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Diagnostic imaging network workforce guidance

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Developed in consultation with and supported by The Royal College of Radiologists, Society of Radiographers and Institute of Physics and Engineering in Medicine

Contents

The main purpose of this document is to optimise the utilisation of the current workforce within imaging departments through networks. The document enables those who work within imaging networks to work efficiently by improving working environments and sharing work, as well as guide planning for the future growth of the workforce.

However, it is important to recognise that these factors need support from increasing the overall workforce, both clinical and non-clinical, as highlighted in the Richards Review, Diagnostics: recovery and renewal (2020). Furthermore, emphasis needs to be placed on prioritising training places and improving imaging staff retention, including those newly trained and those close to retirement. This will help to positively increase network capacity and ensure that imaging staff are supported with their wellbeing and career progression.

1. Introduction

About 151 NHS trusts and foundation trusts provide their imaging services, using operating models that need investment in premises, IT and equipment. Resourcing these individual services with the right number of medical and non-medical staff is proving increasingly difficult.

To address these challenges, The NHS Long Term Plan committed the NHS to have established imaging networks across England by 2023. The national imaging strategy outlined how their formation will maximise existing capacity, improve access to specialist opinion and make efficiencies and economies of scale. NHS evidence supports the strategy that networked imaging services and the modernisation that goes with this increase both quality of service for patients and efficiency, making these services more resilient and sustainable. The Diagnostic imaging network implementation guide identifies benefits to patients, staff and services.

The national imaging strategy proposes transformation by introducing an image-sharing platform whereby all digital images acquired by imaging services within the network can be managed via a single shared worklist and transferred for reporting to any site in the network or beyond. Networking enables imaging services to maximise the benefits of pooling the reporting workforce by making economies of scale and improving access to specialist opinion. At the same time, individual sites continue to image patients close to where they live. Working across a network also supports protocol standardisation.

Imaging networks allow imaging services to manage resources, particularly capital resources, more effectively. The purchasing power of an imaging network will be at least 10 times that of an individual trust.

Strategic industry partners will find imaging networks attractive for technological innovation and research and development activities. Investment in NHS diagnostic imaging services may develop from long-term strategic partnerships with industry.

1.1. Purpose

This document provides guidance and case studies, and identifies available tools to help NHS providers of diagnostic imaging services develop a strategic workforce plan for their network. It has been reviewed and approved by the National Imaging Board (NIB), which has broad representation from imaging services, including the Royal College of Radiologists (RCR), the Society of Radiographers (SoR), the Institute of Physics and Engineering in Medicine (IPEM) and industry.

It does not provide a blueprint for the workforce plan but highlights the critical areas for consideration and the options available to networks in each of those areas. There is no 'one size fits all' solution. Plans will vary from network to network according to local context. This includes the variation in network members (mix of NHS trusts and foundation trusts), age and distribution of the existing equipment asset base, clinical case mix, geographical characteristics of the network (urban or rural) and the pattern and models of service delivery.

The guidance reflects the principles and approaches in the national imaging strategy and the other documents we have published to support the formation of imaging networks. These include:

- Imaging network implementation guidance
- IT and digital guidance
- Capital planning
- Commercial structure and operational guidance

Our documents have been guided by early adopter experience and expertise, and review of case studies from diagnostic imaging networks and professional bodies.

1.2. Disclaimer

We provide guidance only and you should seek further specialist advice regarding workforce changes and governance.

2. Workforce challenge

The development of the imaging networks' workforce is the top priority in the collaborative working between NHS England and NHS Improvement and Health Education England (HEE) Imaging workforce group.

Imaging networks have an essential role in supporting the growth and development of the imaging workforce, both in leveraging innovation at a larger scale and in bringing a more integrated approach across a wider geographical footprint.

The workforce is the most valuable and important asset, as well as the biggest challenge (both in terms of numbers and skills). Benchmarking data published via the Model Hospital shows chronic shortages across all professions: average vacancy rates for clinical support workers are 4.6%, diagnostic radiographers 11%, sonographers 6.7% and medical physicists 9%. The Royal College of Radiologists reports a 10% vacancy rate for consultant radiologists. With a predicted year-on-year increase in activity, these chronic shortages increase expenditure on agency, overtime and outsourcing.

