Imaging Services Transformation Programme

Fiona Thow,
Head of Imaging Services Transformation  14th June 2018
Limited Carter recommendations due to lack of data

Operational productivity and performance in English NHS acute hospitals: Unwarranted variations

An independent report for the Department of Health by Lord Carter of Coles

Recommendation 4: Trusts should ensure their pathology and imaging departments achieve their benchmarks as agreed with NHS Improvement by April 2017, so that there is a consistent approach to the quality and cost of diagnostic services across the NHS. If benchmarks for pathology are unlikely to be achieved, trusts should have agreed plans for consolidation with, or outsourcing to, other providers by January 2017.

Delivered by:

a) trusts introducing the Pathology Quality Assurance Dashboard (PQAD) by July 2016 to assure themselves and others that the pathology service provided to them is and remains of appropriate quality and safety, with NHS Improvement hosting the dashboard;

b) HSCIC publishing a definitive list of NHS pathology tests and how they should be counted by October 2016, with NHS Improvement requiring trusts to adopt the definitions from April 2017;

c) NHS Improvement publishing guidance notes for forming collaborative joint ventures and specifying managed equipment service contracts for local adaptation by October 2016; and,

d) NHS Improvement introducing metrics that describe relative imaging departmental productivity related to the use of equipment and workforce activity by December 2016.
Transforming Imaging Services – Improving Efficiency & Sustainability

£2 Billion Spent on Delivering Imaging Services

Non Medical Workforce 23,500 (vacancy rates of 15%)

3,000 Medical Consultants (vacancy rates 12.5% & ageing demographic)

£134 Million spent on Outsourcing & Insourcing (to manage demand)*

39 Million reports

Finance: National Overview

Total Cost Split

- Non-Pay Cost £542M
- Non-Substantive Pay Cost £148M
- Substantive Pay Cost £1.339M

* Data Collection for 2016/17 (Figure likely to be much higher for 2017/18)
Imaging – Key Work to Deliver increased Productivity

- Imaging network collaborations
- Improved Quality – ISAS / Safety / Reduced Litigation
- Clinical Leadership and system alignment (Local and national)

**Equipment & Consumables**
- Standardisation (Trust, Network & national)
- Procurement - Standard Specification - Economies of scale
- IT to support networking
- Reduction in outsourcing

**Process Optimisation**
- SOPs, Protocols (Booking, Acquisition & reporting)
- Capacity & Demand optimisation (networks)
- Subspecialty skill networks e.g. Paediatrics, IR
- MDT (efficiency, appropriateness & quality)

**Workforce Optimisation**
- Skill mix (Support and extended roles)
- E-rostering & e-job planning
- Flow optimisation (In-patient, acute admission, A&E)
- Out-patient (Day case, one-stop, reduce TAT)

**OOH & 7DS**
- IT Enablers (VR, DD, flexible working)
Imaging – Recent progress

• 9th National Imaging Optimisation Delivery Board (Mapping & showcasing early network collaborations)
• First National Imaging Data Collection completed (and first line validation)
• Model Hospital compartment populated with 1st National Imaging Data Collection – Alpha testing complete, now live
• Four ‘Early Adopter’ Imaging networks selected (from 22 EOI):
  – Merseyside & Cheshire - Norfolk Acute Hospitals
  – Cumbria & North East - Devon STP
• Four regional engagement events- 6th, 7th, 8th & 21st February (to gain input from clinical departments – support planning)
• National Imaging Network Sharing Event (18th April 2018)
• Alignment work with Cancer Board, NHSE, GIRFT, CQC
• Developed programme plan (TOM by March 2018)
Expressions of Interest

Trusts who put forward Expressions of Interest to be ‘Early Adopter’ Imaging Networks networks (green)
Early Adopter Programme

- 22 Bid submissions received for innovative ideas in NHS Diagnostic Imaging
- NHSI provided a small amount of funding to kick start early adopter projects over a 6 month period
- Developed materials and lessons learned to be shared nationally
- Winning submissions:
  - Cheshire & Merseyside Imaging Collaborative
  - Norfolk Imaging Alliance
  - Cumbria & North East Imaging Group
  - Devon STP
<table>
<thead>
<tr>
<th>Region</th>
<th>Project Summary</th>
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| Cumbria and the North East     | ‘An increase in flexible working’  
In the short term – develop clinical passports to enable movement of people.  
In the long term – an IT interoperability solution to enable images to be moved around within the network. |
| Norfolk Acute Collaboration    | ‘Set up a working group, define a governance structure, identify workstreams & requirements, develop aims for each individual site’  
An importance of data, and buy-in from all Trusts |
| Devon STP                      | ‘Increase productivity using home reporting, a consultant on-call network, & skill-mix’  
Skill mix – using the Radiology Academy to provide training to Radiographers |
| Merseyside & Cheshire          | ‘Develop a working stroke network to improve outcomes for stroke patients’  
Data collection, and an impact assessment |
The problem:

