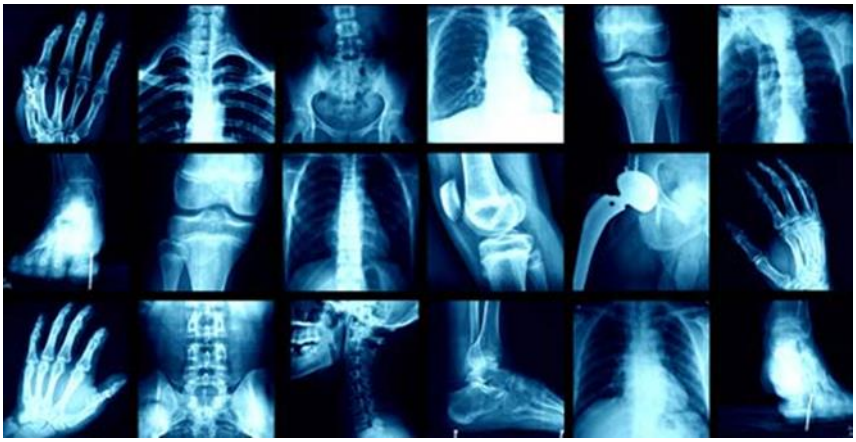
DHSSPS Review of Imaging Services

Radiology Workstream



Paper 4 of 4: Blue Sky / Horizon Scan

Future Proofing and Strategic Planning

16th December 2015

Authors: Dr R McNally, J Robinson, M Wright

Table of Contents

1.0 Introduction

1.1 In 2013, the Department of Health, Social Services and Public Safety established a Review of Imaging Services in Northern Ireland. The Review is tasked with considering the full spectrum of imaging services provided by Health and Social Care, and established a number of Workstreams to take forward the substantive work in each of the core areas. At its first meeting in September 2014, the Project Board requested each Workstream to produce a series of four papers (listed below:

- **Paper 1: Current service**: *where we are* – report/analysis of the current service configuration, demand/capacity, capital resource, workforce etc.
- **Paper 2: Optimal service**: *where we would like to be* - paper outlining what an optimised service would look like, including taking account of regional approach, professional role expansion etc.
- **Paper 3: Gap analysis:** *what we need to get us there*.
- **Paper 4: Blue sky/horizon planning:** future proofing and strategic planning.

1.2 The Radiology Workstream membership is attached in **Appendix 1**. The Workstream presented Paper 1 to the Project Board in September 2014. The paper outlined current provision of adult radiology imaging services in Northern Ireland and endeavoured to describe some of the contributing factors where the current state was under challenge or pressure but it was not tasked with offering solutions.

1.3 Paper 2 of the Workstream was presented to the Project Board in January 2015 and it challenged us to design an exemplar imaging service to support the needs of the health service in Northern Ireland for the next ten years. The paper provided a narrative under a range of key themes to present the views of the group on what an exemplar imaging service would look like. At the end of each section was a list of key statements reflecting what the service of the future would look like which have been used as the basis to undertake the gap analysis.

1.4 Paper 3 required the Workstream to undertake a gap analysis to identify what is needed to get from where we are now (Paper 1) to where we want to be (Paper 2) and was presented in draft to the Project Board in May 2015. This was a challenging paper, which aimed to be ambitious but realistic. In doing so we attempted to be explicit about the benefits to be gained by addressing these gaps and clear about the impact on the quality and effectiveness of patient care. The final draft of Paper 3 was approved by the Project Board on 18th June 2015.

1.5 Paper 4 is the final in the series of four papers required from the Radiology Workstream and aims to present a "blue sky" vision of what we believe imaging services could look like if we had the freedom to design an ideal service, with the aim of future proofing and providing strategic direction. Although conceptual in nature, the Workstream believes that much of the blue-sky is achievable with sufficient dedicated resources, strong leadership and a willingness to support a break away from traditional boundaries and ways of thinking.

2.0 Radiology Workstream: Reflection on Papers 1-3

2.1 The review of health service imaging in Northern Ireland has been an opportunity to develop and grow the service towards providing responsive, high quality imaging to support the challenges within healthcare for the next 10 years and beyond.