The Richards Review, Diagnostics: recovery and renewal (2020), advised that an extra 4,000 diagnostic radiographers, 2,000 radiologists and 220 physicists, in addition to several other imaging workforce groups, are needed to keep up with demand and to enable the development of networks and community diagnostic centres (CDCs).

For growth in imaging services to be sustained, workforce plans must include the expansion of the other professional groups that work in tandem with the clinical workforce (for example, IT/PACS, clinical systems, administration, finance professionals).

Imaging networks allow a different way of working to develop from traditional models. These are summarised in this guidance and offer overall benefits for staff and patients.

Benefits for staff	Benefits for patients
• More opportunities and better access to education and training • Flexible working – home reporting, working across sites, flexible retirement • Best use of 'team' reporting capacity, with appropriate skill mix across radiologists and reporting radiographers • Opportunities to increase skill mix across clinical support workers, assistant practitioners and advanced radiographic practitioners, improving recruitment and retention through career progression	• Sustained local services for scanning close to where people live • Access to specialist opinion across a wider geography and quality improvements • Reduced risk of missed diagnosis • Faster reporting turnaround times reduce waiting times across the pathway and therefore anxiety for patients

Join the Imaging Workforce discussion forum on the FutureNHS National Imaging Transformation Programme.

Contact nhsi.imagingservices@nhs.net for support, information and to find more about other resources.

3. Clinical leadership structure for networks

Network leadership is covered in detailed in the imaging network Commercial structure and operational guidance. This guidance recognises the benefits of good leadership by:

- linking leaders to allow knowledge sharing and formalise peer support for service and clinical leaders across a network and region
- providing an essential mechanism for co-ordinating and communicating the network strategy and direction
- providing network planning and support for business case and change management

- providing opportunities for a network-wide approach to education and training requirements, increasing efficiency and improving access with an equitable and inclusive approach
- connecting regional networks and regional HEE and NHS England and NHS Improvement teams, to work together towards achieving the national and regional strategies.

The central role of executive sponsorship and effective clinical leadership in successful NHS service change programmes is well understood. Networks must have clear radiological, radiographic and scientific leadership, with both sufficient job time allocated to this and support from executive leaders to enable effective delivery. Leading an imaging network is a very different proposition to leading a clinical service within an acute trust. Leaders of networks will therefore need varying support structures, including adequately resourced operational management teams.

Leaders will need to share their network's vision through a change in practice and culture.

There are several points to consider:

- The operational governance that the imaging network adopts will influence how leadership roles are recruited and governed.
- Learning from early adopters, which can be found in Transforming imaging services in England, as well as:
  - creating a shared strategy across the network, including communication, and collaboration (Cheshire and Merseyside CTP)
  - setting up on-call agreements from a hub model
  - critical success factors to improve the outcome of procurement within a network.
- The NHS England and NHS Improvement national imaging team have supported network clinical leadership learning. The first cohort of leaders started the clinical imaging network leadership programme in September 2021.

4. Understanding the current workforce

An understanding of the current workforce opportunities and challenges is essential for the development of a network workforce plan. The National Imaging Data Collection (NIDC) provides information on job roles and job planning and can be found on the Model Hospital; SCoR, RCR and IPEM also publish data from the censuses they undertake. Collectively these data will inform the national and regional picture.

Planning as a network will identify optimum skill mix for each service (for example, paediatrics, forensics and governance), share specialist skills and support education and training efficiency. Networks may wish to carry out a local workforce census to better understand workforce issues and identify areas for potential growth as a network.

4.1 Benefits of workforce planning

- Establishes the current gaps in the workforce, both in terms of numbers and skills, and how these affect services.
- Identifies where short, medium and long-term action is needed.
- Offers more effective planning/response at network level for services that need to grow due to demand or need for their introduction (for example, targeted lung health checks).

4.2 Demand and capacity modelling

The aim is to improve patient access and enhance patient safety, experience and satisfaction. Understanding the capacity, demand and efficiency of current services will help identify any gaps in the workforce.

