Northern Ireland
Audit Office

Health and Social Care Imaging Services

Report by the Comptroller and Auditor General

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Dorinnia Carville
Comptroller and Auditor General

Northern Ireland Audit Office
31 March 2025

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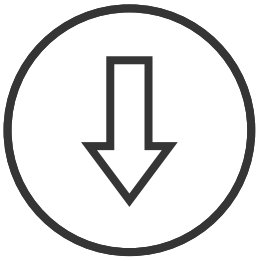
List of Abbreviations

CoR	College of Radiographers
CT	Computerised Tomography
DoH	Department of Health
ESR	European Society of Radiology
GIRFT	Getting It Right First Time
HSC	Health and Social Care
MRI	Magnetic Resonance Imaging
NI	Northern Ireland
NICE	National Institute for Health and Care Excellence
NIMDTA	Northern Ireland Medical and Dental Training Agency
NOUS	Non-obstetric ultrasound
QSI	Quality Standard for Imaging
RCR	Royal College of Radiologists
RMIB	Regional Medical Imaging Board
SPPG	Strategic Planning and Performance Group
UK	United Kingdom
WTE	Whole Time Equivalent

Key Facts

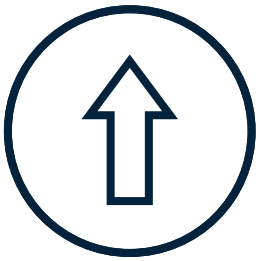
Around 90% of HSC hospital patients have images taken and clinically interpreted

Demand for imaging services is projected to increase significantly between 2018 and 2030: by 123% for MRI; by 170% for CT; and by 42% for NOUS



Between 2018 and 2024, funding constraints mean that 350,000 fewer MRI, CT, and NOUS scans combined were delivered than levels required to meet patient demand levels

Between March 2019 and March 2024, the proportion of patients waiting longer than 26 weeks for an MRI scan rose from 19.5% to 35%



Between March 2021 and March 2024, the number of people waiting over two weeks for an urgent red flag cancer scan increased from 260 to 1,800 and the numbers waiting more than four weeks for an urgent diagnostic scan rose from 2,400 to 9,400

The number of Consultant Radiologist training places needs to be doubled to meet current demand

Currently, 16% of HSC imaging equipment is aged over ten years and considered obsolete

"Although there are clearly many competing priorities for the HSC budget, it is important that DoH and other stakeholders take stock of the current situation facing imaging services and the future challenges that are apparent, and set out how they intend to address these."

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Background and Summary of Findings

Background

1. **Imaging services are a key component of both elective and unscheduled care within the Health and Social Care (HSC) sector.** Collectively referred to as imaging services, these represent a key aspect of HSC service provision. They involve radiographers firstly using various sophisticated equipment to produce images or scans of tissues, organs and bones within the human body. These are then mostly reviewed and interpreted by Consultant Radiologists to help diagnose, assess and monitor illness, disease and injuries, and provide expert guidance to other clinicians on optimum future treatments[1]. Early and effective intervention is key to ensuring beneficial patient outcomes. Around 90 per cent of hospital patients have images taken and interpreted. The diagram below illustrates how the process typically operates in practice.

The flow process

Step one

Patients are referred to imaging services by primary care GPs, or by secondary care consultants as part of inpatient, outpatient, theatre or community care. Imaging may also be requested by a range of non-medical referrers who have been formally entitled to request imaging investigations.

Step two

Radiographers, sonographers, assistant practitioners or Radiologists use sophisticated equipment to produce the necessary images.

Step three

The images are then clinically reviewed, mostly by Radiologists, who provide the clinical report. Where relevant reports may contain advice and recommendations on further action or follow up imaging.

2. **Four modalities account for over 90 per cent of diagnostic imaging activity** – Magnetic Resonance Imaging (MRI), Computerised Tomography (CT), Non-obstetric ultrasound (NOUS), and Plain Film X-rays.

1 About 60 per cent of NOUS imaging is delivered by sonographers (specialist radiographers) who both carry out scans and provide the clinical report. Around 40 per cent of plain film examinations are reported by Reporting Radiographers. Advanced practice is a growing field across the radiography profession.

Summary of findings

3. **Efficient and effective imaging services are a key part of the Department of Health's (DoH's) current 'Cancer Strategy for Northern Ireland 2022-2032'.** This aims to address the challenges currently facing cancer services in Northern Ireland (NI) and deliver greatly needed strategic improvements. Implementing new National Institute for Health and Care Excellence (NICE) guidelines around cancer diagnosis requires additional funding. The strategy also recognises the need for faster access to diagnosis and treatment. It proposes a revised standard of 28 days to definitively confirm if someone has cancer which covers all tests and investigations from their first referral. Currently individual tests are conducted and reviewed before another test is completed.

4. **Demand for Diagnostic Imaging services has grown significantly since 2012-13.** Annual growth has been in the region of 10 per cent for CT, 8 per cent for MRI, and 4 per cent for NOUS. This growth in demand reflects a complex range of factors including increasing clinical recognition and advocacy of the benefits of imaging across patient pathways, and population demographic and morbidity changes. Between 2018 and 2030, demand for MRI, CT and NOUS imaging is projected to rise by 123 per cent, 171 per cent and 42 per cent respectively, adding to the significant challenges and pressures for the HSC sector.

5. **Funding of services has not kept pace with demand and waiting times have continued to increase for patients.** DoH acknowledges that recurrent funding for imaging has not increased since 2018-19 despite demand levels having increased considerably since then and has been insufficient to meet the growing demand. Additional non-recurrent funding has been provided in most years, but this is also insufficient to meet demand. This funding is unable to bridge the funding gap due its one-off nature, and late notification of it has often prevented optimum usage. Imaging activity has increased year on year, but as funding is not in line with demand, waiting times for patients continue to also grow annually. DoH's Strategic Planning and Performance Group (SPPG) has completed a detailed demand and capacity analysis of current and projected imaging requirements up to 2030 which has been fully costed. This modelling is in place should recurrent funding become available and would form the basis of investment plans.

6. **Waiting time targets have not been met for some time due to the demand and capacity gaps.** In both quarters ending March 2019 and March 2023, DoH's targets that at least 75 per cent of patients should wait less than nine weeks for imaging and no patient should wait longer than 26 weeks were both comprehensively missed. Over this period, the number of patients waiting longer than 26 weeks for an MRI scan has increased from 19.5 per cent to 27.9 per cent.

7. **Increasing numbers of patients are enduring long waits for `red flag' cancer and `urgent' imaging, and targets for clinical reporting on urgent scans are not being met**. The number of people waiting longer than two weeks for a `red flag' scan for suspected cancer has increased more than five times from 261 to just under 1,800 between March 2021 and March 2024, which includes the Covid 19 period where waiting times across the system increased. In the same period, the numbers waiting over four weeks for an urgent diagnostic scan has risen by almost three times from 2,400 to 9,400 cases. As these represent measurement at a point in time, the actual numbers experiencing such lengthy waits each year are likely to be significantly higher. DoH targets also require all urgent scans to be clinically reported on within two days, but in the quarter ending March 2023 alone, this target was not met for over 23,000 urgent scans.

8. It should be noted however, that imaging waiting times have significantly improved during 2024/25 for red flag and urgent patients. This has mainly been secured through the timely availability and notification of additional non-recurrent funding, which had not generally been the case in previous years.

9. **The potential impact of these trends on patient welfare is concerning**. The long-term lack of funding is the key constraint driving these trends, along with access to increased training, recruitment and retention of staff and availability of capital equipment. SPPG has highlighted that imaging services are over-performing against their funded baselines, in some cases by up to 175 per cent for CT, and that the services have taken great strides to optimise development of advanced practice and skill mix within imaging teams, but further expansion ultimately requires additional funding and training capacity. A system-wide programme of continuous improvement is in place via the Quality Standard for Imaging (QSI) which ensures that every opportunity to improve quality, safety and efficiency is taken and all NI Imaging Services have been accredited against the QSI Standard, the first region of the UK to do so. However, there is inherent risk in the growing and lengthening waiting times for patients and despite the actions being taken, a sustained programme of recurrent investment is required.