2.2 The Radiology Workstream has demonstrated that imaging requirements have accelerated beyond what was expected and that workforce planning to date has greatly under-estimated present and future requirements. We have recommended that a large increase in radiologist training numbers, skill mix and recruitment from outside the region are required to close the gap and reduce reliance on expensive, outsourced reporting. We have also raised concerns regarding the retention of current trained staff.

2.3 We have presented initial, but none the less compelling, information about the potential currently within the radiographic workforce to redirect specialist time to specialist task if backfill was available, and the need for further recruitment to meet future requirements. There is clear evidence for investment to support advanced practitioner radiographers to deliver and develop reporting expertise for plain film and other modalities and the wider range of advanced practitioner skills.

2.4 We have demonstrated that there is at present, adequate imaging equipment in place and that there are good efficiency and productivity reasons why it should be optimised and concentrated in hospital-based imaging centres. It is hoped that independent sector image acquisition could partly, and eventually fully, return within the health service by increasing funded evening and weekend use of scanners, although this is dependent on recruitment of radiologists, radiographers and support staff.

2.5 The Workstream has recommended that accreditation is introduced for imaging departments in Northern Ireland to ensure that high standards in quality, safety and patient experience exist and that the service users have confidence in the care delivered throughout the region.

2.6 We have highlighted the enormous contribution that NIPACS and NIECR have made to healthcare professionals in providing an information base that supports decision making in a better, safer and more efficient way. We have also emphasised how the continued existence of three separate PACS systems in the Belfast Trust has resulted in patient risk and systemic inefficiencies.

2.7 Other important recommendations have been made regarding specialist networking to allow support in specialist areas, development of multi-disciplinary advisory panels to streamline referral processes from primary and secondary care and greater patient influence in how services are delivered.

2.8 The review has highlighted the opportunities for excellence in imaging in Northern Ireland. There are many examples of high quality service delivery across the province, with a workforce that is well trained and highly regarded. There are opportunities for greater co-operation and learning between Trusts and sharing of expertise, thanks to the use of NIPACS, NIECR and the universal use of the health and care number. This willingness to collaborate for shared benefits has been fostered by the Modernising Radiology Clinical Network (MRCN).

2.9 Medical imaging has progressed from a supportive to a central role in healthcare systems and an efficient imaging department is essential in the hour-to-hour operation of an efficient acute hospital. Early accurate diagnosis can be lifesaving or altering in terms of acute disease, acute injury and oncology. There are opportunities in the DHSSPS Review of Imaging Services to change

and improve systems that require investment; but from this investment there will be benefits to the health of the population and long term monetary savings from reduction in length of hospital stay, reduction in waiting times and reduced IS reliance.

2.10 In Paper 4, the Workstream looks at how to maintain the momentum in driving imaging services forward through monitoring of those initiatives already suggested. This includes the development of an Imaging Board to bring forward proposals to HSCB and DHSSPS and inform future manpower needs.

3.0 Summary of Blue Sky / Horizon Planning

RESILIENCE

- NI Imaging Board to oversee Imaging Review Recommendations
- Regional Reporting Networks
- ISAS Accreditation
- Consolidation of clinical expertise (Donaldson Report/TYC)

FLEXIBILITY

- Removal of barriers to recruitment
- HR procedures to facilitate cross-boundary working
- Flexible funding
- Responsive to new technology

INFRASTRUCTURE

- Single PACS for NI
- Formalise outsourcing to IS with NIPACS integration
- Consider Imaging Centre for NI, i.e. standalone outpatient facility
- Regional overview of Capital Requirements

WORKFORCE

- Strategic workforce design for imaging workforce to include training requirements and skill mix
- Increase in Radiology training numbers in line with need
- DHSSPS recruitment drive for radiologists
- 4-tier career progressing for radiographers
- Expand role of advanced pratitioner radiographers
- Workforce plan to meet needs of diagnostic radiography and radiology

3.1 Resilience

3.1.1 Diagnostic imaging needs to be responsive to the requirements of healthcare in Northern Ireland. Consideration should be given the establishment of an Imaging Board.