The tools below have been developed for use at trust level. Their use across a network will help identify the network-wide gaps within services and any opportunities for further skill mix development or the need to introduce new roles.

- The diagnostic imaging capacity and demand tool helps operational teams understand the overall demand and estimate the capacity needed per scanner and modality. This can optimise appointment times and help identify capacity across a network and where staff most need to be redeployed to.

- The RCR business intelligence guidance encourages the use of data to support departmental workforce modelling and service planning, but is applicable to the development of imaging networks also.
- The Health Education England Star Model can help with understanding of the current workforce within services and the network, and the requirements and steps for change.

5. Skill mix

The national imaging strategy, GIRFT radiology report and Diagnostics: recovery and renewal all highlight significant unwarranted variation in skill mix across England. Networks will help to reduce variation for patients using different hospital sites and maximise the contribution of all staff groups, by improving career progression and producing efficiencies within the network, to ensure patients receive high quality and timely imaging.

Establishing a workforce strategy will support the development of optimal skill mix by:

- **enhancing roles;** for example, extending assistant practitioners' scope of practice, developing radiographers' roles and progression to enhanced, advanced levels and consultant levels of practice
- **substituting roles;** for example, clinical support workers cannulating for CTs instead of radiographers, or working as part of the PACS/RIS team
- **designating roles;** for example, technologists performing QA tests instead of clinical scientists
- **introducing new innovative roles;** for example, radiology navigators to support patient pathways.

5.1 Benefits

Optimising skill mix across a network is essential for:

- increasing productivity so patients can get appointments quicker, earlier diagnosis and improved quality of care
- enhancing job satisfaction and with this staff recruitment, retention and resilience – a broad skill mix across a network provides greater opportunity for career development, with career paths to work towards

- growth in existing services and introduction of new services such as CDCs, providing expansion of current roles and opportunities to build new roles centred on patient pathways, depending on the services offered.

This requires:

- clearer and accessible career paths between support staff and assistant practitioner roles, and apprenticeships in radiography and nursing, supporting development of skill mix within the team
- greater training opportunities within regional imaging academies; by working as a network there may also be potential to increase training places
- consideration and identification of new ways of working; for example, hot reporting for emergency and trauma services extended across the network as a result of the increased access to reporting radiographers.

The Breast Screening Programme has developed its workforce skill mix to support and deliver the patient pathway with a fully supported mammographer career development structure. This has four tiers from assistant practitioner to consultant radiographer. The roles and responsibilities of each level of practice are identified and breast clinicians' credentials have been established by the RCR, HEE, National Breast Imaging Academy and Association of Breast Clinicians to increase the clinical workforce.

5.2 Considerations

Below are examples of roles that can help optimise skill mix, along with descriptions of how they can be used to support other roles within the team. These roles are described at an individual level; leveraging them across a network will provide stability and sustainability for patients and services, and opportunities to train and create new roles within the network.

- **Clerical staff** can release time for radiologists to report by undertaking generic administrative tasks, such as scheduling multidisciplinary team (MDT) meetings and assembling the information for these. They can also support the patient journey through imaging; for example, by providing information on what a patient can expect during their visit to imaging, helping patients fill in MRI

questionnaires and supporting PACS teams. By working across a network they can help manage waiting lists and ensure that procedures are booked where they are best suited – both for the procedure and the patient, thus supporting sustainability of services during unplanned leave.

Clerical roles can evolve into radiology navigators who work across a pathway and across a network, to ensure patients are supported and their appointments and results are tracked.