10. **Effective delivery of services requires a properly resourced workforce, and there have been broadly positive trends in respect of the HSC radiographer workforce.** In recent years, HSC radiographer staffing numbers have increased, and vacancy levels have reduced in some areas, but the gap between funded capacity and demand continues to increase. Increased funding for training levels secured means that the workforce will likely grow close to the levels of identified need by 2026. However, further sustained investment will be required beyond this to meet continually growing demand and ensure service expansion.

11. **Issues around the Radiologist workforce are complex and there are current and future challenges.** Although NI currently has a higher proportion of Consultant Radiologists per 100,000 population than England and Wales, insourcing and outsourcing costs and staffing vacancies in NI are the highest in the United Kingdom (UK). In addition, NI has the highest percentage of Whole Time Equivalent (WTE) Consultant Radiologists in the UK forecast to retire over the next five years, and the lowest proportion of trainee consultants currently in the workforce in the UK. It is also projected to have the highest Consultant Radiologist staffing shortfall in the UK by 2028.

12. **Demand modelling shows that the current local training levels for Consultant Radiologists needs to be doubled to meet future demand**. A proposed training academy would go some way to helping create a more sustainable Radiologist workforce and also further boost radiographer advanced practice training. The NI Imaging Academy is a key priority of the Regional Medical Imaging Board (RMIB)[2] and the Strategic Framework for Imaging and whilst this has been included in DoH's current capital plan, it is however unclear, in the context of competing DoH priorities and funding constraints, if or when the necessary funding to support the delivery of this will be available.

2 The RMIB sits within DoH's Strategic Planning and Performance Group.

13. **A significant proportion of HSC imaging capital equipment is currently either obsolete or older than the preferred replacement age**. Equipment downtime and maintenance costs tend to escalate for assets which are older than ten years. Older equipment is also potentially slower, which reduces the number of patients which can be scanned and may produce lower quality images meaning conditions are harder to identify with increased risk of missed disease. There is a ring-fenced budget of £3 million per annum for replacement of imaging equipment which is significantly lower than required to meet timely replacement requirements. The programme can also benefit from ad-hoc slippage from other capital schemes but this is opportunistic and not guaranteed. Compared to the estimated £15 million to £25 million required annually, an annual average of just over £6 million was provided between 2020-21 and 2024-25. However, no additional ad-hoc funding has been secured in 2024-25. Currently 16 per cent of all HSC imaging equipment is over 10 years old and requires urgent replacement, with 24 per cent of NOUS equipment and 28 per cent of non-NOUS equipment older than their preferred replacement age. If additional funding is not secured, the proportion of older equipment will grow. This will impact negatively on service efficiency and delivery.

14. **In addition to replacing existing equipment, the RMIB has identified a need for almost £62 million capital and £40 million revenue over the next 10 years for new equipment to address additional demand and secure productivity improvements**. However, similar to the proposed training academy, the availability and timing of the required funding, both for capital and its associated revenue, is not guaranteed and is dependent on prioritisation and availability within DoH. Any significant non-availability of this funding will also potentially impact on service standards.

Overall conclusions

15. **The growing gap between demand for services and funding allocated to these has contributed to the numbers of patients waiting, and the time they wait for scans and for clinical reporting of these growing significantly, with particular concern over `red flag' and `urgent' scans. In the context of meeting future demand, it is also unclear if or when the required funding to support the required expansion of the Radiologist workforce or to replace aged imaging equipment and purchase additional new equipment to expand capacity will be available.**

16. **Whilst robust plans have been developed in the key areas of demand and capacity, workforce and capital equipment, that clearly demonstrate the need, these will require additional funding.**

17. **Although there are clearly many competing priorities for the HSC budget, it is important that DoH and other stakeholders take stock of the current situation facing imaging services and the future challenges which are apparent, and set out how they intend to address these to support the longer-term sustainability of services.**

18. **Whilst largely outside the timeframe of this report, progress in establishing two Rapid Diagnosis Centres which opened in December 2022 is a positive development. These commenced with funding for two sessions of Computerised Tomography (CT) per week for a Vague Symptom Pathway for patients who do not meet current red flag criteria but who have vague but concerning symptoms which may be cancer. From January 2025, further funding has been made available non-recurrently to assist with utilising the remaining scanner capacity for imaging backlogs in CT and Magnetic Resonance Imaging (MRI). This funding will become recurrent from April 2025 onwards and will be used regionally to provide additional CT and MRI capacity for patients including those waiting for red flag, urgent and routine imaging.**

Recommendations

Recommendation

The Department should more precisely identify the recurrent funding required to address the demand and capacity requirements outlined by the RMIB. It should then, in as far is possible within budgetary constraints, deliver a phased programme of investment in imaging services to help meet rising patient demand.

Recommendations

In the context of supporting enhanced workforce planning, DoH should work to ensure that enhanced management information is readily available for the wider HSC medical workforce group.

Given the Royal College of Radiologist's (RCR's) future workforce projections, DoH should set out clear plans for addressing issues around the Radiologist workforce, including those around managing succession planning and minimising future outsourcing and insourcing costs. This will include assessing the merits of funding the proposed training Academy as a key priority project given its strong potential to bring longer-term benefits, and also potentially help reduce outsourcing costs.

Recommendation

In view of the range of disadvantages of relying on old diagnostic imaging equipment, DoH should draw on the information held by SPPG and produce an action plan aimed at ensuring that the HSC asset base reflects best practice in that no more than 10 per cent of this should be aged 10 years or over. The plan should also outline what action is to be taken to ensure that the replacement equipment which has been identified as required to meet rising demand is procured and utilised to maximum effect.

Part One:
Introduction

Introduction

1.1 Imaging is a critical component of both HSC elective and unscheduled care. Around 90 per cent of hospital patients have images taken and interpreted during their care pathway. Patients may be referred to imaging services by primary care GPs, or by secondary care consultants as part of inpatient, outpatient, theatre or community care. A range of non-medical referrers are also formally entitled to request imaging. Services are mainly delivered in hospital imaging departments. **Figure 1** describes the four modalities that account for over 90 per cent of imaging activity.

Figure 1: The four main modalities used in imaging

Radiography service	Description
Computerised tomography (CT)	An X-ray image made using a form of tomography[3] in which a computer controls the motion of the X-ray source and detectors, processes the data, and produces the image.
Magnetic resonance imaging (MRI)	A medical test which produces images of soft tissues, including organs and muscles within the body using a magnetic field along with radio waves.
Non-obstetric Ultrasound (NOUS)	A medical test that uses high frequency sound waves to capture live images from inside the body. The technology is similar to that used by sonar and radar.
Plain film (X-rays)	X-rays which produce images of bones, lungs and teeth to assist diagnosis.

1.2 Timely and effective delivery of these critical front-line services can contribute to early patient diagnosis and intervention, which can help ensure that patients conditions do not unnecessarily deteriorate. The services are mainly delivered through a two-stage and interlinked process:

- Radiographers firstly use various types of sophisticated equipment to produce images of tissues, organs and bones within the human body.
- These are then reviewed and interpreted mainly by Consultant Radiologists to help diagnose, assess and monitor illness, disease and injuries, and provide expert guidance and advice to other clinicians on optimum future treatment. Around 60 per cent of non-obstetric ultrasound (NOUS) is overseen by sonographers (specialist radiographers) who both perform scans and provide the clinical report. Around 40 per cent of plain film examinations are reported by Reporting Radiographers. An increasing proportion of radiographers are also now reviewing and interpreting images as part of skills expansion through advanced practice.

