

Radiology Services: Update on Progress – Aneurin Bevan University Health Board

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Summary report

Introduction

- 1 [Our 2017 report on radiology services](#) found that the Health Board faced risks in meeting current and future demand for radiology services. We found that the Health Board's ability to manage increasing demand on the service was exacerbated by staffing challenges, while waiting times and reporting turnaround times needed improvement. In addition, there were weaknesses in strategic and financial planning.
- 2 The Auditor General's 2018 national report on [Radiology Services in Wales](#) also highlighted several issues threatening the sustainability of radiology services across Wales. These issues include staffing challenges; ageing and underutilised equipment; weaknesses in IT systems; long waits for examination results; and opportunities to improve scrutiny and strategic planning.
- 3 Both reports set out recommendations or action that the Health Board should address to improve workforce planning, equipment replacement programmes, modelling demand, maximising capacity, performance information and monitoring arrangements. The 2018 national report also identified additional challenges that required a co-ordinated approach by NHS Wales.
- 4 In 2019, the Welsh Government published an [Imaging Statement of Intent](#), setting out a commitment to adopt a new co-ordinated strategic approach to developing high quality, effective and sustainable imaging services. The National Imaging Programme Strategy Board (NIPSB) was established in 2019 to oversee the implementation of the Imaging Statement of Intent and promote innovation and new ways of working in imaging services in Wales. The NIPSB has been undertaking work to assess the progress made by NHS Wales.
- 5 Since we published our local and national reports on radiology services, the COVID-19 pandemic has changed the landscape in which the Health Board operates, posing new challenges and opportunities for service delivery. In addition, the Health Board opened the Grange University Hospital in November 2020, resulting in changed service delivery models and patient pathways.
- 6 We undertook a high-level assessment of the progress made by the Health Board to address our recommendations. In undertaking this work, we:
 - asked the Health Board to complete a self-assessment of progress;
 - reviewed documentary evidence to support the self-assessment, as well as board and committee papers; and
 - interviewed several officers to discuss progress, current issues, and future challenges.
- 7 A summary of our findings is set out in the following section with more detailed information provided in **Appendix 1**.

Our findings

- 8 Our overall conclusion is that the Health Board **has significantly improved the way it plans and delivers radiology services through strong leadership and using demand and capacity modelling to identify and implement solutions to respond to increasing demand and changes to service delivery and patient pathways. As wider services now start to recover from the pandemic, suppressed demand as a result of delayed access to treatment, however, has the potential to create challenges for radiology services.**
- 9 In summary, the status of progress against each of the previous recommendations is set out in **Exhibit 1**.

Exhibit 1: status of 2017 recommendations

Total number of recommendations	Implemented	Ongoing action	No action	Superseded
9	7	1	0	1

Source: Audit Wales

- 10 We found that the Health Board has made good progress to address our recommendations because:
- the new Grange University Hospital has resulted in increased radiology equipment, and hence imaging capacity. Prior to the opening of the hospital, the Health Board reduced waiting times by making use of additional capacity provided by outsourced services and continues to make use of these services in response to increased waiting times caused by COVID-19.
 - the service has developed supporting plans to implement the changes to service delivery and patient pathways resulting from the opening of the Grange University Hospital.
 - there is a strong leadership team within the radiology directorate with a clear vision to drive forward innovative solutions and improvements.
 - the radiology directorate has been successful in recruiting to radiographer posts, and changes to staff working patterns and increased radiology operating hours have improved the sustainability of imaging services.
 - where challenges remain in recruiting radiologists, the Health Board has sought to close part of the gap with advanced radiographer practitioner roles.
 - the radiology directorate has good relationships and regular communication with other directorates to inform demand and capacity, and to ensure appropriate prioritisation of patient referrals for diagnostic imaging.

- there are appropriate arrangements to ensure operational monitoring of performance.
- 11 In undertaking this assessment of progress update, we identified one new risk in relation to radiology services which is set out in **Exhibit 2**. The Health Board will need to make sure that it maintains oversight of this risk.

