

Community Diagnostic Hub Planning In North-East London

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Abstract

Objectives

To improve cardiac diagnostic provision in North East London (NEL) through the provision of cardiac diagnostic hubs

Plan, Resources and Team

To identify the predicted requirement for growth using data from national and Trust datasets, build a team to determine the resources and costs required, and submit the bid to NHS London

Results

Local growth in echo is predicted at approximately 8% per year. Poorly served populations are not defined solely by geography. Echocardiography will require the greatest proportion of recruitment.

Challenges

Cardiology is a (sub)specialist area of practice with few easily translatable techniques to other medical specialities. This mandates clear description and justification for differences from other standardized workflows.

Conclusions

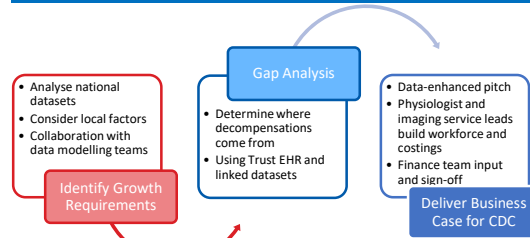
If correctly configured, diagnostic hubs will meet demand for the coming 5 years.

Attempts to bring diagnostic modalities together can result in over-generalization and loss of quality.

Objectives

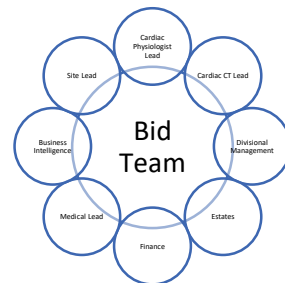
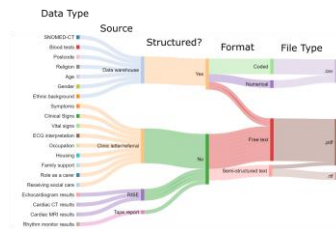
1. Use electronic healthcare records to plan future echocardiography service locations in NEL.
2. Use data insights to support diagnostic hub planning.
3. Design and deliver business case for a cardiac diagnostic hub as part of a task-and-finish bid group.

Plan, Resources and Team



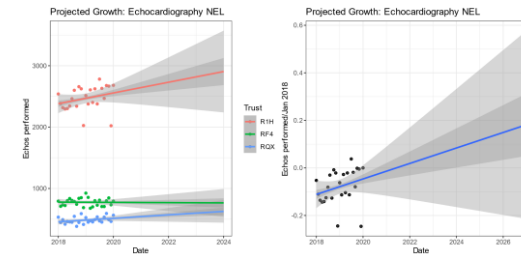
Delivery of a cardiovascular diagnostic hub requires an understanding of population and service growth in our region, an understanding of the distribution of disease processes across the region, and the collaboration of a large team to bring together a coherent plan to locate, equip, staff and run the centre.

Data architecture in our trust allowed in-depth analysis of test utilisation by provider and commissioner. In this pilot approach, data on number of tests, postcode and GP practice of patient, subsequent hospital admissions and automated extraction of diagnostic features were parsed to achieve postcode-level mapping of disease in our region, and worked with Trust modelling teams to determine future requirements



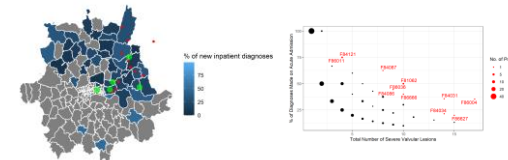
Once modelled, preparation of the bid required input from across the department. Whilst the clinical need was developed, divisional management teams assembled a group to deliver workforce modelling, costings and finance, assessment of locations. These were co-ordinated through a close working relationship between medical leadership and divisional management. Working to a tight deadline and without dedicated time brought challenges. Changing priorities and personnel churn at the funder and trust level led to inconsistency in message requiring management of expectation and multiple iterations

Outcomes and Decisions

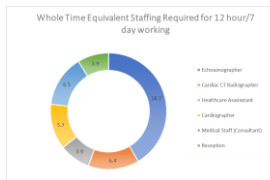


NHS Statistics provided external data to assess projections for growth in the requirement for echocardiography in NE London over the coming 5 years, based on pre-pandemic growth. We modelled 95% and 50% confidence intervals. At 50% confidence, we expected 5% growth per year. Modelling work with our Trust team based on GLA populations project confirmed that expected growth was between 5-8% and a requirement. We modelled 8% annual growth over 5 years.

Year	1	2	3	4	5
Echos Total	49000	52920	57153	61725	66663
Rooms Total 5 day	14	15	16	18	19
Rooms Total 7 day	14	15	16	17	18



We determined the distribution of valvular disease across NEL, and identified GP practices where a high proportion of valve disease was diagnosed during acute admission rather than as part of out-patient follow-up. These practices represented those whose patients might benefit from increase in echo provision allowing earlier diagnosis of disease. High-acuity practices (red dots) were often places very close to hospitals (green circles), suggesting that location is not the only barrier to accessing service.



Our trust decided to use existing real estate to house the diagnostic hub, due to its immediate availability and cost advantage. Thus, to meet the high-volume requirements and working hours required for a Hub, workforce became the major expected cost. Around 19 WTE sonographers are required: a major challenge in the current environment

Challenges

An initial project scope to plan the provision of mobile echo solutions grew into a broader project underpinning the delivery of echo across our community. The team grew alongside the size of the project.

The delivery of cardiac alongside other diagnostic areas leads to internal competition for space, budget and staff allocation, for which there are no centrally determined priorities: is cardiac care more important than respiratory? Or cancer? Successful centres will achieve clear prioritisation and work across these previous barriers.

One version of proposed delivery was single scanning centres operating as spokes, without a central hub; this was not pursued due to concerns about quality and clinical support

The commissioning body had undertaken modeling and had expectation which did not match ours. Specifically, echocardiography was included in general ultrasound modelling, and cardiac CT with general CT. Communication about these discrepancies was via Finance teams rather than to Divisional or Clinical Leads. Successful teams will communicate effectively with the correct team members.

Conclusions

- Diagnostics hubs are central to NHS strategy over the coming decade.
- Design and delivery is complex, cross-institutional and cross disciplinary.
- Cardiac hubs will need to scale to local requirements, and accurate projections for growth are essential.
- As non-specialist team members join, facts we take for granted will be challenged.