3 Tomography is imaging by sections or sectioning that uses any kind of penetrating wave.

1.3 The scope, complexity and application of imaging services continues to grow significantly each year. Advances in imaging practices, IT and digital electronics, new professional guidelines and increased recognition of use of imaging in patient pathways contribute on an ongoing basis to increasing demand. Imaging remains core to improving health outcomes via diagnosis and interventions for a wide and growing range of health conditions. Alongside this, patient demographic changes and associated morbidity has resulted in demand for imaging services rising significantly each year. Backlogs which became much worse during the pandemic, continue to increase and present challenges for service delivery.

1.4 In March 2024, Northern Ireland (NI) became the first region in the UK to achieve full diagnostic imaging accreditation by meeting the Quality Standards for Imaging (QSI). The QSI is a collaboration between The Royal College of Radiologists (RCR) and the College of Radiographers (CoR), which set out national criteria for imaging services, aimed at improving the quality of care for people within imaging services.

1.5 Accreditation against these standards is recognised as a key indicator of service quality. With the South Eastern Trust receiving this accreditation in March 2024, all five local trusts are now recognised as meeting the necessary standards and are fully accredited. Northern Ireland was the first region of the United Kingdom (UK) to fully achieve accreditation. This helps provide evidence of assurance to patients on the quality of imaging services received. However, as paragraph 1.2 outlined, services also need to be delivered in a timely manner to ensure patients receive early diagnosis, maximum benefit and improved health outcomes.

What we reviewed

1.6 Our high-level, informative report considers the capacity of imaging services to meet patient need and what further steps need to be taken to ensure these are placed on a sustainable basis to address future challenges, demands and pressures. It addresses four main areas:

- how demand for services has grown and is forecast to keep rising, and the various factors which have contributed to this, as well as whether funding for services has kept pace with demand.
- trends for the number of people on HSC waiting lists for imaging and the length of time patients wait.
- the degree to which the HSC radiographer and Radiologist workforces are sufficiently resourced, and what further steps are needed to strengthen them.
- the degree to which the imaging capital equipment, crucial to service provision, is adequate to meet current demand, and what further steps are required in this area to meet future additional demand.

1.7 As part of our review we liaised closely with staff from the Regional Medical Imaging Board (RMIB) which sits within the Department of Health's (DoH's or the Department's) Strategic Planning and Performance Group (SPPG). SPPG is responsible for planning, improving and overseeing the delivery of effective, high quality and safe health and social care services in NI within available resources. The key responsibilities of the RMIB include advising DoH in the oversight and implementation of the recommendations outlined in the Strategic Framework for Imaging Services which was published in June 2018.

"Unless more stable and sustained funding arrangements are established, the demand / capacity gap will only further widen."

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Issue 1:
Demand for services has and continues to grow but funding has not kept pace

Issue 1 - Demand for services has and continues to grow but funding has not kept pace

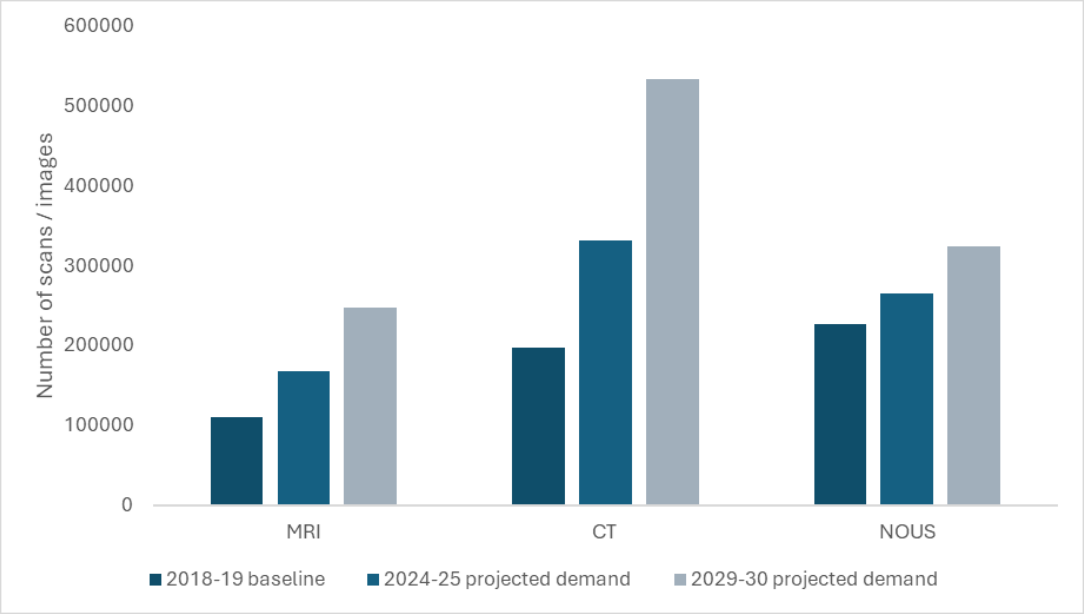
2.1 Increased recognition of the benefits of imaging alongside patient demographics means that robust information on current and future demand for services is required to inform planning, funding, and workforce requirements. The RMIB has developed projections for this purpose. These show how demand has grown significantly for three of the four main imaging modalities. Between 2018 and 2025, these projections indicate demand growth of:

- 52 per cent for MRI;
- 68 per cent for CT; and
- 18 per cent for NOUS **(Figure 2)**.

2.2 Demand is also forecast to continue growing at pace. Compared to the 2018-19 funded baseline levels, projections indicate the following increases by 2030:

- 123 per cent for MRI;
- 170 per cent for CT; and
- 42 per cent for NOUS **(Figure 2)**.

Figure 2: Demand for the main imaging modalities has grown rapidly between 2018 and 2025, and will continue to do so



Source: DoH SPPG

2.3 Images require a clinical report, which are in most cases produced by Consultant Radiologists.[4] As such, the volume of associated clinical reports required will increase at the same significant rate.

4 The exception to this is that about 60 per cent of NOUS images are reported on by sonographers and about 40 per cent of plain film x-rays are reported on by specialist trained radiographers.

The HSC sector is reliant on additional in-year non-recurrent funding to deliver imaging services. However, this is insufficient and ineffective to meet continued increases in demand

2.4 The extensive growth in demand for services highlights the mounting pressures facing the HSC sector and how its productivity needs to be maximised to address this. The lack of funding is the biggest constraint, along with access to increased training, recruitment and retention of staff and availability of capital equipment. The extent to which recurrent funding allocated annually to the five HSC trusts for imaging services has not kept pace with demand cannot currently be definitively quantified as full details on this are not currently readily available.

2.5 The Department did however confirm to us that aside from an additional £3.93 million allocated in 2020-21, recurrent funding provided annually has remained unchanged since 2018-19, and remains based on activity levels at that date, despite activity levels having grown notably since then.

2.6 In the absence of sufficient recurrent funding, the HSC sector has become increasingly reliant on additional in-year non-recurrent funding to deliver imaging services. However, even with this, funding is inadequate to fully meet demand. The non-recurrent amounts allocated can vary significantly (for example this reduced from £15.2 million in 2022-23 to £13 million in 2023-24 **(Figure 3)**). Whilst it helps fund some additional activity through outsourcing of work and HSC overtime working, it has limited impact and is not a sustainable solution, as it does not support longer-term planning, and is often untimely, with late notice of availability preventing optimum usage.

