

Diagnostic Networks and Blood Transfusion

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History of consolidation in the NHS

















		NHS	
		North West	
	London Pathology		
Chelsea and Westminster Hospital NHS Foundation Trust	Imperial College Healthcare NHS Trust	The Hillingdon Hospitals NHS Foundation Trust	

Results : The Carter review



The opportunity

 Report saw £5bn of value opportunity 2020- 21, if 	Optimised use of clinical workforce Hospital pharmacy and medicines optimisation	2.0
unwarranted variation	Diagnostics – pathology and radiology	0.2
removed.Operational	Procurement	0.7
Productivity Directorate in	Estates and facilities management	1.0
NHSI to deliver report's	Corporate and administration (back office) costs	0.3
recommendations 09.16)	Total opportunity	5.0
		Minimum estimated savings opportunity by area £bn



Overview of the final report: £5bn savings

15 recommendations involving:

- Optimising application of clinical resources
- Optimising use of non-clinical resources
- Quality & efficiency throughout care pathway
- Implementation & engagement with trusts



INNOVATION HEALTH AND WEALTH Life Sciences

Industrial Strategy

- A report to the Government from the life sciences sector

NHS





Pathology Under the Microscope



Improving the quality and value of NHS pathology services



Pathology Consolidation

Benefits of consolidation



Improvement

Clinical	 Allows for ESL to focus on what is clinically urgent and provide shorter TAT Allows for greater collaboration between pathologists, resulting in better quality diagnoses Increases the standardisation of service across the UK The economies of scale benefits can lead to faster turn around time of routine work and can enable the latest technology to be purchased
Financial	 Economies of scale benefits allow for better utilisation of expensive capital equipment Less duplication of functions across the network such as HR, finance, logistics, marketing etc Increased volume allows for greater negotiating power to drive down costs of equipment, IT, reagents and consumables
Operational	 Improves service resilience through backup sites and increased workforce Networking across wider geographies provides a solution to localised recruitment challenges Economies of scale allows for centralisation of low volume, high expertise testing Allows for standardisation of IT systems, logistics and result delivery

Network & methodology





Pathology



Covers all healthcare across prevention, screening, monitoring and diagnosis from before conception until post mortem. All with appropriate clinical and scientific support for local clinical teams.

- Clinically lead service. Every result issued has been monitored, reviewed or commented upon by a medical clinician or state registered (via HCPC) Biomedical or Clinical Scientist.
- Integrated access to sub-specialty expertise available for community, primary, secondary and tertiary at a single touch point. Scientists all have a subspeciality training, and have an active role in many specialist MDT meetings.
- Accreditation and quality assurance integral to service delivery. Pathology in the UK has lead the way in clinical accreditation for more than 20 years. UK system is the basis of the current international accreditation standard.
- Keen **technology adopters.** Moving academic and novel technologies into routine, safe, clinical practice.



Pathology Configuration



Essential Services Laboratory



Principles

The provision of laboratory services for the acute setting is vital to ensure safe patient care. We have developed a tool kit that describes the minimum service that should be available. ESL that vary from this toolkit should be justified using clinical evidence, or robust data to demonstrate efficient use of resources.

The ESL

- Only the services needed to provide acute pathology provision should be commission in an ESL. All other work should be performed in the hub laboratory.
- Meet all regulatory and accreditation standards (MRHA, UKAS, HSE).
- Have a clear clinical and operational governance link to the Hub.
- Have a clear management structure.
- **True interoperability with the Hub**, with a single LIMS or full IT integration, common platforms and procedures.
- Full 24/7 rota, multidisciplinary assistant grades, aspiration towards multidisciplinary Biomedical Scientists.
- Have clear **training strategy** that is harmonised with the Hub laboratory, provided by staff supernumerary to the ESL.
- Have agreed performance metrics, service specification. Variation only where it is warranted.