- **Clinical support workers** can increase productivity within all modalities and aid practitioners in areas such as cannulation for MRI or CT and patient preparation for ultrasound, as described in the GIRFT radiology report. This can create more imaging time within the network, decrease waiting times for patients and release practitioners from generic tasks, allowing them to focus more on advanced and specialist care.
- **Assistant practitioners** (APs) are not used in all departments. Such roles are mostly in plain imaging or general X-ray. Embedding APs into rotas to support the general X-ray area releases radiographers for enhanced and advanced roles. Widening APs' scope of practice to other modalities such as MRI and CT should be explored. AP roles may also be used to support new services such as CDCs. The Skills for Health report, assistant practitioners in the NHS in England sets out the key benefits of these roles.
- **Enhanced practitioners** have specific expert knowledge and skills in a particular field. They manage a discrete aspect of a patient's care within their current level of practice, contributing to service delivery as part of the MDT.
- **Advanced practitioners and consultant practitioners** are experienced practitioners who work with a high level of autonomy and make complex decisions within their scope of practice. They work across all four domains of practice: clinical skills, education, leadership and research. They provide effective clinical care to patients, expanding their practice into many different areas such as plain film and CT reporting, sonography and interventional radiology (IR) with line insertion. The HEE advanced practice toolkit provides helpful resources relating to advanced practice.
- **Medical physics clinical scientists and technologists** provide scientific support and technical services to imaging departments. **Clinical scientists** support the specification, procurement and commissioning of imaging systems. They support clinical teams by optimising these systems in terms of

image quality and where relevant patient dose. **Technologists** work alongside medical physics clinical scientists to perform periodic comprehensive QC tests, and support radiographers carrying out routine user QC of X-ray systems to ensure image quality and patient doses are monitored at all times. Developing the technologist workforce further will support clinical scientists in driving improvement in imaging services.

East and North Hertfordshire NHS Trust has introduced technologists into the medical physics team. They have been trained to perform some of the more complex tasks that clinical scientists usually do. This has also created a learning pathway for the department.

5.3 Staff mobility

Networks should articulate how they will support the free movement of staff across the network, both physically and virtually. There are many ways to support the movement of staff; for example, mutual recognition agreements for consultants and trainee doctors reporting across trusts, and staff passports for radiographers working across a network. With network leaders and imaging department leaders working together to provide streamlined processes, a mobile workforce promotes the standardisation of policies and procedures and competencies across the sites.

The movement of staff across a network may allow staff to work flexibly and patients to have wider access to specialist opinions. Staff mobility can support the needs of new services; for example, the staffing of CDCs.

It is important to engage early with staff groups, human resources leads and trade unions when introducing mobility across sites. Staff groups cannot be redeployed without their prior agreement or consultation.

5.4 Tools to support skill mix and mobility

The following tools and information sites can support staff mobility – although mainly aimed at doctors, they can be used across all workforce groups:

- The sharing staff appropriately and efficiently toolkit signposts how to set up workforce sharing agreements, with examples of agreements that are already in place across the NHS.
- The system working staff mobility/portability guidance advises on developing workforce sharing agreements and provides templates and legal considerations.

The NHS Long Term Plan commits NHS trusts and foundation trusts to deploy electronic rosters or e-job plans by 2021.

The following workforce deployment systems can help develop and deliver skill mix and mobility across a network. More information and recordings of webinars can be found on the clinical workforce productivity FutureNHS page.

E-job planning

E-job planning documents professional activity, to ensure there is enough clinical capacity to plan and deploy a workforce and that this is balanced against training needs. In line with the NHS Long Term Plan all clinical workforce groups and service levels should be accounted for to allow gaps within the network to be identified. The FutureNHS platform has useful resources on the 2021 job planning project, including webinars and guidance documents.

Job plans are currently used in consultant workforce planning but should now be extended to team job planning. Including advanced and consultant practitioners identifies the MDT involved in patient care, maximises the radiologist workforce contribution and identifies where extra training and recruitment are needed. This networked approach will need support from trust stakeholders but will have significant impact on services and staffing. It can improve:

- the understanding of the workforce involved in a clinical pathway, identifying gaps or duplication
- staff morale and health and wellbeing when implemented appropriately and collaboratively to develop robust staffing models
- staff recruitment and retention by demonstrating a clear understanding of roles and service levels.

The following tools can be used to introduce job planning to the allied health professional workforce and the wider team:

- the AHP job planning best practice guide provides a starting point for deploying e-job planning on both an individual and team basis
- the E-job planning guidance provides an overview of job planning with examples and the case for change.

E-rostering

E-rostering gives visibility to staffing levels and allows rotas to be planned ahead. With staff movement across a network and staff having different working patterns, it is important to have visibility at service level and at network level. This emphasises the importance of a network having the right staff with the right skills in the right place at the right time.