Exhibit 2: new risk identified during our work

New risk	
Area	Description
Increased demand resulting from COVID-19 supressing demand during the first peak	There is an unknown level of ‘pent-up’ demand as a result of patients having treatment delayed or not visiting their GP during the pandemic, which could significantly affect the radiology service’s ability to respond to referrals and report images in a timely manner.

Source: Audit Wales

Recommendations

- 12 In undertaking this work, we have made no new recommendations. However, the Health Board needs to continue to make progress in addressing our previous recommendation which has yet to be fully implemented. This is set out in **Exhibit 3**.

Exhibit 3: previous recommendations not yet fully implemented

2017 recommendation not yet fully implemented	
R4	The Health Board should look to further develop its collection of patient experience information across its sites and seek to identify any common trends that can be actioned to improve the service.

Appendix 1

Progress to address our 2017 recommendations

Exhibit 4: assessment of progress

Recommendations to be addressed	Status ¹	Summary of progress
<p>R1 Develop an action plan detailing how waiting-time targets will be achieved in the short term, and how the radiology service will sustain a reduction in waiting times going forwards, setting out:</p> <ul style="list-style-type: none"> a. an approach for the use of locums; b. an approach for the use of outsourcing of examinations; 	<p>Green</p>	<p>Our 2017 report highlighted that a significant number² of patients waited more than eight weeks for diagnostic scans, and waiting-time performance for patients receiving magnetic resonance imaging (MRI) and non-obstetric ultrasounds (US) had deteriorated during 2016.</p> <p>Our high-level review of pre-pandemic waiting-time performance identified that the number of patients waiting more than eight weeks for MRI, computerised tomography (CT) and non-obstetric US imaging reduced over the months since our previous report, and in January 2020, no patients waited over eight weeks³. The Health Board achieved this by:</p> <ul style="list-style-type: none"> • successfully recruiting a range of staff, but in particular radiographers and sonographers by pursuing innovative options, such as international recruitment campaigns. The focus has now moved to appointing to the remaining consultant radiologist vacancies.

¹ Green indicates that the recommendation has been achieved; Amber indicates ongoing action to address the recommendation; Red indicates that insufficient or no progress has been made; and Blue indicates that the recommendation was superseded.

² At the time of our previous report, in August 2016, 594 patients were waiting over eight weeks for an MRI scan, 30 patients waited over eight weeks for a CT scan, and 1,276 patients waited over eight weeks for a non-obstetric ultrasound scan.

³ StatsWales, Diagnostic and Therapy Services Waiting Times

Recommendations to be addressed	Status ¹	Summary of progress
<p>c. how it can ensure consistency in the prioritisation applied by referrers to forms; and</p> <p>d. any other actions that will help the Health Board achieve targets.</p>		<ul style="list-style-type: none"> • reducing long-term reliance on locums. The radiology service continues to make effective and efficient use of locums to cover short-term absences. • making continued use of outsourced CT and MRI to increase imaging capacity provided by mobile services, a private hospital, and a diagnostic centre. These services are managed and monitored through service level agreements. • seeking an appropriate solution to increase non-obstetric US capacity. In 2017, the Health Board engaged with external partners for an outsourced ultrasound examination service but encountered significant clinical governance and patient safety concerns with the service provider. The Health Board decided instead to employ a locum to provide additional cover and will continue with this arrangement in the medium term. However, the directorates are working on plans to train and employ more sonographers. • working closely with referrers to ensure there is consistency in prioritising patients. The radiology service actively vets request forms submitted by referrers to ensure the most urgent cases are prioritised, whilst still maintaining throughput of less urgent referrals. • prioritising urgent suspected cancers, aided by the appointment of two cancer pathway ‘navigators’ to manage and prioritise urgent suspected cancer requests. <p>The Health Board developed a Radiology Sustainability Plan in 2017-18. We did not review the Radiology Sustainability Plan as it was superseded by the Clinical Futures Radiology Service Model 2019, which set out how the radiology service would support the delivery of the Clinical Futures Strategy for changing delivery of care across the Health Board. The Clinical Futures Strategy set out significant changes to deliver more care closer to</p>