- Mechanical thrombectomy within 6 hours of onset of symptoms can prevent permanent brain damage and prevent or limit long-term disability.
- CT Angiography is required to assess whether a patient should receive Mechanical Thrombectomy.
- Multiple stroke pathways across the region with varied access to CT Angiography.
Cheshire & Merseyside

The solution:

- All stroke pathways across the entire region were mapped & analysed.
The Output:

- The group workshoped a standardised approach and agreed a uniform pathway.

C&MRFV Acute Stroke – Future State Map
Cheshire & Merseyside

The Output:

- The group workshopped a standardised approach and agreed a uniform pathway.
Cheshire & Merseyside

The Output:

• The group workshopped a standardised approach and agreed a uniform pathway.

Next steps:

• Implement a training programme to enable the uniform stroke pathway to be a reality.
Devon STP

The problem:
• The peninsula is facing a workforce crisis as demand for imaging services increases.
Devon STP

The solution:

- A business case to increase the training numbers at the Peninsula Radiology Academy.
- Implement home reporting for radiologists to increase productivity, recruitment & retention and job satisfaction.
- Implement a regional on call system

The output:

- Individual workstreams created that are investigating detailed solutions plans.
- Proof of concept working from home pilot has been completed showing increased sustainability and productivity.
- Peninsula Radiology On Call [PROC] has been implemented across the region utilising the joint RIS/PACS to support radiologist on call rotas.
Next steps:

- Complete a business case for increasing the utilisation and financial viability of the Peninsula Radiology Academy.
- Expand the working from home pilot and establish a detailed baseline so any results from the pilot can be tracked and increased productivity proven along with any impact on the service.

Initial baseline assessment results

- I am happy with my current work/life balance:
  - Strongly Agree: 16.67%
  - Agree: 29.17%
  - Neutral: 29.17%
  - Disagree: 20.83%
  - Strongly disagree: 4.17%

- How often are you interrupted / disturbed per reporting session on average:
  - Never: 0%
  - Less than 5 times: 37.5%
  - Between 5-10 times: 33.33%
  - More than 10 times: 29.17%
The problem:

- Workforce and service sustainability issues in the face of increasing demand on services have stretched the imaging service in the area.
- Without interconnectivity across the region, realising any benefits from networking is extremely difficult.
Cumbria & North East

The solution:

• The group created a terms of reference for working together and established work groups with workstream leads.

• **Workforce workstream:**
  • To provide recommendations for change to Trust executives

• **IT interoperability:**
  • To provide a business case on connecting the IT between Trusts so the benefits of networking could be realised.

• **Interventional Radiology:**
  • To design a hub and spoke model to ensure sustainability and standardised care.

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**Workstream diagrams**

- **Workforce**
- **IT Interoperability**
- **IR**
Cumbria & North East
The output:

**Workforce**
- Clinician passport memorandum of understanding drafted and agreed
- Analysis of vacancies and age profiles conducted to assess areas of risk
- Analysis of JDs to understand regional variation

**IT Interoperability**
- Analysis of existing infrastructure completed
- Liaised with other groups investigating IT interoperability
- RIS/PACS supplier functionality matrix
- Clinical needs for IT functionality defined
- Output based service specification drafted

**IR**
- Current state analysis
- Patient pathway mapping
- Initial designs of hub & spoke model
Cumbria & North East
Next steps:

**Workforce**
- Solve the administrative barriers to passports such as parking and IT logins.
- Design assistant practitioner framework.
- Formulate recommendations to executives

**IT Interoperability**
- Complete output based service specification
- Define the governance of the IT interoperability system
- Market and supplier engagement event
- Plan procurement

**IR**
- Draft full report on network IR hub and spoke model to be presented to STP in Autumn
The problem:

- The sustainability of the imaging service in the Norfolk region is at risk due to;
  - Increasing demand
  - Recruitment and retention difficulties
  - Access to capital to improve technology and equipment
- Networking has been identified as a potential solution to these difficulties however how do 3 Trusts, who are traditionally competitors, come together to collaborate for the sustainability of the service?
Norfolk Imaging Alliance

The solution:

• The Norfolk Imaging Alliance [NIA] has been established.
Norfolk Imaging Alliance

The solution:

1. Establishing Terms of Reference & Group Remit
2. Assessing potential commercial options for the alliance
3. Establishing ways of working and building trust
4. Establishing workstream briefs to tackle sustainability issues in the region
Norfolk Imaging Alliance

The output:

1. Terms of Reference Agreed;
   1. The purpose of the Norfolk Imaging Alliance is to deliver quality, safe and efficient imaging services to the patients of Norfolk & Waveney at an appropriate cost.
   2. To provide strategic direction to the imaging services of Norfolk & Waveney, including a case for future investment across the STP.
   3. To ensure a sustainable and future proofed imaging service.
   4. To clearly define the benefits of networking imaging services.