E-rostering software also allows staff to see their rotas on and be alerted to changes through their phones, as well as to book leave remotely. This empowers the workforce to take time to prepare for work and the flexibility to book time off when they need and want to.

E-rostering services in the past have been difficult to use within imaging services due to the variability of shifts for clinical staff and their degree of movement. The following provide guidance on how to procure or develop software that is applicable to a network's needs for effective workforce deployment.

- E-rostering the clinical workforce guidance outlines the principles and techniques for e-rostering staff efficiently.
- E-rostering software specifications sets out the core functions and specifications for the tool.
- E-rostering meaningful use standards sets the levels trusts and services should aspire to work towards.

6. Networked image reporting

Traditionally radiographic image reporting has been completed by radiologists, but increasingly over the past 10 years, radiographers who are educated (at Masters level) and trained to report have become integral to the image reporting team within many radiology departments.

The 2019/20 Model Hospital reported that 144 acute and specialist acute NHS trusts in England outsourced over 5.5 million examinations. Of the outsourced activity, 85% was to tackle reporting backlogs or provide an out-of-hours reporting service. Reporting backlogs have long been an issue for acute trusts, often driven by workforce shortages. Many are now reliant on outsourcing models to maintain timely reporting and meet delivery targets. This incurs significant cost for many imaging departments and is their biggest expenditure after workforce, although this is not reflected directly in pay costs.

A network-wide pooled reporting model can better support the management and prevention of backlogs by drawing on a larger workforce and supporting areas that are short-staffed due to leave or unplanned staff absence. As well as out-of-hours reporting and faster access to specialist opinion, imaging networks provide a platform for enhanced 'insourcing', particularly if digital connectivity is optimally delivered.

Networked reporting supports the development of shared governance standards for the reporting workforce, removing variation and improving access for patients to timely reports. It also supports further training in specialised areas within imaging and the expansion and development of appropriate skill mix.

Working across a network also supports the development of protocol standardisation.

The IT network toolkits and home reporting resources should be used to support the implementation of shared reporting and IT systems across the network that support the workforce.

6.1 Benefits

Possible benefits of networked reporting are:

- facilitates development of a network-wide recruitment strategy for workforce recruitment across the network
- enhanced insourcing service provision to reduce outsourcing
- subspecialist cover
- shared out-of-hours provision
- shorter reporting turnaround times
- decreased reporting backlogs

- potential to train more radiologists and radiographers in reporting, and learning generally across the network
- harmonisation of insourcing rates.

6.2 What is required?

Reporting models

A network-wide reporting model can support in-hours reporting and on-call reporting provision, to reduce the need for outsourcing. This will require consideration of the visibility of reporting worklist arrangements for both managing demand and pay harmonisation for additional work. Networks should consider the practical aspects of how this will be achieved and what services the network will provide. The operational guidance advises on how clinical governance, staffing models and leadership can be governed. Trade union involvement in pay and conditions consultation should be sought at an early stage.

Demand and capacity modelling (see Section 4.2) and job planning (see Section 5) will identify where there are gaps in capacity for both acquisition and image reporting within the network. Optimising reporting allows the development of an insourcing model and potential reinvestment of cost saving to increase the number of substantive posts.

A network-wide reporting model can also help with a network-wide strategy for recruitment to fill identified gaps and vacancies. It can support the recruitment of specialist radiologist roles at smaller trusts, which have been difficult to recruit to. These roles can be made more attractive by having an agreement to split sessions with larger teaching or specialist centres, as well as by providing radiologists at smaller trusts with opportunities to train in areas of interest at larger trusts.

By widening the workforce across the network to cover reporting out of hours, a pooled reporting system can decrease the number of shifts for any individual and potentially also the amount of outsourcing. Increasing numbers of radiology trainees can also support on-call rotas, and in turn will support their training and knowledge. Specialist radiographers, such as those within emergency departments and trauma services who are experts in recognising fractures, can help improve service quality across the network

The Peninsula Radiology network created a pooled on-call service for trainee radiologist, giving Cornwall and Devon access to reporting overnight all year round. While supervising consultants stayed at their host sites, this has significantly improved the training experience and opportunities for radiology trainees, as well as daytime reporting capacity across the network.