Figure 3: The amount of non-recurrent funding allocated to diagnostic imaging services varies annually

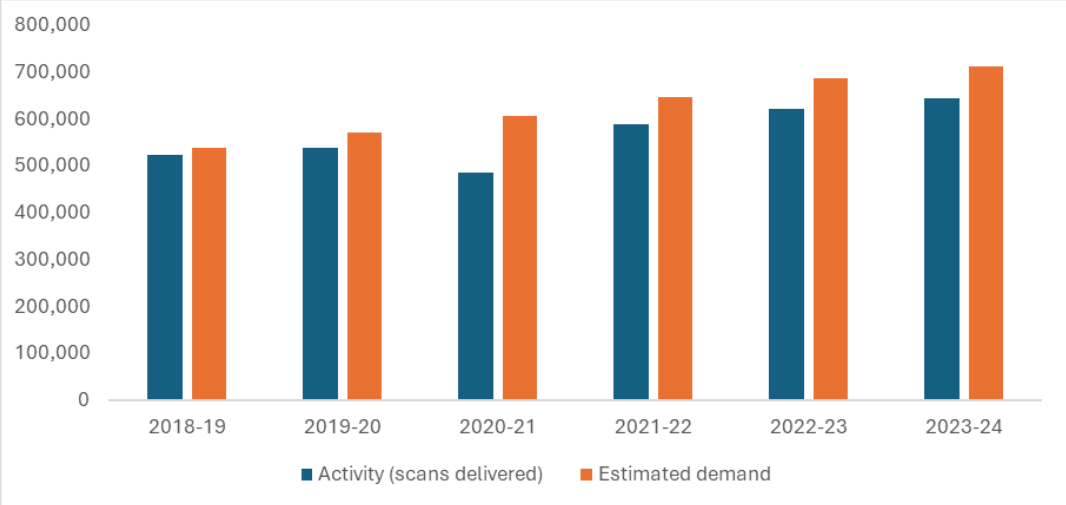
Year	Non-recurrent funding allocated to diagnostic imaging services
2021-22	13.8
2022-23	15.2
2023-24	13.0
2024-25 (April – September 2024)	8.7

Source: DoH

Whilst the number of examinations delivered each year continues to grow, activity levels since 2018 have been approximately 10 per cent lower than demand, meaning significant patient backlogs have developed

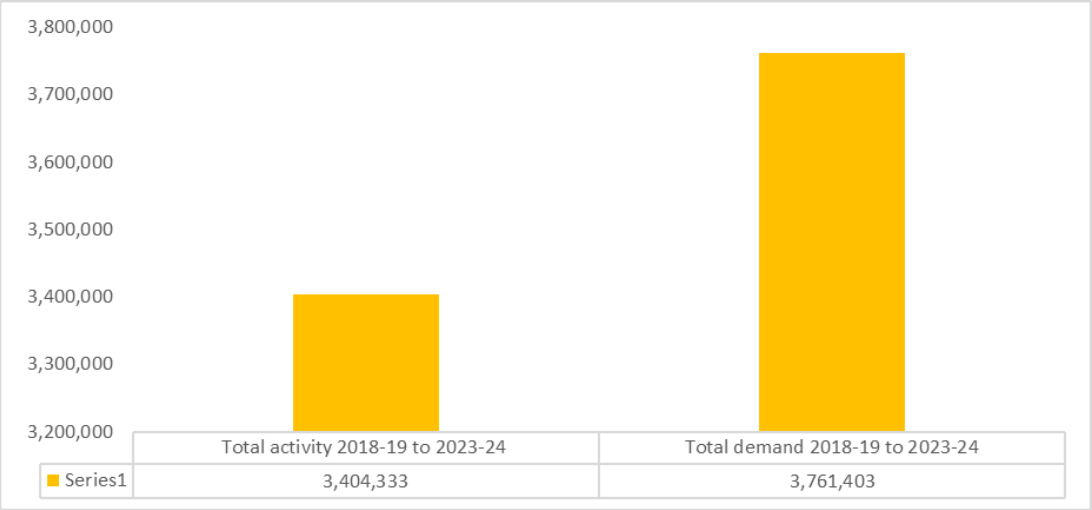
2.7 Aside from the Covid-impacted year of 2020-21, HSC activity levels, including that delivered through non-recurrent funding, for the combined number of MRI, CT and NOUS scans have been increasing in recent years. However, this has still not been sufficient to meet rising patient demand each year between 2018 and 2024. Over this six-year period, the available information indicates that an additional 350,000 MRI, CT, and NOUS examinations combined would have been required to meet the rising demand for these **(Figures 4 and 5)**. Overall, activity was 9.5 per cent lower than demand during this period, with a higher shortfall for MRI imaging (16.5 per cent), and for NOUS imaging (12.5 per cent). Activity for CT scans did however come close to meeting demand. This mainly reflects the fact that CT is very heavily used within HSC Emergency Departments (EDs) and inpatient care and plays a key role in red flag imaging and staging of cancers. Activity must therefore continue regardless of demand or funding availability. However, as a result, resources have inevitably been redirected from other imaging modalities to meet the critical nature of CT provision.

Figure 4: The combined number of CT, MRI, and NOUS scans actually delivered has fallen notably below patient demand for these in each year since 2018



Source: DoH SPPG

Figure 5: Combined activity for these scans has been 350,000 below demand levels between 2018 and 2025



2.8 The fact that patient demand has not been fully met for some time has been a key factor behind the number of people on imaging waiting lists increasing and the length of time they wait is also growing substantially. Part 2 of this report examines this area in greater detail.

Conclusions

2.9 **Demand for diagnostic imaging services has grown significantly since 2012-13 and is forecast to continue doing so. There is also clear evidence that a significant gap between demand levels and HSC funded capacity has developed. Additional non-recurrent funding provided in-year is insufficient to bridge this gap and there are also operational disadvantages to this approach.**

2.10 **Unless more stable and sustained funding arrangements are established, the demand / capacity gap will only further widen. The RMIB has developed detailed, costed capacity and demand proposals which will be used to inform investment proposals in the event that funding becomes available.**

Recommendation

The Department should more precisely identify the recurrent funding required to address the demand and capacity requirements outlined by the RMIB. It should then, in as far is possible within budgetary constraints, deliver a phased programme of investment in imaging services to help meet rising patient demand.

"Increased funding for training levels recently secured... means that the workforce will likely grow close to the levels of identified need by 2026. However further sustained investment will be required beyond this to meet continually growing demand and ensure service expansion."

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Issue 2:

The numbers on HSC waiting lists and the time patients wait for diagnostic imaging services have both been rising

Issue 2 - The numbers on HSC waiting lists and the time patients wait for diagnostic imaging services have both been rising

3.1 The reasons for increased demand for diagnostic imaging services are multi-faceted and complex. However, in line with wider HSC trends, demand increasing faster than capacity has led to an increase in the number of people waiting for services and people waiting longer for these services.

3.2 Between the first quarter of 2019 (a year prior to COVID-19) and the third quarter of 2023 (the most recent date for which full Northern Ireland wide data is available due to the ongoing development of Encompass[5]), the number of patients waiting for MRI and CT scans, and plain film x-rays combined have increased by almost 20,000 **(Figure 6)**.

Figure 6: The number of people waiting for diagnostic imaging in Northern Ireland increased significantly between 2019 and 2023

Type of scans/images	Total numbers waiting March 2019	Total numbers waiting March 2023	% increase March 2019 - 2023
MRI	18,858	25,848	37.1%
CT	9,019	13,195	46.3 %
NOUS	26,334	26,533	0.7%
Plain film x-rays	4,331	12,754	194.5%
Total (all four imaging modalities)	**58,542**	**78,330**	**33.8%**

Source: DOH published quarterly statistics

The numbers now waiting for imaging services are the highest recorded

3.3 The unavailability of fully validated data for the South Eastern Trust means that more recent waiting list trends at March 2024 cannot be fully measured on a NI-wide basis.[6] Nonetheless, the numbers waiting for the main imaging modalities across the four other trusts combined have continued growing, and at March 2024, remain far higher than 2019 **(Figure 7)**. Indeed, the numbers waiting at this date for four Trusts (78,700) are actually slightly higher than for all five Trusts at March 2023 (78,300). When the unavailable data for the South Eastern Trust is taken into consideration, the numbers waiting at 2024 represent the highest ever recorded.

5 Encompass is an ongoing programme within the local HSC sector which is aiming to create a single digital record for each patient in NI accessible by all care providers and patients themselves.

6 As Encompass was being implemented across the South Eastern Trust in March 2024 the data available is regarded as `official statistics in development' and DoH does not yet consider it sufficiently robust for formal measurement or publication.