Recommendations to be addressed	Status ¹	Summary of progress
		<p>home, create a network of local hospitals to provide routine diagnostic and treatment services, and centralise specialist and critical care services in the new Grange University Hospital.</p> <p>The Clinical Futures Radiology Service Model included demand and capacity modelling. The modelling identified the consequences of changed patient pathways and the anticipated growth in demand for imaging services. The modelling also identified the increased capacity from additional scanning equipment (resulting from the opening of the Grange University Hospital) and from increasing radiology operating hours across the Health Board hospital sites. The Model set out the implications for the radiology service, including the additional staffing and skill mix needed.</p> <p>The Grange University Hospital was due to open in March 2021 but opened four months earlier than scheduled to help the Health Board respond to winter pressures and the COVID-19 pandemic.</p> <p>The pandemic has had a significant impact on waiting times for imaging services, resulting from the standing down of non-urgent diagnostics and treatment. Whilst significant numbers of patients waited more than eight weeks during the period March 2020 and May 2021 (latest data available at time of reporting), the trend shows that the number of patients waiting over eight weeks is reducing. However, there is now an unknown level of ‘pent-up’ demand as a result of patients having treatment delayed or not visiting their GP during the pandemic, which could significantly affect the radiology service’s ability to respond to referrals and report images in a timely manner over the coming months and potentially years.</p>
<p>R2 Develop an action plan detailing how reporting backlogs will be managed sustainably, for example, by making short-term use of outsourcing whilst developing a medium to long-</p>	<p>Green</p>	<p>Our 2017 report identified that whilst average turnaround times for reporting images was good, some patients waited many months.</p> <p>Since our previous report, in 2018 the Health Board introduced a home reporting option for radiologists which enabled them to meet their reporting targets and during the pandemic helped them be able to support out of hours acute work.</p>

Recommendations to be addressed	Status ¹	Summary of progress
<p>term strategy to address the delays.</p>		<p>The reporting radiographer role has expanded to increase the types of reporting they can undertake, thus helping to reduce some of the demand on radiologists. The reporting radiographer role has a job plan based on 70% reporting, 20% clinical modality sessions, and 10% continuing professional development/supporting professional activities sessions. Reporting radiographers are able to work flexibly and also provide an out of hours service.</p> <p>The Health Board told us that reporting radiologists turn inpatient reports around very quickly and usually within 24 hours. There can be variance in reporting times from day to day, but the Health Board monitors reporting times at weekly performance meetings to ensure that reporting backlogs are managed.</p> <p>The Health Board also uses an external service and monitors the quality of the service provided.</p> <p>Whilst the Health Board has been successful in recruiting to vacant posts, there are still a number of consultant radiologist posts that remain unfilled as there is a UK-wide shortage of radiologists. Consequently, the Health Board is exploring artificial intelligence systems to help report more routine scans, with the potential to free up radiologist time to report on more complex images.</p>
<p>R3 Communicate and liaise with referring clinicians both:</p> <ul style="list-style-type: none"> a. when developing and reviewing referral guidance. <p>Ensure all radiology staff</p>	<p>Green</p>	<p>Our 2017 report identified that there was a need to strengthen the communication and liaison with referring clinicians.</p> <p>As outlined in Recommendation 1, the radiology team has worked alongside referral services to develop imaging referral guidelines. In 2019, they met with the GP leads for primary care to discuss prioritisation,</p>