Digital interoperability

The interoperability of digital systems must be factored into timescales for implementing reporting models across a network. Network-wide reporting and the integration of RIS and PACS will allow pooled reporting and urgent review of scans by specialists. Critical to the design and implementation of digital systems is that planning is done with stakeholders with the network's workforce, to ensure it addresses their needs as users.

Interoperability will take time to establish across the network. Those networks in the early stages of this should consider the following:

- service-level agreements or memoranda of understanding for consultant radiologist specialist reporting to support sites that are struggling with certain specialties, where there is spare capacity
- managing insourcing across the network by supporting consultants and radiographers who volunteer to report outside their working hours, with harmonised additional remuneration
- establishing a PACS managers group and encouraging rotation of staff between organisations to share knowledge of systems and business processes.

Protocol standardisation

A network approach to protocol standardisation provides the opportunity to improve patient pathways by reducing inappropriate referrals and recalls, as well as to increase productivity by reducing examination time where appropriate. Agreeing protocols for image capture and reporting across a network will reduce unnecessary variation and support improvements in image quality through audit and dose management.

The GIRFT radiology report highlighted that a standard knee MRI examination protocolled by different radiologists results in between two and seven sequences. This

dictates how long the examination takes. By introducing a pathway standardised protocol where appropriate, radiographers and other team members can vet referrals to maximise equipment capacity and appointment time and thus free up time for radiologists to focus on more complex scanning and reporting.

Protocol standardisation should be included in imaging networks' capital planning to ensure that new equpiment can support harmonisation while optimising scan time and patient dose, and be agreed by radiologist clinical leads, modality lead practitioners, medical physics teams and referrers.

6.3 Considerations

Interventional radiology (IR)

When planning services across a network, it is important to include provision for IR services. IR plays a vital role in the diagnosis and treatment of both elective and emergency patients, but not all hospital sites offer all types of treatment or a 24/7 service.

Robust cover should be a priority, with formal transfer procedures and policies in place to support emergency transfers to specialist centres across a network (for emergency haemorrhagic control or stroke thrombectomy, for example), and making IR treatments accessible for all patients.

Safe and sustainable rotas for specialist interventional radiologists and the IR nursing and radiographer team are vital to support the out-of-hours rota. Fellows and trainees across the team can also support this. The RCR reported that although on average the interventional consultant radiologist workforce has increased by 4% annually, there is still an 8–10% vacancy rate and only eight paediatric interventional radiologists across the UK. Training and education posts should be increased across networks to ensure an interventional workforce pipeline, and to meet the demands of expanding services.

When planning IR services, it is important to refer to the RCR provision of interventional radiology services, which provides information on the staffing and service provision needed on site.

Enhanced and advanced radiographer practitioners can support interventional services when appropriately educated, trained and supported to do so, and using their skills across a network can help with service capacity.

Radiographer reporting

Diagnostic radiographers who are trained to report can support timely availability of results for patients. The GIRFT radiology report supported an increase in their numbers, both so patients receive results faster and to allow radiologists to focus on work, including more complex imaging.

In 2019/20 NHS trusts in England performed 138 million radiographs, 32% of which were reported by radiographers. Imaging networks should consider what the right level of reporting should be for radiographers and consultant radiologists. They should work towards 40% of X-rays being reported by radiographers for those organisations starting to develop these roles so as to ensure that radiologists maintain this skill. Further reporting role development should feature in workforce plans and may include areas such as low-dose lung CT and MRI studies.

Within the EMRAD network, advanced diagnostic radiographers contribute to reporting plain films and they have helped reduce the backlog. The network has also introduced diagnostic reporting radiographers into CT and MRI. Support from the network's radiologist team has meant that radiographers have been able to extend their scope of practice.

Home reporting

Reporting strategies within IT, digital and workforce plans should highlight clear arrangements for home reporting and refer to the imaging network IT and digital toolkits for guidance.

The benefits of home reporting have been exhibited during the COVID-19 pandemic when most reporting radiologists moved from imaging departments to homes so that radiologists could support the service from a COVID-secure environment. Contingent on good digital connectivity, reporters may find that by working from home they can focus better on reporting with fewer interruptions and have a better work–life balance.

