Lancashire & South Cumbria Diagnostic Programme Board

Title of Paper	**5-year Radiographer recruitment plan for Lancashire & South Cumbria**		
Date of Meeting	24th February 2022	Agenda Item	XX

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Paper endorsed by	Jack Smith, Director, L&SC Diagnostic Imaging Network	
Purpose of the Report	Please tick as appropriate	
	For Information	
	For Discussion	
	For Decision	X
Executive Summary	This paper presents a 5-year plan for recruiting NHS radiographers in readiness to meet growing demand for quality image acquisition, positively impacting timely diagnosis of health conditions in Lancashire and South Cumbria (L&SC). Application of an agreed set of imaging workforce assumptions utilising the latest L&SC demand and capacity modelling has informed this plan. An indicative amount of £960k additional revenue is required per year for five years. A combined funding route through National Diagnostics Transformation, Community Diagnostic Centres and Health Education England revenue funding streams is to be explored. A proportionate increase in Consultant Radiologists, Assistant Practitioners and clerical and administrative support will follow separately. This paper has been reviewed and endorsed by both the L&SC Radiology Working Group and the L&SC Diagnostic Imaging Network Workforce workstream.	
Recommendations	L&SC Diagnostics Programme Board is requested to: 1. Note the content of this report 2. Support the request for the revenue funding to secure the recruitment 3. Advise on potential funding source(s) for the revenue required. 4. Support engagement with the Trust Directors of Finance and Directors of HR to support progression of the proposed approach	

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1. Background

1.1 The Prof Mike Richards Report, Diagnostics: Recovery and Renewal (Oct 2020) was an independent review commissioned by NHS England because '*The need for radical investment and reform of diagnostic services was recognised at the time the NHS Long Term Plan was published in 2019*'.

1.2 Recommendations from the report were categorised under five key pillars; New service delivery models; Equipment and facilities; Workforce; Digitisation and connectivity; Delivery the change.

1.3 Clear and unambiguous recommendations from the report for workforce include

Recommendation 12: There should be a major expansion in the imaging workforce – an additional 2,000 radiologists and 4,000 radiographers (including advanced practitioner radiographers, who undertake reporting) as well as other support staff and key 'navigator' roles. Additional training places should be provided for radiologists and radiographers and initiatives will be needed to meet demand, as well as expansion in assistant practitioner and support staff roles.

Recommendation 13: There should be an increase in advanced practitioner radiographer roles, including for reporting of plain X-rays (to a minimum of 50%); and expansion of assistant practitioner roles to take on work currently undertaken by radiographers.

Recommendation 18: Alongside the necessary expansion of key professional groups, all relevant organisations should work together to deliver changes in the diagnostics workforce. Particular emphasis should be given to driving skill-mix initiatives across the whole country. This will require concerted action at team, NHS trust and network levels

1.4 Other recommendations from the report that affect workforce include

Recommendation 4: Community diagnostic hubs should be rapidly established to provide Covid-19 minimal, highly productive elective diagnostic centres for cancer, cardiac, respiratory and other conditions. For patients with suspected cancer, these should incorporate the rapid diagnostic centre service model.

Recommendation 8: CT scanning capacity should be expanded by 100% over the next five years to meet increasing demand and to match other developed countries. In the Covid-19 recovery phase, priority should be given to ensuring each acute site with an A&E has access to a minimum of two CT scanners so that patients known to be Covid-19 negative can be kept separate from those who are Covid-19 uncertain or Covid-19 positive. Other additional scanners should be deployed to community diagnostic hubs.

1.5 Current recruit at risk requests at trust level have been submitted/have been agreed to address current vacancies/predicted vacancies in a year to enable full utilization of existing assets. The focus of this paper is to propose an approach to recruiting in readiness for expected increase in demand over and above the current workforce requirements.

1.6 This paper makes a case for agreeing a standardised approach to recruitment of additional, band 5, graduate radiographers in Lancashire and South Cumbria from June 2022 onwards in readiness for future workforce requirements related to increase in activity and assets.

2. Case for recruiting in readiness

2.1 National Imaging Data Collection data shows that in 2019/2020 455.84WTE radiographers were employed across L&SC, with 45.79WTE vacancies.

2.2 Appendix 1 provides data extrapolated from the Prof Mike Richards report recommendation 12 as it relates to L&SC ICS based on population size. In order to meet the future capacity demands, an extra 114wte radiographers (including reporting radiographers) would need to be employed within the next five years.