3.1.2 Region-wide ISAS Accreditation will embed continuous improvement into services and ensure that quality standards are maintained and monitored. Experience nationally has shown that accredited imaging services report cultural change and efficiency gains. Standards for performance should also apply within the IS, to drive up quality and patient safety of imaging within this area.

3.1.3 Given the workforce pressures within radiology and radiography, it is essential to find new ways of working, which provide specialist clinical expertise to the population of Northern Ireland in a structured, co-ordinated and innovative way. Services need to be designed in a way that safeguards the safety of patients, maximises clinical outcomes and facilitates patient choice. To achieve this, patients will need to be able to make informed choices about how to access quality care. This will require a partnership with primary and community care providers. Imaging should also form part of a wider debate about the future of acute services in NI in line with Sir Liam Donaldson's recommendations.

3.1.4 Regional reporting networks can provide cover for foreseeable and unexpected loss of manpower across the Trusts. This will provide the resilience required for the radiologist work force covering the population of Northern Ireland and allow support in speciality areas, ensuring the service can be maintained regionally.

3.2 Flexibility

3.2.1 There is a need for more flexible arrangements support the development of imaging services in order to meet the needs and challenges of the future. This will require working across traditional boundaries, specifically from HR services to support new models, recruitment opportunities and training programmes.

3.2.2 In relation to radiologists, the Imaging Review recommends collaboration across government agencies by removing barriers to recruitment, (both from EU and non-EU countries), such as restrictions within GMC and Tier 2 Visa requirements. The DHSSPS should take advice from the Expert Reference Group and work collaboratively with other government agencies to identify and remove obstacles to streamline the recruitment process. The Royal College of Radiologists have recognised that there is a shortfall of radiologists in the UK and are actively promoting the UK as an attractive option for non-UK trained. Involvement of NI in this process is recommended.

3.2.3 There are three main alternate recruitment options for international doctors who are not registered with GMC:

a) The most common way for such doctors is to obtain GMC registration through completing Processional and Linguistics Assessment Board (PLAB test).

b) An accepted alternate to the PLAB test is the Royal College of Radiologist International Sponsor Ship Scheme. This scheme is open to trainees in clinical radiology and clinical oncology who wish to complete part of their training in the UK.

c) The third and most important route in terms of alternate recruitment options is the application of registration and recognition under the RCR article 14. This article allows the entry to the GMC Specialist Register for those who have not completed UK training. Once the RCR award the CCT certificate, these doctors can register with GMC (subject to English language requirements). After GMC registration, they are eligible to work as Radiologist anywhere in the UK.

3.2.3 Internationally, there is a big pool of radiologists who are eligible to avail of article 14 for registration process, and who would be willing to come and work here in Northern Ireland if a clear recruitment strategy and a time-bound plan is developed to facilitate the recruitment of these international doctors.

3.2.4 Change in HR procedures to allow for flexibility in Radiology service provision:

- Regional HR procedures are required to be put in place in order to facilitate cross-trust working. More flexibility in cross Trust employment is needed, to facilitate consultant radiologists to work regionally addressing gaps in reporting and specialised examinations. This will also ensure that key skills are available across sites.
- HR arrangements are required to support use of the recently retired radiologists.
- There should be consideration of non-consultant grade staff for radiology and the tasks that Trust doctors could perform.
- The NI region should be promoted as a good place to work to increase chances of recruitment. This may take the form of a promotional video / campaign or regional recruitment drive. This could be extended to promote other shortage specialties.
- We need responsive HR processes to support innovative solutions.

3.2.5 It is likely that there will be changes to the consultant contract in the near future that will alter the way that consultants work. The details of this are unknown but it is unlikely that it will benefit productivity given the number of vacancies at present and may increase the manpower gap if the terms of employment are unattractive to staff in post. It is not known if a new contract will allow for increased flexibility in employment.

3.2.6 In relation to radiography, there is an equal need for detailed workforce planning, which focusses on recruitment (including international), and especially for advanced practitioners. Training is a key area to be addressed, with the need for NI based programmes to support the development and expansion of advanced practice radiographers. Without this, the benefits to be gained from skill mix within imaging services will be severely compromised and progress towards innovative models of delivery significantly slower .

3.2.7 Flexible funding mechanisms responsive to shifting requirements are needed to allow for changes in demand for imaging services. This will require innovative planning of new diagnostic services in order to provide the most cost-effective quality service. This will include planning for new technologies within diagnostic imaging.