Radiographer reporting from home can add to service capacity and should be included in network home reporting plans.

EMRAD piloted home reporting by regional neuroradiologists to support specialist reporting of neuro-scanning, especially on-call. This gave greater flexibility to specialist advise within the radiologist reporting workforce for a wider geographical footprint.

7. Recruitment and retention

Networks should develop collaborative strategies for recruitment and retention of clinical and non-clinical staff to ensure imaging services across the network have the right staff, in the right place, at the right time. Networks may find that they can develop trust-level recruitment and retention strategies.

Within a network, local retention incentives and strategies are crucial to building workforce resilience: an approach to career progression, access to education and development and harmonising pay and rewards strategies are needed. Providing opportunities for flexible working and engaging with staff about their individual needs may all reduce attrition, especially due to early retirement and sickness, as suggested in the RCR 2021 support and wellbeing report.

Together with offering clear career development plans, exploiting different routes into imaging careers can help fill vacancies and this in turn will increase productivity.

7.1 Benefits

With successful recruitment and retention network strategies, the anticipated benefits of recruitment and retention strategies at network level are:

- less competition for staff between neighbouring trusts
- highlighting and implementing the inclusion, equality and diversity strategy for the imaging network
- augmenting service resilience
- leveraging enhanced career pathway design and development for all staff groups
- enhancing access to learning and increased student capacity
- promoting a better work–life balance for staff.

7.2 Considerations

Education and training

Clear education, training and development pathways can increase recruitment and retention of staff, aid service planning and develop skill mix. A networked approach to education and training can help to identify and share student placements and maximise training capacity and continuing professional development opportunities. The sharing of resources across the network through practice educators can support training and opportunities at all levels within the imaging workforce and provide pastoral care to junior members of the team and internationally recruited staff.

Networks should consider how they can increase their clinical placements for pre-registration radiographers as well as healthcare scientists, trainee radiologists and postgraduate advanced clinical roles and research. The RCR vision for training discusses solutions to recognised difficulties in increasing training posts within the medical workforce.

Workforce strategies and plans should identify how education and training should be delivered – in departments, virtually, through e-learning, such as the Clinical Imaging programme, using interactive tools such as virtual support tools or more formally through higher education institutions (HEIs) offering credit bearing programmes.

Deploying innovative tools such as virtual support (for example, in CT and MRI), allows senior radiographers or medical physicists to remotely log into scanners and their direct communication with radiographer practitioners. This can build confidence in newly trained staff when scanning as they can access remote support for complex cases. This type of tool can also support the education and training of students and staff, with live learning sessions away from the control room. The effectiveness and safety of such technology is currently being evaluated in a pilot led by NHS England and NHS Improvement.

Imaging academies

Imaging academies combine traditional teaching methods with clinical teaching and have traditionally been used to support radiologist training. They are now being expanded to provide ultrasound clinical training for sonographers and clinical reporting training for radiographers, and will link to HEIs for the formal education delivered through a postgraduate College of Radiographers' approved programme. Regional academies can support some components of a network's educational and training

priorities within its strategies. This gives smaller departments access to physical resources such as simulation equipment, and peer and expert support.

HEE and IPEM are also exploring how academies can support healthcare scientist training and how physics services can help train colleagues in radiology and radiography.

Networks should engage with regional imaging academies to support the growth of student and trainee placements and training within the teams.

> The South Yorkshire Clinical Academy trains and supports diagnostic reporting radiographers while they work alongside radiologists. This academy facilitates support for radiologists and radiographers while training. Within the region it has successfully increased the number of training places for reporting radiographers.

Routes into imaging

Having different career routes into imaging services brings different working styles and knowledge to a network. The opportunity to grow careers for those from the local community, regionally, nationally as well as internationally will bring a diverse and agile team dynamic. The HEE role explorer is a collection of resources that supports the planning and delivery of workforce redesign. It provides resources for introducing new and innovative roles, as well as adapting existing roles to meet the demands of a network.