2.3 Appendix 2 shows workforce modelling assumptions based on the provision of capital bids to establish one CDC per trust (ie 1xMRI, 2xCT, 2 x US and 2 x Plain film running 12/7). If these were established to full assets as outlined, 103.4wte radiographers and 21.84wte sonographers would be required to staff these centres.

2.4 Appendix 3 shows predicted activity v actual activity for CT across the L&SC ICS. It demonstrates that actual increase in activity across L&SC is mimicking predicted modelling increases. Further work is being undertaken to widen the modelling for other modalities and include workforce. For understanding, two radiographers running a CT scanner for 37.5hours/week (full time) could provide approx. 75-100 scan appointments per week (holiday/study leave not included). Small increases in referrals quickly leads to the requirement for additional staff and assets

2.5 Appendix 4 shows CT activity mapped against asset capacity. Please note that current asset capacity is independent of workforce capacity. Current staffing does not always allow for 12/7 working on all assets. By 2023, there will be a need for additional fully staffed units with competent and appropriately trained specialist radiographers.

2.6 Whichever modelling is utilised, Appendix 1 and Appendix 2 demonstrate a requirement to significantly increase staffing. In the radiographic workforce an overall increase of between 18-20% once vacancy rates are filled is required. Inclusive of current vacancy, there needs to be a workforce expansion of 20-21% This equates to 24 band 5 graduates per year across the L&SC ICS for the next 5 years.

2.7 This assumption is based on CT/MRI/US and Plain film only, modalities in which the majority of the radiographic workforce would be based. This does not include smaller radiographic workforce expansion such as nuclear medicine, fluoroscopic, interventional imaging, that may be required as patient pathways develop.

2.8 Capacity and demand modelling will continually be refreshed as future activity data is captured, and staffing requirements flexed/adjusted accordingly. This may include pausing recruitment if the demand growth rate is slower than current modelling forecast.

2.9 Should L&SC fail to secure additional recruitment over the next 5 years as the activity and /or assets increase either at the acute sites or CDCs, then the staffing to meet the demand will need to be outsourced.

2.10 There are a number of risks contributing to the case for recruiting additional graduates

- Risk that assets will be in placed at acute sites or CDCs but workforce not in place to run them effectively.
- Risk of waiting lists increasing as referrals increase, as assets will be not matched with appropriately trained staff
- Ongoing increased annual demand for CT (6.8%), MRI (5.6%), NOUS (3.8%), Plain film (1%)
- Implementation of CDCs from 21/22 which includes provision of additional imaging activity.
- There is a national shortage of Radiologists, Radiographers and Sonographers, which remains on the government shortage occupation list. Every effort should be made to secure substantive posts and predicted substantive posts to achieve the nationally published workforce plan.
- Appropriately upskilling radiographers (those requiring a development of skill sets) takes considerable time. For example, to complete a PgD in Ultrasound, takes 15months-2years, a reporting radiographer can take 1-2years of additional training. Not all the professionals can commence training at the same time, so upskilling currently employed staff needs to begin now, with appropriate backfill of their current posts.

2.11 To note, due to the lack of availability both in the NHS and private sectors of suitably qualified ultrasound staff, some of the Non Obstetric US activity monies associated with early adopter/year 1 CDCs in L&SC had to be re-profiled to provide other diagnostics.

2.12 To note, undergraduate clinical training places has increased across the L&SC ICS over the last few years. In light of national shortages within the workforce, and potential for attrition of staff to the Independent Sector, it is important that career opportunities are offered locally to the new graduates seeking to stay in the region, and to also provide attractive career development opportunities to those currently employed.

3. Proposed approach to recruiting in readiness

3.1 Graduation occurs once per year, with new graduates normally commencing employment between July and September. Due to supply and demand, any vacancies at graduate level occurring after this recruitment window, such as for promotion, attrition, retirement etc are difficult to fill.

3.2 In addition to trusts normal recruitment/recruitment at risk, an additional 24 graduate radiographers across the L&SC ICS would be required per year for at least 5 years to commence preceptorship and allow backfill for additional training of already qualified staff. As assets are procured to meet demand over the coming years, the workforce will be in a position to have sufficient skill sets to staff these new units.

3.3 If the number of new graduates required in year 1 is not achieved, due to either supply or funding constraints, the outstanding requirement will need to roll over to the next year.

3.4 The table below demonstrate the domino effect that increasing entry level graduates could have across the system (red demonstrating additional training concurrent with 24 additional graduate posts).