What does good look like	
Clinical Governance	 Clear leadership Clear escalation points for local issues
LIMS	Integration and full interoperability
Logistics	Harmonised with HubTimely
Quality	 Provided by Hub ISO 15189 MHRA
Training	 Supported by the Hub, delivered across the network Full rotation of staff
Business continuity	 Clear robust, tested plans. POC and emergency procedures.
Implementation	 Step change implementation, involving quality assessments and review

improvement.nhs.uk/resources/pathology-networks-toolkit/

Guide to the staffing structure in an ESL

Shifts per annum and required number of FTEs based on a workload of 1500 samples per day in an ESL

Staff	Shifts per annum	Required FTEs
Bands 2 to 4	1,854	8.1
Bands 5 and 6	3,285	14.3
Band 7	759	3.3
Lab supervisor	253	1
Total		26.7

The guide assumes no multidisciplinary working. Efficiency gains could be made by introducing multidisciplinary scientists into an ESL. For example, many biomedical scientists in ESLs are cross-trained in both haematology and blood transfusion representing an opportunity for further efficiencies to this model.

State of the Nation





State of the Nation





National Update

Level of Engagement and continuing risk (%)	Agreement on local partnership operating model (%)	Networking on track and on target for 20/21 (%)
97%	89%	76%

Region (no. of Networks)	SOC*	OBC*	FBC*
London (5)	3	1	1
Midlands and East (8)	4	2	2
North (8)	8	1	0
South (8)	6	3	2

State of the Nation



"In September 2017 we signalled to all acute hospital trusts in England that they would need to change how they work and collaborate to drive out unwarranted variation in pathology services.

The first tranche of pathology networks is fully operational, and we expect a third of all the networks to be fully operational by the end of this financial year, with the rest to follow by 2021."

"To meet this deadline, there is much to do. We need to scale up from the one in five pathology networks that are operational today, to at least a third by the end of 2018/19.

The formation of pathology networks is a core part of implementing national policy on improving quality and productivity. NHS Improvement will continue to support and guide the development of these networks, ensuring that services are safe, effective, caring, and responsive. We will work with trusts in networks yet to become operational to jointly agree milestones, establish what extra support they need and ensure local leadership (across trusts and commissioners) is in place to complete or network becoming operational."

Next steps for the sector



- It is important that networks are progressed at pace.
- Actions to support realisation of efficiencies, available immediately, should be taken now.
- <u>Centres that have been identified as Essential Services</u> <u>Laboratories should begin to model the transition to</u> <u>delivering this service model.</u>
- <u>Centres identified as hubs should be supporting the</u> preparatory work to consolidate any testing activity that can be moved in advance of further networking.
- It is vital that staff and subject matter experts are engaged at all stages of the process, executive commitment is also essential in the next phase of developing networks.



Pathology Quality Assurance Dashboard



- This is a tool for individual Trusts to assess and manage the benefit Pathology services can deliver. It is not a contractual tool to manage the service.
- Timely collection of appropriate data. To give Trust Board visibility of system wide metrics that Pathology has an impact on. The aim is to support national initiatives.
- Collecting data in one place, once. Benchmarking performance to continuously drive improvement.
- Looking to include metrics for Innovation and Training to support long term sustainability of workforce and adopting advance and innovative roles.
- Potential to propose KPIs initially where national targets do not exist.

Specialist Services/Testing



- Specialist Trusts have been mapped into networks, however, we are aware of the supra-regional and national impact some of services have.
- Formation of a board sub-committee to investigate the opportunity and approach; Paediatrics, Bone Pathology, Blood Transfusion, Neuropathology,
- Defining attributes of specialist services to support: -
 - Training / Succession
 - Clinical Pathways Providing greater access to more patients
 - Innovation and translational development
 - Development of accepted standards, protocols, and national leadership
 - Diagnostic pathway optimisation

Blood Transfusion subgroup - Objectives

- Establish a Clinically Led Liaison Steering Group with representation from NHS E/I and NHS
- Provide an Interface between NHS E/I and NHS BT laboratories
- Develop a Network of specialist NHS BT Laboratories
- Provide additional governance to NHS BT assuring good, safe, standardised laboratory practice
- Ensure services working to common objectives
- Ensure Systematic Accreditation Assurance to benchmarked standards
- Assure training and education, including CPD provides sustainable, competent workforce across the system