These routes – as yet not widely used in imaging – should be considered:

- **Apprenticeships** are available at degree level (the Health and Care Professions Council [HCPC]/SCoR approved), offer pre-registration education and training for diagnostic radiography apprentices and can widen access to the profession. Those entering imaging services through this route must meet the same HCPC standards of proficiency as those who enter through traditional routes. Apprentices will therefore have the same clinical experience and theoretical knowledge as students completing undergraduate/pre-registration SCoR/HCPC-approved programmes. The difference is that apprentices are employed and work at the hospital site while they train. Apprenticeships are available from support worker level and therefore can

support people building their careers in imaging networks, from clinical support workers to radiographers.

- **International recruitment** brings knowledge, different styles of working and diversity to teams, and benefits the employee and the network. The We are the NHS: People Plan 2020/21 recognises ethical international recruitment as being important. Networks should explore this and build partnerships with new countries in doing so. Recruiting internationally as a network can mean this is done at scale, and support and pastoral care is available across the network. The following tools can support collaborative and effective international recruitment:
  - the international recruitment toolkit provides a guide through the process of international recruitment and can aid key stakeholder conversations
  - restarting international recruitment shares learning in how to support international staff, risk assess them and conduct remote interviews and employment and visa checks.
- Staff and associate (SAS) doctors bring knowledge from radiology positions abroad. Many have managerial or educational backgrounds. The most recent RCR census reported that 77 SAS grade doctors were working within radiology in England, which is low compared to other professions. With their international experience these roles can provide an essential contribution to the MDTs within imaging.

The South West Region has invested in an international campaign through the adapt and adopt programme to support the recovery and renewal of services and reduce vacancy levels. It was important to involve all teams in the region, from recruitment to interviews, so they could ask their department's questions.

A pastoral package was developed for all new radiography recruits, supporting both the international recruits and the staff providing support and mentorship.

Harmonisation of roles, banding and pay and career pathway design

The NIDC shows wide variation between trusts in roles, pay and the ability to progress through imaging careers, all creating unnecessary competition. Harmonising job descriptions and titles will reduce competition for staff within networks; consistently applying the Agenda for Change (AfC) job evaluation scheme and being clear how the

network supports career ambitions can help with recruitment and retention. Early engagement with trade unions is essential in any work to harmonise terms and conditions, including job descriptions.

The North West London Network Radiographer Career Framework was agreed by all member trust chief executives and sets out the key competencies and behaviours for each AfC band in the network. These key indicators are used to set job descriptions and have helped standardise positions through the network.

Flexible working

Imaging networks have the necessary scale to give staff a choice of working environments and/or the rota that suits their work–life balance. Working as a network will help to identify flexible working best practice and provide access to a wider range of opportunities.

Flexible working is beneficial for learning new skills and techniques, but also provides cover for sickness absence and annual leave when needed. There should also be opportunities to work part-time or as a job share. The People plan 2020/21 encourages offering these flexible working options for the wellbeing of individuals and the team.

Flexible working can support:

- **Retire and return:** incentives for older staff to stay can keep a wealth of knowledge in imaging departments; for example, with more opportunity to report from home, reduced or no on-call commitments, consultant radiologists are more likely to continue than retire. These incentives should also be offered to reporting radiographers, sonographers and clinical staff, and conversations started well ahead of when they may be considering retiring.
- **Return to practice:** COVID-19 has seen the return of many radiographers and medical staff who had left the profession. The return to practice scheme should continue to be highlighted to radiographers, sonographers and healthcare scientists.

Many imaging workforce developments are ongoing at regional, network and service level. For further updates and case studies please log on to the NHS Imaging Transformation FutureNHS page.

8. Useful resources

- Imaging network toolkits
- The People Plan 2020/21
- Diagnostics: recovery and renewal
- Transforming imaging services in England: a national strategy for imaging networks
- The NHS Long Term Plan
- Operational productivity and performance in English NHS acute hospitals (Lord Carter of Coles)
- GIRFT report: National specialty report on radiology
- RCR: Who shares wins: Efficient, collaborative radiology solutions
- HCPC standards of proficiency for radiographers
- Society and College of Radiographers
- Royal College of Radiologists
- Institute of Physics and Engineering in Medicine
- Health Education England

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