3.5 The diagram is a template training programme which would be repeated each year. It is the trusts who would provide clarity once the graduates are recruited as to what training is required for other staff, either to progress to specialist MRI/CT posts, from specialist to advanced practitioner, and advanced practitioner to consultant posts according to the trust service needs, service development needs and current skill sets of the workforce within each trust. These staff need to be supernumerary during training periods.

- •24 additional Entry grade radiographer- preceptorship up to 1 year

Band 5

- •General Radiographers providing round the clock service

- •Trainee Specialist Radiographers- CT
- •In house training 6months-1 year alongside PgCert/PgD 1-2 years total

- •Trainee Specialist Radiographers- MRI
- •In house training 6months-1 year alongside PgCert/PgD 1-2 years total

- •Trainee Specialist Radiographers- other
- •In house training 6months-1 year alongside PgCert/PgD 1-2 years total

Band 6

- •Specialist Radiographers, also providing round the clock emergency service.
- •Upskilling current staff in readiness for CDCs (PgCert/PgD, equipment compentancy, ILS etc)

- •Trainee Advanced Pracitioners -Reporting
- •1-2 years PgD/Msc

- •Trainee Advanced Practitioners-ultrasound
- •1-2 years PgD/Msc

- •Trainee Advanced Practitioners-acquisition
- •1-2 years PgD/Msc

Band 7

- •Advanced Practitioner-reporting/US etc providing weekend and extended day
- •Specialist Lead/Manager- Modality/PACS/QA

- •Trainee Consultant Practitioners /Senior Managers
- •Specialised specific training to MSC/PhD.

Band 8

- •Consultant Practitioner
- •Senior Manager

3.6 In summary, there are a number of benefits to increasing recruitment

- To support meeting cancer targets
- To support hot reporting (a report available immediately after acquisition)
- To support the RTT (reporting turnaround times)
- To support elective recovery
- To provide safe patient-centred pathways
- To have safe staffing to deliver the forecasted increase in diagnostic imaging activity
- To deliver required reforms in diagnostic imaging services including delivery of CDCs with sufficient suitably qualified and skilled staff to deliver in these out of hospitals settings
- Reduce expenditure across all modalities on OT, agency, outsourcing costs
- Reduce litigation through delayed diagnostics

4. Costs and additional terms to consider

4.1 The indicative additional revenue required is £960K per year for 5 years

4.2 Increasing the substantive posts will decrease reliance on overtime, bank, agency and outsourcing.

4.3 The funding request does not take consideration of the cost for additional training. L&SC ICS, Trusts HEE and education providers are currently working collaboratively to establish a North West Imaging Academy and have already identified training priorities with prime pump funding to deliver these. For the North West this includes ultrasound, CT/MRI PgD, radiographer reporting courses. If we are unable to release staff through backfill, this funding will not be able to be utilised effectively.

4.4 To note, commitment by the trusts to increase radiographic workforce should be aligned with a requirement to increase Consultant Radiologists, Assistant Practitioners, clerical and support workers. Further papers of this type will need to be developed to support these staff groups.

5. Recommendations

5.1 The L&SC Diagnostics Programme Board is requested to:

- Note the content of this report
- Support the request for the revenue funding to secure the recruitment
- Advise on potential funding source(s) for the revenue required.
- Support engagement with Trust Directors of Finance and Directors of HR to support progression of the proposed approach.

Appendix 1 – Data for Workforce extrapolated from the Prof Mike Richards Report based on population for the North West

	Over next 5 years					Yearly Additional Requirement			
Imaging workforce	**Additional requirement**	**North West**	**GM**	**CM**	**L&SC**	**North West**	**GM**	**CM**	**L&SC**
Radiologists	2,000	268	112	100	57	54	22	20	11
Advanced practitioner/reporting radiographers	500	67	28	25	14	13	6	5	3
Radiographers	3,500	469	195	174	100	94	39	35	20
Assistant practitioners	2,500	335	140	125	71	67	28	25	14
Admin and support staff	2,670	358	149	133	76	72	30	27	15
Physicists	220	29	12	11	6	6	2	2	1
	11,390	**1527**	**636**	**567**	**324**	**305**	**127**	**113**	**65**

Weighted pop proportions :

North - West	7,964,158	13.41%
Lancashire and South Cumbria	1,689,821	21.22%
Greater Manchester	3,315,292	41.63%
Cheshire and Merseyside	2,959,044	37.15%
England	59,402,338	**100.00%**

Lancashire and South Cumbria Health and Care Partnership

Appendix 2 – Community Diagnostic Centres Modelling Staffing Assumptions (7 day/12 hour)