Figure 7: Waiting lists for diagnostic imaging have continued rising into 2024

Type of scans/images	Total numbers waiting March 2019	Total numbers waiting March 2024	% increase 2019 - 2024
MRI	17,893	28,597	59.8%
CT	7,323	12,510	70.8%
NOUS	21,276	27,507	29.3%
Plain film x-rays	4,042	10,055	148.8%
Total (all four imaging modalities)	**50,534**	**78,669**	**55.7%**

Source: DOH published quarterly statistics (data excludes the South Eastern Trust)

Waiting time targets for diagnostic imaging services are not being met

3.4 Once patients have been referred for diagnostic imaging services and join a waiting list, minimising the time they wait is important in ensuring early clinical interpretation and reporting, and delays can potentially undermine patient outcomes. Longstanding Commissioning Plan Direction Targets set by DoH require that at least 75 per cent of patients should wait no longer than nine weeks for scans to be performed, and that no patient should wait longer than 26 weeks for this.[7]

3.5 However, these targets have not been met for some time for the MRI, CT, and NOUS imaging modalities. As a result, in both quarters ending March 2019 and March 2023, far fewer than 75 per cent of patients waited less than nine weeks to have these scans undertaken, and a considerable proportion waited longer than 26 weeks. Performance levels were lowest for the MRI and CT modalities. Various factors mean that waiting time targets for plain film x-rays are generally met, including the fact that they are emergency driven to a greater extent, and tend to involve shorter and less complex examinations **(Figure 8)**.

Figure 8: The length of times patients wait for key scans and images has markedly risen between 2019 and 2023

Image/scan category	% of patients waiting < 9 weeks q/e March 2019 (target 75%)	% of patients waiting < 9 weeks q/e March 2023 (target 75%)	% of patients waiting > 26 wks q/e March 2019 (target 0%)	% of patients waiting > 26 wks q/e March 2023 (target 0%)
MRI	51.4%	40.9%	18.7%	27.9%
CT	62.0%	58.7%	16.9%	12.2%
NOUS	63.8%	68.2%	9.4%	7.6%
Plain film x-rays	98.2%	99.5%	0%	0.02%

Source: DoH published quarterly statistics

7 Given the impact of the pandemic on elective activity DoH wrote to Trusts in June 2020 to confirm the suspension of the formal com missioning process. Subsequently, activity targets to monitor how the Trusts would restart and rebuild their services were developed. This process was amended during 2022-23 and under Service Delivery Plans DoH set targets based upon pre-pandemic baselines with a view to returning to pre-pandemic activity levels.

3.6 The more recent data for quarter ending March 2024 (which again excludes the South Eastern Trust) confirms that performance remains far below the target levels **(Figure 9)**.

Figure 9: Waiting times for scans and images have continued rising into 2024

Image/scan category	% of patients waiting < 9 weeks q/e March 2019 (target 75%)	% of patients waiting < 9 wks q/e March 2024 (target 75%)	% of patients waiting > 26 wks q/e March 2019 (target 0%)	% of patients waiting > 26 wks q/e March 2024 (target 0%)
MRI	49.6%	31.4%	19.5%	35.3%
CT	62.1%	53.4%	18.6%	16.6%
NOUS	62.9%	54.2%	11.2%	7.4%
Plain film x-rays	98.3%	99.2%	0%	0%

Source: DoH published quarterly data

Note – all data excludes the South Eastern Trust

At the end of March 2024, almost 1,800 people were waiting more than two weeks for a red flag cancer scan and 9,400 were waiting more than four weeks for other urgent diagnostic scans

3.7 In addition to the formally published waiting time data, DoH's SSPG identified a need during the pandemic for more granular waiting time information on imaging services to monitor the impact of COVID-19 on urgent patient pathways. This information, which includes waiting times for the two-week suspected cancer (red flag) and four-week (urgent) diagnostic pathways[8] has been available on a NI-wide basis since October 2020. SPPG has been using this to help facilitate a greater understand of waiting list dynamics, and to better inform planning, escalation and investment decision making.

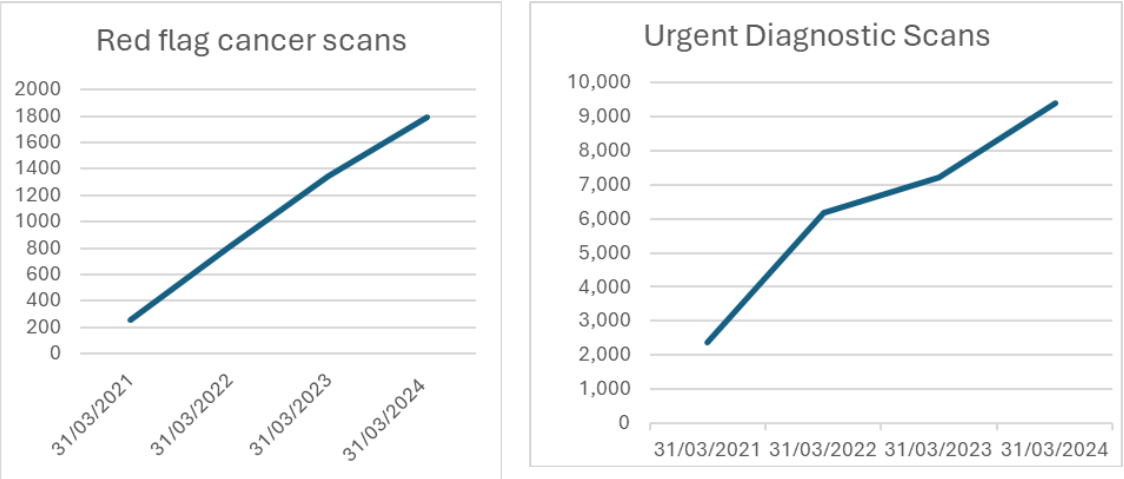
3.8 Concerningly, this data has also helped quantify how badly performance has deteriorated for both the number of suspected `red flag' cancer scans taking longer than two weeks and the number of urgent diagnostic scans taking longer than four weeks. Between the end of March 2021 and March 2024:

- The numbers waiting longer than two weeks for a red flag cancer scan has increased by more than five times from 260 cases, to almost 1,800 at March 2024.
- The numbers waiting over four weeks for an urgent diagnostic referral has risen by almost three times from just under 2,400, and stood at almost 9,400 patients at March 2024 **(Figure 10)**.

3.9 As this data only reflects patients waiting longer than these periods at a particular point in time, the numbers experiencing such lengthy waits for these urgent scans each year will be much higher.

8 There are no formal targets for the `urgent' four week pathway. This information is used for operational and clinical prioritisation.

Figure 10: The number of patients waiting over two weeks for red flag cancer scans and more than four weeks for urgent diagnostic scans has grown very significantly since 2021



Source: DoH SPPG

Note – there is no formal Ministerial target for carrying out urgent diagnostic scans. This is because urgency is defined at the clinical level, depending on the specialty, i.e. what is urgent in one service may not be urgent in another. The four-week timeframe is used internally within SPPG/RMIB to monitor performance and for operational and clinical prioritisation.

3.10 More recently, it should be highlighted that there has been some improvement during 2024-25 in the waiting time position for these urgent pathways. At January 2025 there were 1,069 patients waiting more than 2 weeks for a red flag scan, with 7,536 urgent patients waiting more than 4 weeks. This indicates significant progress compared to the March 2024 position and reflects the timely notification and availability of additional non-recurrent funding which has not always been the case in recent years. However, during this period, waiting times for routine patients have continued to increase.

The time taken to clinically report on images and scans has also significantly increased

3.11 After images have been produced, these need to be clinically interpreted and reported on in line with Ministerial turnaround standards to ensure timely patient diagnosis and treatment.