2. Commercial model options outlined with examples. An assessment criteria has been agreed.
3. Governance model created alongside ToR. Organisational Development specialist brought on board to establish readiness for change.
Norfolk Imaging Alliance

The output:

4. Three initial workstreams created;

- Workforce
- Networked IT
- Radiology Academy
So what about the other networks?
Collaborative Project:

The Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust

Dorset County Hospital NHS Foundation Trust

Poole Hospital NHS Foundation Trust

Dorset HealthCare University NHS Foundation Trust

Serving approximately 900,000 population in urban and rural settings

Dr Robert Ward – Clinical Lead
Mandy Tanner – Management Lead
Susan Varley – Project Manager
7 Radiology Vanguard Deliverables

- Implement image sharing solution
- Achieve ISAS accreditation all sites
- Enable joint procurement for major equipment
- Develop and implement workforce plan
- Options appraisal for Future Out of Hours Reporting
- Single Pan Dorset Radiation Safety Policy
- Pan Dorset Service in place for all radiology services

One Radiology Service for Dorset
Working Together

Areas for consideration

- Increase the reporting and image capturing workforce
  - Radiographers, radiography technicians, sonographers
  - Radiologists
- Decrease inequalities of access – One NHS Institution
  - Remove barriers to staff movement
  - Technical solution
  - Co-ordinated regional approach
- Demand management
Workforce

Radiography Academy Pilot - Benefits

- Train as a regional cohort
  - Peer support
  - Decreased burden on trainers
  - Minimises impact on service delivery
- Critical mass for University and Academy
- Protected time out of workplace
- Linked to University Advanced Practice modules
- Regional standardisation of scope of practice
- Backfill and course fees funded (HEE)
- Replicable

Coordinates the current ad hoc approach, with a comprehensive evaluation
National Imaging Network – Sharing Event

Create a networking & learning opportunity

Horizon Scan – future developments
Sharing Event

Thanks for arranging such a brilliant event. I feel we must do more, since the interest and turnout was amazing.

It felt like everyone there was engaged in trying to overcome the traditional barriers to working together, a “can do” attitude seemed to be common.

I thought the day was very useful. My only wish is that I could have attended all the breakout sessions as it was difficult to choose between them.

I thought it was a really good event, with a lot of energy from participants. Imaging networks can and will help to drive change, but will also need nurturing.

Thanks for arranging such a brilliant event. I feel we must do more, since the interest and turnout was amazing.

It was a thoroughly interesting and useful day.
**Compartment notifications (3)**

- "CT: % appointments not attended" is above the recommended benchmark
- "MR: % appointments not attended" is above the recommended benchmark
- "Ultrasound - Non Obstetric: % appointments not attended" is above the recommended benchmark

### Total cost of Imaging services

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<th>Amount</th>
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<tr>
<td>£11.22m</td>
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### Total pay costs as % of all Imaging costs

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<th>Percentage</th>
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<td>77.8%</td>
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### Non-pay costs as % of all Imaging costs

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<th>Percentage</th>
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<td>19.9%</td>
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### Insourcing costs as % of total Imaging costs

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### Outsourcing costs as % of total Imaging costs

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<tr>
<td>0.3%</td>
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### Agency, bank, and overtime costs as % of overall Imaging costs

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<td>4.7%</td>
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### Plain X-Ray reports by Radiographer

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### Pay cost per report

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<td>£31.35</td>
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### Medical roles vacancies: Consultant Radiologist

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### Radiographer: Total AFC staff vacancy rate

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<td>3.2%</td>
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Variation in reporting

Plain X-Ray reports by Radiographer, National Distribution

Total insourcing costs, National Distribution
So what next?

• Installed asset base – concerns over age of some capital equipment
• Working with NHS Supply chain to look for opportunities
• 2\textsuperscript{nd} Data Collection – 21\textsuperscript{st} May 2018 (2017/18)
• Develop Model Hospital
• UKRCO – Show case ‘Early Adopters’ & Case Studies
• Working with NHSE, NHSD, OLS,
• More work understanding & modelling with the data
• Develop a national Target Operating Model
So why are we really here?

To make things better for our patients

To make things better for our staff

......but first we need to understand where we’re starting from