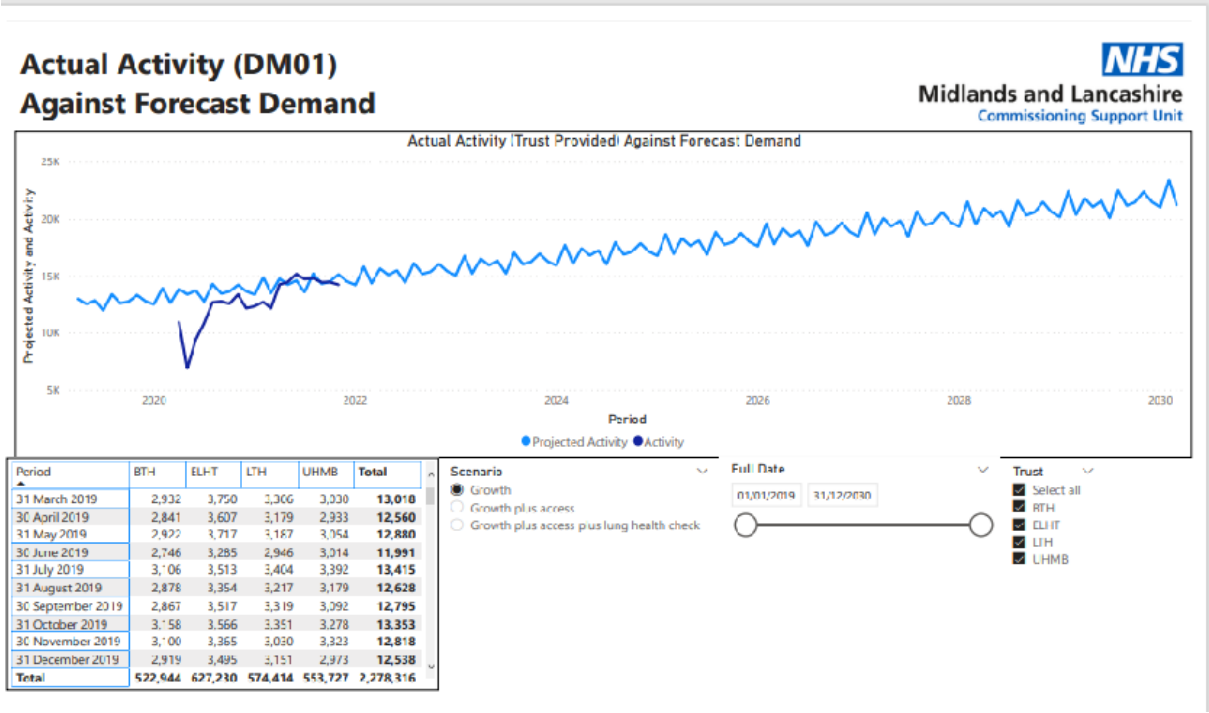
MRI x 1	Staff Per Scanner 2022/23 WTE	Equipment per CDH	WTE per CDH	Estimated Staff Cost per WTE	Staffing Cost per CDH
Band 7 Radiographer WTE	2.73	1	2.73	£55,000	£150,304
Band 6 Radiographer	2.73	1	2.73	£48,000	£131,174
Imaging Support Worker	2.73	1	2.73	£28,000	£76,518
Band 8a Service Management	0.55	1	0.55	£65,000	£35,526
Admin Support	1.37	1	1.37	£28,000	£38,259
Assistant Practitioner	0.00	1	0.00	£32,000	£0
Consultant Radiologist - Reporting	3.02	1	3.02	£130,000	£392,796
Total MRI Workforce	13.13		**13.13**		**£824,578**

X-Ray x 2	Staff Per Scanner	Equipment per CDH	WTE per CDH	Estimated per WTE	Staffing Cost per CDH
Band 5 Radiographer	1.37	2	2.73	£40,000	£109,312
Band 6 Radiographer	1.37	2	2.73	£48,000	£131,174
Assistant Practitioner	2.73	2	5.47	£32,000	£174,899
Reporting Radiographers	1.39	2	2.78	£55,000	£153,172
Total Xray Workforce	6.86		**13.72**		**£568,558**