3.12 The key Commissioning Plan Target for this area requires all urgent diagnostic imaging to be reported on within two days. However, again this target was not met for any of the four main imaging modalities in the quarters ending March 2019 or March 2023. Performance deteriorated over this period for all modalities except for NOUS scans. In the quarter ending March 2023 alone, the two-day clinical reporting target was missed for over just over 23,000 urgent scans **(Figure 11)**. It is widely acknowledged that the consultant workforce is currently insufficient to ensure timely reporting within the required standards. Even with increasing use of outsourcing of imaging services, timeliness cannot always be achieved given the well documented shortage of clinical staff.

Figure 11: The percentage of urgent scans clinically reported on within the two day target requirement reduced between March 2019 and March 2023

Type of reporting	% reported on within 2 days q/e March 2019 (target 100%)	% reported on within 2 days q/e March 2023 (target 100%)	% point change	Number not reported on within 2 days q/e March 2023
MRI	68.5%	59.6%	- 8.9%	6,539
CT	86.9%	80.9%	- 6.0%	6,998
NOUS	94.3%	96.7%	+ 2.4%	601
Plain film x-rays	91.8%	58.8%	- 33.0%	8,960
Total	**n/a**	**n/a**	**n/a**	**23,098**

Source: DoH published quarterly data

3.13 The more recent 2024 data which excludes the South Eastern Trust shows that performance remains well below the target's requirements **(Figure 12)**.

Figure 12: Performance for reporting on urgent scans remained well below the target levels in 2024

Type of reporting	% reported on within 2 days q/e March 2019 (target 100%)	% reported on within 2 days q/e March 2024 (target 100%)	% point change	Number not reported on within 2 days q/ending March 2024
MRI	67.8%	61.0%	-6.8%	5,455
CT	89.5%	81.5%	-8.0%	6,586
NOUS	94.7%	95.9%	+1.2%	722
Plain film x-rays	92.0%	48.8%	-43.2%	8,401
Total	**n/a**	**n/a**	**n/a**	**21,164**

Source: DoH published quarterly data

Note – data excludes South Eastern Trust

Full benchmarking of waiting times with the rest of the UK is not currently possible but the available data suggests these are much longer in NI compared to England

3.14 It is not currently possible, or fully appropriate, to compare waiting time performance for diagnostic imaging services in NI on a fully `like-for-like' basis with the rest of the UK, as the respective targets and the way performance is measured vary significantly. SPPG told us that, currently, its primary responsibility is to achieve the local targets set by the Minister for Health. However, it also told us that it in seeking to strengthen local performance, it regularly monitors UK best practice in terms of diagnostic imaging productivity and waiting time performance through various sources, including reports produced by the Royal Colleges, NICE and Getting It Right First Time (GIRFT)[9] as well as the NI strategic direction for imaging and wider elective, cancer and unscheduled care.

3.15 The limited benchmarking which can be undertaken indicates that patients are waiting much longer in NI compared to England. For example at March 2024, fewer than 5 per cent of patients had been waiting 13 weeks or longer for an MRI scan in England whilst in broadly the same period, 35 per cent of patients had been waiting longer than 26 weeks in NI **(Figure 13)**.

Figure 13: The limited comparison possible suggests that waiting times for diagnostic imaging are much longer in NI compared to England

Imaging modality	% of patients waiting > 26 weeks quarter ending March 2024 (NI)	% of patients waiting 13 weeks or longer at March 2024 (England)
MRI	35.3%	4.7%
CT	16.6%	3.9%
NOUS	7.4%	3.6%

Source: DoH and NHS England

3.16 In interpreting these outcomes, however, it is important to highlight that that local commissioning and funding mechanisms differ fundamentally compared to England.

9 The GIRFT programme is a national NHS England programme designed to improve the treatment and care of patients through in-depth reviews of services, benchmarking and presenting a data driven evidence base to support change.

Conclusions

3.17 **The number of people on diagnostic imaging waiting lists and length of time patients wait for most imaging modalities have both been rising notably since 2019.**

3.18 **Increasing numbers of patients are enduring long waits for 'red flag' suspected cancer and `urgent' diagnostic scans, and the time being taken to clinically interpret and report on urgent scans has also been increasing. The impact on less urgent patients has been the most significant and creates an increasing risk of serious patient disease and morbidity. The potential impact of these trends on patient welfare is clearly concerning.**

3.19 **Whilst it is very difficult to meaningfully benchmark local waiting time performance with the rest of the UK, the available information indicates patient waits are much shorter in England than in NI.**

Issue 3:

Issues impacting the HSC radiographer and Radiologist workforces

Issue 3 – Issues impacting the HSC radiographer and Radiologist workforces

Whilst HSC radiographer workforce and training levels have increased, demand will continue to rise, meaning sustained funding will still be needed to meet this

4.1 The effective and timely delivery of diagnostic imaging services is also significantly reliant on an adequately resourced and skilled workforce, both in terms of radiographers who (mostly) perform the scans and Radiologists who (mostly) clinically review and report on these. This section of the report assesses issues in respect of both workforces.

4.2 DoH monitoring has identified some broadly positive recent trends in respect of the HSC radiographer workforce. For example, there has been an overall increase of 23 per cent between 2017 and 2024 in both headcount and Whole Time Equivalent (WTE) workforce numbers **(Figure 14)**. Whilst the number of vacant radiographer posts increased from 71 in 2019 to 99 in 2023, it has more recently fallen to 77 vacancies at March 2024 **(Figure 15)**.

Figure 14: The HSC radiographer workforce has increased by 23 per cent since 2017

Type of measurement	2017	2024	% increase
Headcount numbers	913	1,124	23.1
Whole Time Equivalents	827.4	1,021.5	23.5

Source: Annual DoH workforce census

Figure 15: The number of HSC radiographer staff vacancies has recently reduced

Quarter Ending	Number of staff vacancies
March 2019	71
March 2020	n/a
March 2021	94
March 2022	94
March 2023	99
March 2024	77

Source: DoH

4.3 Although these recent developments are encouraging, they do not mean that the workforce is adequately resourced to meet future demand and this also requires focused and longer-term planning. Based on projections that the total number of images required in NI would increase by 56 per cent from 1.8 million to 2.5 million between 2017 and 2028, a DoH-led Workforce Review of diagnostic radiography concluded that an additional 400 radiographers would be required by 2029 through additional recruitment and training.

The Department of Health have increased the number of available radiographer training places

4.4 Prior to 2018, DoH permanently funded 48 places on the Ulster University under-graduate diagnostic radiographer training programme. Between 2018 and 2023, this gradually increased to 68 permanently funded places as result of the Review of Imaging Services. An additional 10 to 12 places were generally funded annually during this period through non-recurrent funding, but as these places were not guaranteed, this did not represent a permanent expansion of funded training capacity. In any case, the training levels in place up to 2023 were not sufficient to meet the longer-term needs identified by DoH's workforce review.

4.5 However, an increase in DoH funding recently secured by SPPG means that 94 radiographer training places will be funded annually in the three years between 2024 and 2026. Alongside a further five annual places funded via a reciprocal arrangement with the Republic of Ireland, it is anticipated that this will help bring the workforce closer to meeting the required levels at 2026. In the longer-term however, the Department acknowledges that sustained recurrent investment will still be required beyond this to ensure that the future supply of diagnostic radiographers is sufficient to meet growing demand and service expansion, and to support skill mix and advanced practice.

An annual census by the Royal College of Radiologists provides detailed staffing information and projections

4.6 DoH is currently unable to routinely produce workforce data for HSC doctors broken down by medical speciality, including for Consultant Radiologists. In a one-off exercise it found that 166 Consultant Radiologists (headcount) or 153.8 WTEs were employed across the five trusts at May 2023. This however, only provided a point in time measurement. It is important for workforce planning purposes that information in this area is updated regularly.

4.7 An annual UK-wide workforce census conducted by the Royal College of Radiologists (RCR) provides more detailed staffing information for the UK overall and the four individual regions. It is a comprehensive exercise which regularly draws a 100 per cent response rate from all UK acute trusts and health boards (including the five local HSC trusts). Some of the RCR's key 2023 census findings for NI and the other UK regions are summarised at **Figure 16**.