Blood Transfusion subgroup - Issues

- Quality and appropriateness of transfusion training
- Appropriate leadership oversight of transfusion laboratories
- Shortage of qualified workforce
- Transfusion guidelines in need of review
- Governance assurance guidance even if in place not always followed
- Lack of improvement in services evidenced by NEQAS

What are the pitfalls for Blood Improvement

• IT and interoperability

NHS Digital

• Staffing; Vacancies, recruitment and retention

HEE

• Equipment

Procurement

• Funding

Access to National Funding sources

Data Extracted from the UK NEQAS Pre-Transfusion Testing questionnaire 2018

IT and Automation (Total = 200; 100%)

- 80.5% using iSoft or Clinisys. There were 15 other commercial IT suppliers reported, with none of these having more than eight users.
- iSoft (including CSC/DXC) 83 (41.5%) Clinisys 79 (39.5%) Other* 38 (19.0%)
- * including three using in-house systems Booking EQA samples into the LIMS

LIMS interface with automation (Total = 180; 100%)

Interface between automation and LIMS Number (%)

- Bi-directional 141 (78.3%) Uni-directional 36 (20.0%) Not interfaced 3 (1.7%)
- 139/177 (78.5%) of LIMS systems recognise when a result has been edited on the analyser, and 92/128 (71.9%) of those using EI indicated that this flag prevents electronic issue.

Technology used for primary group and screen (G+S) – manual, automated and overall

	Technology	Number G+S automated	Number G+S manual	Total number (%)
•	Bio-Rad	84	13	97 (48.3)
•	Ortho	57	3	60 (29.8)
•	Immucor	22	0	22 (10.9)
•	Grifols	17	0	17 (8.5)
•	Tube based meth	nods O	5	5 (2.5)
	All techniques	180	21	201 (100)

National Programme Updates



Carter Efficiency Fund.

- SoS has approved the remaining £50m Carter Capital Efficiency fund for Digital Diagnostics adoption and scale up.
- Working with Office of Life Sciences to develop a how best to utilise this fund, likely to involve working with the Centres of Excellence and Innovate UK.
- The key theme of this fund will be added value and increased adoption.
- Split between Pathology and Imaging programmes

Publications

State of the Nation (2019)

- Provide a public update to progress to date.

Microbiology and Histopathology ESL

Provide guidance and watch points for these services in spoke laboratories

PQAD

- Quality assurance tool monitoring laboratory performance set out by the Barnes' (2012) review

NHS Digital – Unified Test List

- First 350 lines of code delivered
- NHS D working with NHE/I, PHE, RCPath
- Seeking prioritisation list for next cohort of tests
- Formal launch in April 2019 with next publication of SNOMED CT

Highlights:

- Networked provider demonstrating a 20% reduction on Cost per Test.
- Network purchasing saving £26m over life of contract.
- Provider removes consultant shortage issue by joining network.
- Digital Pathology and interoperable solution committed to by entire network.
- Existing networks expanding, and renewing commitment over longer periods
- Commitment extended into the Long Term Plan and People Plan

Lessons learnt and on-going risks



- Greater commitments around Unified test list
- Programme funding to support each network
- Set IT and Digital Standards 5 years ago
- Greater and earlier connections into linked and aligned programmes.
- 5 FTE for a national programme is light
- More data insights to support the sector

Risks – to prevent continued progress forward:

- National, sustained commitment is vital.
- Regional Priorities need to respond to the national strategy, and visa versa
- Being able to influence Capital Spend to reward good proactive
- Being able to align diagnostics to 100% of healthcare not just disease priorities groups.
- Shift between regulatory driven change to governance of the networks

Single message for success, be clear on the aim, know your red lines, pragmatic of the delivered proposal and understand the impact.





Questions?