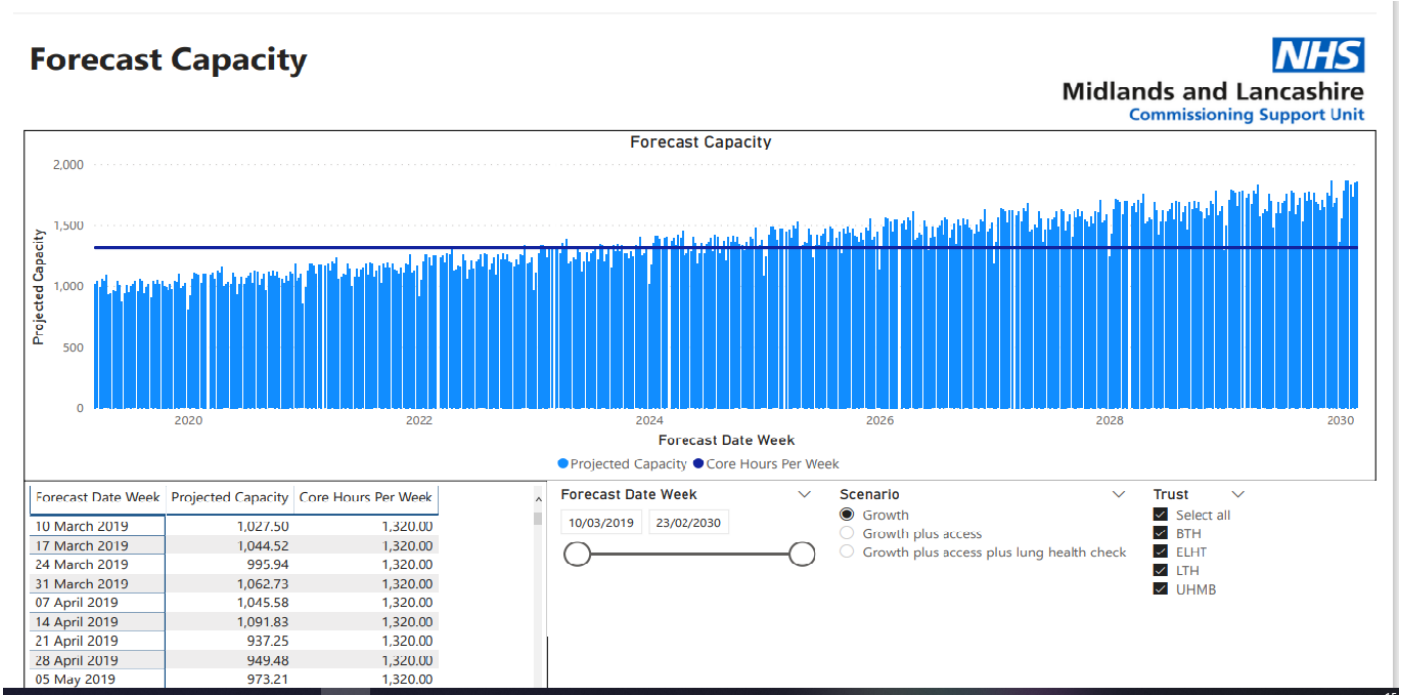
CT x 2	Staff Per Scanner	Equipment per CDH	WTE per CDH	Estimated per WTE	Staffing Cost per CDH
Band 7 Radiographer	2.73	2	5.47	£55,000	£300,608
Band 6 Radiographer	2.73	2	5.47	£48,000	£262,349
Imaging Support Worker	2.73	2	5.47	£28,000	£153,037
Band 8a Service Management	0.55	2	1.09	£65,000	£71,053
Admin Support	1.37	2	2.73	£28,000	£76,518
Assistant Practitioner	0.00	2	0.00	£32,000	£0
Consultant Radiologist - Reporting	4.53	2	9.05	£130,000	£1,176,989
Total CT Workforce	14.64		**29.28**		**£2,040,554**

Ultrasound x 2	Staff Per Scanner	Equipment per CDH	WTE per CDH	Estimated per WTE	Staffing Cost per CDH
Band 7 Ultrasonographer	0.55	2	1.09	£55,000	£60,122
Band 8A Ultrasonographer	2.19	2	4.37	£65,000	£284,211
Support Worker	2.73	2	5.47	£28,000	£153,037
Total US Workforce	5.47		**10.93**		**£497,370**

Appendix 3 – Actual Activity in CT v Forecast Demand captured



Appendix 4- Forecast Capacity against CT assets L&SC



Work is underway to map current staffing levels onto the asset/demand capacity. Where staffing capacity levels are lower than demand levels/asset levels, additional activity needs to be supported by such revenue as overtime, waiting list initiatives, agency and outsourcing to the independent sector.