Figure 16: The 2023 RCR workforce census highlighted some positive findings around current workforce levels in NI, but also identified a 27 per cent staffing shortfall

Staffing numbers – The local Radiologist Consultant workforce (headcount) comprised 213 staff (164 fully qualified staff and 49 trainees). This included 151 fully qualified WTEs, 16 per cent of which were locums.

In NI, the 4 per cent reduction in the WTE Consultant Radiologist[10] workforce over the last five years broadly reflected UK-wide trends.

Comparative UK workforce levels – At 10.5 WTE Consultant Radiologists per 100,000 population, NI had the same staffing levels as Scotland, and a higher ratio than England (9.8) and Wales (9.5).

Current workforce shortfalls – The estimated current shortfall of 56 WTE Consultant Radiologists in NI (27 per cent), was similar in percentage terms to Scotland (26 per cent), but lower than England (31 per cent) and Wales (34 per cent).

Despite some positive findings, the census also identified various existing and future Radiologist workforce challenges

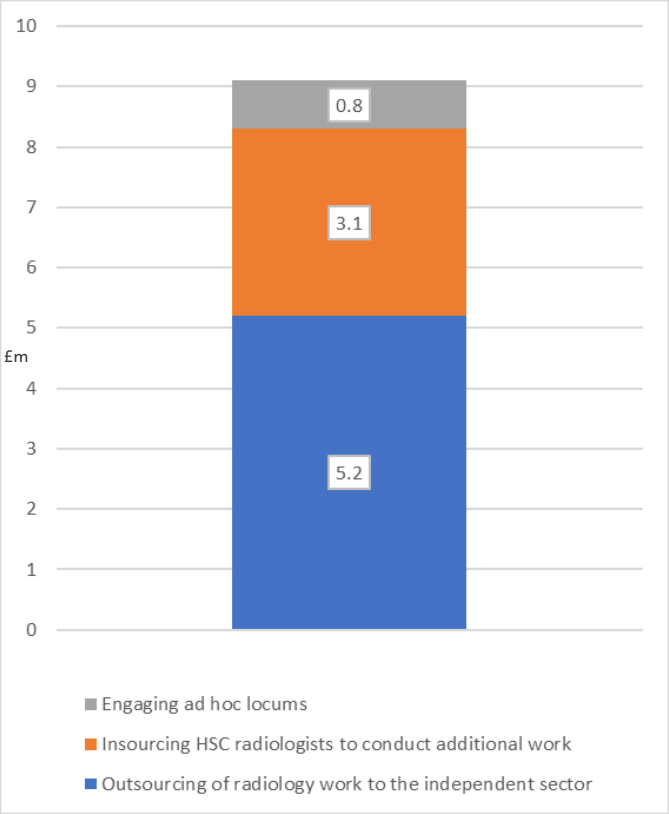
4.8 Whilst the census indicated that Northern Ireland currently compares relatively well against the rest of the UK in terms of Radiologist workforce levels per capita, it also highlighted existing and future challenges. Four of the five HSC trust Radiology Clinical Directors considered that the current workforce was insufficient to deliver safe and effective care, albeit that this was a slight improvement on 2022, when all five Directors expressed this view. It also found that the 14 per cent Consultant Radiologist vacancy rate in NI in 2023 was higher than in England and Scotland (both 10 per cent), and Wales (8 per cent).

Spending on temporary Radiologist workforce solutions in NI is the highest in the UK

4.9 In terms of relying on temporary workforce solutions, NI spent £9.1 million in 2022-23 on either outsourcing radiology work to the independent sector (£5.2 million), insourcing HSC Radiologists to conduct additional work (£3.1 million) and engaging ad hoc locums (£0.8 million) **(Figure 17)**.

10 Estimates based on an average of an assessment of three factors: imaging volumes and IR provision; population size; and radiology expenditure.

Figure 17: £9.1m was spent on temporary Radiologist workforce solutions in 2022-23



4.10 At £4.77 per capita, this is the highest UK spending level compared to England (£4.13), Scotland (£3.49), and Wales (£3.65). This reflects previous reported trends. Furthermore, insourcing costs of £20,913 per Consultant Radiologist in NI were higher than in England (£16,375) and Scotland (£12,454), but similar to Wales (£21,287).

Retirements are likely to have a large impact on the Radiologist workforce over the next five years

4.11 In assessing other challenges, the census forecast that notable gaps could develop in the HSC Radiologist workforce over the next five years. It indicated that NI had the highest percentage of WTE Radiologist Consultants in the UK forecast to retire over this period, and the lowest UK proportion of trainees currently in the workforce. It also projected that NI will likely have the highest Consultant Radiologist staffing shortfall in the UK by 2028 **(Figure 18)**.

Figure 18: NI is forecast to have the highest proportion of Consultant Radiologist retirements and staffing shortfall in the UK over the next five years, and currently has the lowest UK proportion of trainee consultants

	NI	England	Scotland	Wales
% of WTE Radiologist Consultants forecast to retire over next five years	**25%**	20%	18%	21%
% of trainee Radiologist Consultants in currently in workforce	**23%**	29%	31%	35%
Projected % shortfall of WTE Consultant Radiologists by 2028	**44%**	41%	36%	38%

Source: Royal College of Radiologists

4.12 Whist the number of DoH-funded Consultant Radiologist training places has steadily increased from 37 in 2014 to 56 in 2024, this reflects the optimum capacity of the current Northern Ireland Medical and Dental Training Agency (NIMDTA)[11] training model. SPPG demand and capacity planning has indicated that this training capacity needs to be doubled even to meet current levels of identified need.

4.13 To address this, SPPG has established plans for a multi-professional Northern Ireland Imaging Academy (the Academy). SPPG initially made a bid for funding for the Academy in 2022 which was accepted and included into DoH's then ten-year capital funding plan. This remains listed within the Department's current 15-year plan. Currently, the bid for the Academy envisages a requirement for approximately £3.9 million capital funding and £1.2 million revenue funding.

4.14 The Belfast HSC Trust has been identified as the regional host for the Academy which will provide 100 training places for Radiologists over the five-year training period and will increase training capacity for advance practice radiographer education. A final version of the business case for the Academy is currently undergoing scrutiny. A fuller and more robust understanding of project costs is expected to emerge following this process.

4.15 However, the provision and timing of funding will be dependent on how the Academy is prioritised in the context of other competing priorities within DoH's 15-year capital plan. Until a decision on this has been made, it is unclear whether and when construction of the proposed Academy, which would contribute significantly to ensuring that a sustainable Radiologist workforce capable of meeting the forecast future challenges, will proceed.

11 NIMDTA provides postgraduate training programmes for doctors and dentists in Northern Ireland.

Conclusions

4.16 **There have been broadly positive trends for the HSC radiographer workforce with staffing numbers and vacancy levels having recently reduced. Increased funding for training levels recently secured also means that the workforce will likely grow close to the levels of identified need by 2026. However, further sustained investment will be required beyond this to meet continually growing demand and ensure service expansion.**

4.17 **Issues around the Radiologist workforce are more complex. Although NI currently has a higher proportion of Consultant Radiologists per 100,000 population than England and Wales, there are current and future challenges. Temporary staffing costs and staffing vacancies in NI are currently the highest in the UK. In addition, NI has the highest percentage of WTE Radiologist Consultants in the UK forecast to retire over the next five years, and the lowest UK proportion of trainee consultants currently in the workforce. It is also projected to have the highest Consultant Radiologist staffing shortfall in the UK by 2028.**

4.18 **Demand modelling shows that the current local training model for Consultant Radiologists needs to be doubled to meet optimal demand. A proposed training academy would go some way to helping create a more sustainable Radiologist workforce and further boost radiographer training, but it is currently unclear, in the context of competing DOH priorities and funding constraints, if and when funding to support the delivery of this will be available.**

Recommendations

In the context of supporting enhanced workforce planning, DoH should work to ensure that enhanced management information is readily available for the wider HSC medical workforce group.