3.3 Infrastructure

3.3.1 A single regional PACS/RIS is essential for Northern Ireland. The benefits of this have been detailed in previous papers and include vital improvements in patient safety in addition to improvements

in systems' efficiency and report accuracy. This will require robust arrangements to ensure that **all NHS** images and reports are uploaded to NIPACS promptly, including those generated in the IS.

3.3.2 The Independent Sector will continue to be used by Trusts for imaging and ISPs should have access to NIPACS to ensure that a full imaging history is available to reporters and that NHS examinations can be entered directly into NIPACS in the same manner as in NHS facilities.

3.3.3 Earlier papers have demonstrated that there is under-utilisation of imaging equipment in terms of 12 hour days and 7day working. The limiting factor in total imaging capacity is in reporting rather than production of imaging examinations. Given that there is spare imaging capacity, development of a regional imaging facility is not considered necessary. Logistically, identifying a location, planning, building and staffing such a facility would be expensive, time consuming and of doubtful benefit.

3.3.4 The concept of a virtual regional imaging centre is desirable but requires further investigation. When there is a mismatch between scanner requirement and capacity in one trust, vacant space on under-utilised equipment in another trust could be identified for 'regional' or 'other trust' use reducing the need for IS provision of scanning.

3.3.5 A regional approach to capital requirements is essential in order to ensure that Radiology assets are utilised as much as possible. The supply of new equipment and diagnostic services should be collated regionally through the MRCN and the Imaging Board to ensure efficient use of resources and the strategic planning of diagnostic imaging.

3.4 Imaging Workforce

3.4.1 The workforce is the most valuable asset of an imaging service and it should be considered holistically in order to ensure that services are provided in a way that enhances the skills of the medical, professional and support teams.

3.4.2 Following analysis in Papers 1-3, imaging workforce design as a whole is a clear priority which goes beyond the immediate challenge of increasing numbers of staff. There should be a strategic imaging workforce plan for NI which is focussed on how the service should be trained, recruited, retained, developed and resourced.

3.4.3 In the short term, as well as going forward, recruitment and retention of trained radiologists remains the greatest challenge. Although training numbers have increased as a direct result of the review for 2015/16, it is essential that growth continues each year for the next 5 years.

3.4.4 By way of context, in 2012, the RCR indicated that there is a need for an increase of 60 radiologist training places per year for the next five years for the UK to achieve parity with our European counterparts. The recent response of the RCR to Health Education England[1] regarding future radiology needs explains and quantifies requirements for future radiology expansion in England, making a compelling case that mirrors our conclusions. In 2015, an increase of 22 places (16 for England and 6 for Scotland) was agreed. In Northern Ireland, the number of radiologist training places had remained static for 10 years until April 2015 when an increase of 2 per annum was agreed. Throughout these papers, the Workforce and the MRCN have highlighted this crisis and whilst progress is gratefully acknowledged, the crisis remains. Regular review of radiologist numbers will be required to minimise future shortfall.

[1] https://www.rcr.ac.uk/sites/default/files/docs/newsroom/pdf/HEE_2014_RCR_Radiology_Final_270614%20%282%29.pdf

3.4.5 Similarly, there is a need to ensure that the radiography and support workforce is properly supported and developed. Implementation in Northern Ireland of the 4-Tier career progression for diagnostic Radiographers needs to be supported by dedicated recurrent funding. There have been limited opportunities for advanced practitioner radiographers to develop within the region in comparison to other areas within the UK and this is a key aspect to be addressed within a strategic imaging workforce plan. It is essential to develop the skills of radiographers to ensure gaps in reporting and examinations historically carried out by radiologists can instead be completed by trained radiographers, as well as ensuring that there are sufficiently trained staff to perform advanced investigations. It is therefore crucial that the whole system is supported so that assistant practitioners are developed to perform duties traditionally carried out by skilled radiographers.

3.4.6 With the increase in demand in Ultrasound, CT & MRI examinations there needs to be a review of the training programme to provide the radiographers with the skills to maximise the utilisation of the equipment towards establishing 7 day working.

4.0 Commissioning

4.1 Investing recurrently in diagnostic imaging will have an impact on the patient pathway and lead to savings elsewhere in the system. Examples include access to minimally invasive procedures leading to faster recovery times or reduction in length of stay due to reduced waiting times for inpatient investigations or procedures.

4.2 In future, there will be a need to plan at both local and regional levels, with healthcare organisations collaborating to ensure that services are planned and delivered to comply with relevant standards and that capacity is available to accommodate variation in demand maintaining compliance with waiting time standards. Plans will need to take into account the physical capacity to carry out investigations and the clinical capacity needed to ensure that investigations are promptly reported. The availability of integrated information systems will be a key enabler to the on-going development of innovative new service models.

5.0 Patient Centred Service

5.1 The role of the patient is no longer as a passive recipient of care. Ensuring that people's views are heard at all levels and across all parts of the healthcare system is essential for creating and delivering better health and care services. The Health Service in NI is committed to working and engaging with patients, carers and the public in a wide range of ways.

5.2 As part of the imaging review, the Workstream developed a Patient Questionnaire (PIQ), the final draft of which went to Project Board in June for ratification. Board members suggested some valuable amendments, including the inclusion of an information section, which described the various imaging modalities. These modifications were subsequently made and the final PIQ was completed. This PIQ has now been formally passed onto the Research Section of the HSC Patient & Client Council for their scrutiny and for sending out electronically to their Membership Scheme. The PCC are going to pilot the PIQ through their internal processes and once a timeline is in place, relevant information will be fed back to the Project Board.

5.3 This questionnaire should identify what sort of service is required to meet patient's needs. We realise the necessity of patient involvement at every level of decision making and design. We

need to ensure we are providing a professional service that meets overall aims of timely diagnosis and accurate reports accessible to the right person, at the right time.

6.0 Development of an Imaging Board

6.1 Influence from senior healthcare representatives involved in the Imaging Review has allowed progress to be made in crucial areas already. As the review comes to an end, it will be necessary to maintain this momentum in implementing the recommendations that have been made. Development of a regional imaging board is desirable.

7.0 Conclusion

7.1 This review of imaging services has been a welcome opportunity to assess the current status of healthcare imaging in Northern Ireland and to plan for the future. The review has identified that despite increasing output, a widening gap exists between the overall capacity of the system and the demand for medical imaging.

7.2 We have been impressed by the level of appreciation of the issues and support from senior healthcare representatives and are confident that our recommendations will result in a better, more efficient and more responsive service that will benefit the people of Northern Ireland reducing expenditure on expensive IS solutions.

Appendix 1

Membership of Radiology Workstream of DHSSPS Imaging Review

RADIOLOGY WORKSTREAM OF DHSSPS REVIEW OF IMAGING		
NAME	**PROFESSIONAL TITLE**	**AREA / BASE**
Dr Ronan McNally	Consultant Radiologist / Joint Lead Radiology Workstream	SEHSCT
Mrs Jeanette Robinson	Radiology Services Manager / Joint Lead Radiology Workstream	SHSCT
Dr John Lawson	Consultant Radiologist / Clinical Lead of the DHSSPS Imaging Review	BHSCT
Mrs Maria Wright	Service Improvement Programme Manager / MRCN Network Manager	HSCB
Dr Peter Flynn	Clinical Director and Consultant Neuroradiologist	BHSCT
Mr David Wallace	Radiology Services Manager	NHSCT
Mr Dan McLaughlin	Radiology Services Manager	WHSCT
Dr Niall McKenzie	Consultant Radiologist	WHSCT
Dr Hall Graham	Head of IR(ME)R RQIA	RQIA
Dr Adam Workman	Head of Radiological Sciences and Imaging, Regional Medical Physics Service.	BHSCT
Mrs Nicky Harvey	Regional NIPACS Service Manager	BSO IT
Dr Muhammad Sartaj	Consultant Public Health Medicine	PHA
Dr James Clarke	Consultant Radiologist Nuclear Medicine / PET	BHSCT
Dr Eddie Gibson	NI Breast QA Lead	NHSCT
Dr Anton Collins	Consultant Radiologist – ad hoc member to inform on training and manpower issues	BHSCT