Given the RCRs future workforce projections, DoH should set out clear plans for addressing issues around the Radiologist workforce, including those around managing succession planning and minimising future outsourcing and insourcing costs. This will include assessing the merits of funding the proposed training Academy as a key priority project given its strong potential to bring longer-term benefits, and also potentially help reduce outsourcing costs.

"A significant proportion of HSC diagnostic imaging capital equipment is currently older than the necessary replacement age... If the age profile of the current asset vase was to increase further, this could potentially...impact negatively on service efficiency and delivery."

Northern Ireland Audit Office

Issue 4:
A sizeable proportion of HSC capital equipment is currently older than the necessary replacement age

Issue 4 – A sizeable proportion of HSC capital equipment is currently older than the necessary replacement age

Currently, 16 per cent of the HSC imaging asset base is older than ten years which is effectively obsolete

5.1 A clear plan for the ongoing replacement of imaging and scanning equipment is fundamental to the delivery of modern, high quality imaging services.[12] This is important in the context of patient and staff safety, and to support service quality, efficiency, and productivity. The European Society of Radiology (ESR) recommends that assets should be replaced at an interval of no longer than 10 years as a backstop.

5.2 It is also acknowledged that equipment downtime and maintenance costs escalate for assets which are older than this. The ESR has concluded that older equipment of this nature potentially brings risks of delays to patient diagnosis and treatment. Research has also indicated[13] that older equipment is also slower, which reduces the number of patients which can be scanned and may produce lower quality images meaning cancer and other abnormalities are harder to identify, as well as potentially delivering higher than necessary radiation doses, bringing concerns for patients and clinical staff as well as regulatory non-compliance.

5.3 The ESR adopts guidance[14] that, if properly maintained, equipment between 6 and 10 years is still fit for use, but that equipment older than 10 years is no longer state of the art and replacement is essential.

5.4 The RMIB has established a Capital Equipment Sub-Group which has responsibility for both oversight and management of the HSC equipment replacement programme and development of the plan for additional imaging capital equipment to meet projected need. With regard to replacement, the Sub-group has identified backstops of five years for ultrasound and mammography equipment and seven years for all other equipment which essentially means they have reached replacement stage and should be considered and listed for this.

5.5 The significant management strategies needed and increasing risk involved with equipment older than five years, mean that SPPG's preferred approach is that CT and MRI equipment is replaced at seven years. As NOUS equipment is largely hand-held, more prone to damage and generally has a shorter "life-expectancy", SPPG requires that this is replaced every five years. This equipment is not as expensive as MRI and CT scanners, and replacement is mainly managed within trusts' own capital budgets, meaning it is not usually listed as a priority compared to CT and MRI on the DoH's annual replacement list.

5.6 A central inventory of existing HSC diagnostic equipment is maintained by the RMIB and shows that, at November 2024, 16 per cent of the current overall asset base is older than 10 years and requires priority replacement, with a higher percentage currently exceeding SPPG's preferred replacement age **(Figure 19)**.

12 Diagnostic imaging equipment capital equipment planning guide – guidance developed by the NHS in consultation with the Royal College of Radiologists, Society of Radiographers, and Institute of Physics & Engineering in Medicine (April 2021).

13 Royal College of Radiologists research June 2024.

14 European Society of Radiology "Renewal of Radiological Equipment" 2014.

Figure 19: Some 16 per cent of HSC diagnostic imaging equipment is currently obsolete

Equipment type	Current position compared to preferred replacement age
All types of HSC diagnostic imaging equipment	16% of all equipment is older than 10 years. The European Society of Radiology recommends that no more of 10% of the equipment base should be older than this.
NOUS equipment	24% of equipment is older than 5 years.
All other equipment	28% of equipment is older than 7 years.

Source: DoH SPPG

5.7 SPPG told us that whilst unplanned breakdown of equipment does occur across the current asset base, this is currently relatively limited. However, it cited rising maintenance costs as increasingly becoming an issue and presenting real challenges for trusts, with increased recurrent funding urgently required to address this. Without this increased funding, these high maintenance costs bring the risk of contributing to overspends within trusts and an inability to fund and address other priority operational areas.

Funding for replacing the existing imaging asset base in a timely manner has fallen below levels of identified need

5.8 To achieve its preferred replacement policies, SPPG has estimated that annual funding of between £15 million and £25 million is required, depending on when equipment becomes due for replacement. In contrast to this, the ring-fenced annual capital budget for equipment replacement has for some time stood at £3 million.

5.9 SPPG told us that the additional non-recurrent capital equipment funding provided in recent years had enabled more equipment to be replaced compared to the situation prior to 2021. However, as **Figure 20** shows, the total capital funding and additional in-year non-recurrent funding provided has still fallen short of the identified requirement each year between 2020 and 2025.

5.10 No funding was allocated in 2020-21, reflecting the pressures and disruption placed on the HSC sector by COVID-19. Furthermore, between 2020-21 and 2024-25, a total of £30.3 million capital and in-year non-recurrent funding has been allocated (an annual average of just over £6 million). As this has fallen substantially below the identified levels of need, the Regional Medical Imaging Board within SPPG has had to prioritise replacement activity against the £3 million annual guaranteed funding as it cannot assume that there will be in-year additional slippage available.

Figure 20: The funding provided to replace existing diagnostic imaging equipment between 2020-21 and 2024-25 has fallen well below the £15 million to £25 million required annually

Year	Capital funding allocated (£ million)	Additional in-year non-recurrent funding allocated (£ million)	Total funding allocated (£ million)
2020-21	No allocation	No allocation	**No allocation**
2021-22	3.02	3.27	**6.29**
2022-23	12.39	1.96	**14.35**
2023-24	3.17	3.50	**6.67**
2024-25	3.00	No allocation	**3.00**
Total	21.58	8.73	**30.31**
Annual average 2020-21 to 2024-25	4.31	1.75	**6.06**

Source: DoH

There is uncertainty over whether funding will be available to purchase new equipment to meet growing demand and take advantage of technological advances

5.11 In addition to replacing existing equipment, plans are in place, subject to funding, to acquire new additional imaging equipment to meet rising demand and to benefit from efficiency and productivity benefits achievable from new and improved technology. Based on the current HSC capital equipment base and demand modelling, SPPG has bid for an additional £61.6 million capital funding, as well as £40 million revenue funding spanning the period 2025-26 to 2033-34 which has been included in DoH's current 15-year capital plan.

5.12 Whilst the procurement of this equipment is essential to create the additional capacity required to meet future demand and to support the sustainability of imaging services, availability of the necessary funding is, similar to the proposed training academy (paragraph 4.13), not guaranteed. The quantum and timing of allocation will again depend on how procurement of the equipment is prioritised on an ongoing basis within the Department's capital plan.

Conclusions

5.13 **A significant proportion of HSC diagnostic imaging capital equipment is currently older than the necessary replacement age. A factor influencing this has been that the level of funding allocated to replacing equipment in recent years has been well below levels of identified need. If the age profile of the current asset base was to increase further, this could potentially lead to higher levels of equipment downtime and impact negatively on service efficiency and delivery.**

5.14 **In addition to replacing existing equipment, RMIB has identified a need for almost £62 million capital and £40m revenue over the next eight years for new equipment to meet additional demand and secure productivity and efficiency improvements. However, availability and timing of the required funding is again not guaranteed and dependent on prioritisation and availability within DoH. Non-availability of this funding could also potentially impact on service standards.**

Recommendation

In view of the range of disadvantages of relying on old diagnostic imaging equipment, DoH should draw on the information held by SPPG and produce an action plan aimed at ensuring that the HSC asset base reflects best practice in that no more than 10 per cent of this should be aged 10 years or over. The plan should also outline what action is to be taken to ensure that the replacement equipment which has been identified as required to meet rising demand is procured and utilised to maximum effect.

NIAO Reports: 2024 and 2025

NIAO Reports 2024 and 2025

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