Recommendations to be addressed	Status ¹	Summary of progress
<p>and referring clinicians can easily access an up-to-date version of guidance.</p> <p>b. on an ongoing basis, strengthen ongoing communication between radiology and referring clinicians, in particular GPs, by setting out an engagement plan by 2018. This plan should ensure there is an adequate forum for regular discussion of service changes that may affect the service and referral feedback to support demand management.</p>		<p>reporting, and referral guidelines. The guidelines were developed and agreed with secondary and primary care colleagues. The guidelines have subsequently enabled the reduction of inappropriate scans that would have previously been processed.</p> <p>All referrers and radiology staff have access to referral guidelines via the 'i-refer' webservice and there are separate referral guidelines for musculoskeletal and ultrasound diagnostic imaging.</p> <p>The radiology team has set up and maintains an email account for GPs to raise questions and obtain guidance directly. The email account is monitored by radiology senior management who seek guidance from senior colleagues and clinicians before providing a response to the referring GP. The service has proved popular, particularly with GPs, and the Health Board told us that it has led to a reduction in the number of unnecessary scans undertaken.</p> <p>The radiology service told us they provide feedback where they feel there is a pattern of inappropriate prioritisation.</p> <p>There remains frustration however, with the Radiology Information System (RADIS) and even though the referrals come through electronically, there remains a need to print and scan referrals into RADIS before being vetted.</p>
<p>R4 The Health Board should look to further develop its collection of patient experience information across its sites and seek to identify any common trends that can be actioned to improve the service.</p>	<p>Amber</p>	<p>The radiology directorate has developed its own Patient Reported Experience Measure (PREM) survey which is distributed on an annual basis and reported back to its Clinical Governance meeting and the Radiology Operational Group.</p> <p>The most recent PREM was adapted to include three COVID-19-related questions. 281 surveys were completed across the sites during a two-week period in September 2020. Whilst the feedback was largely positive, some learning points relating to communications with patients were identified.</p> <p>Learning from patient experience is shared through team meetings, noticeboards, and a staff newsletter.</p>

Recommendations to be addressed	Status ¹	Summary of progress
		<p>The Health Board acknowledged that there are more limited opportunities to collect patient experience data specifically on radiology services from the Grange University Hospital as most patients are acutely ill.</p> <p>The Health Board told us that, in addition to the directorate-wide PREM, it plans for each hospital site to design an additional site-specific PREM, which focuses on particular issues identified at that site. All sites will also re-introduce a comments box for service users.</p> <p>Whilst the Health Board has made positive progress against this recommendation, we feel unable to close this recommendation until the Health Board has implemented the site-specific PREM and reintroduced the comments box. In terms of learning, it would be helpful for the Health Board to identify how learning from patient feedback has made a difference and led to improvements.</p>
<p>R5 Over the next 12 months develop, in consultation with radiology staff and services that impact on radiology, a radiology strategy which sets out:</p> <ul style="list-style-type: none"> a. where the service is now in terms of its demand, capacity and available resources; b. where the service needs to be; and 	<p>Green</p>	<p>In our 2017 report we recommended the Health Board set out a radiology strategy in consultation with staff.</p> <p>As outlined in the ‘summary of progress’ section of Recommendation 1, the Health Board introduced a Clinical Futures Radiology Service Model in 2019 which includes changes to radiology services resulting from the Clinical Futures Strategy and the opening of the Grange University Hospital.</p> <p>In 2019-20, the radiology directorate undertook a consultation process of radiology services in August 2020. The purpose of the consultation was to provide staff and key stakeholders with information and options aimed at improving the sustainability of around-the-clock imaging services across all Health Board sites. The radiology service held a number of radiology staff engagement events to brief them on the options in the consultation and held</p>

Recommendations to be addressed	Status ¹	Summary of progress
<p>c. how the service will achieve its aims.</p>		<p>individual meetings where required. No formal objections to the proposals were received.</p> <p>The changes implemented as a result of the consultation have enabled easier rotation of staff across all hospital sites due to the alignment of shift patterns.</p> <p>As discussed in the 'summary of progress' section of Recommendation 1, there was a need for additional radiographers, and a recruitment exercise was accelerated due to the earlier than anticipated opening of the Grange University Hospital. The radiology service acknowledges that there remains a degree of uncertainty over the level of suppressed demand for imaging services resulting from COVID-19, and thus maintains regular dialogue with other directorates to help determine their future demand.</p>
<p>R6 By mid-2017, review the groups that routinely discuss radiology issues relating to radiology to consider how each contributes to the service including:</p> <ul style="list-style-type: none"> a. Weekly performance group; b. Radiology Operational Group; c. Radiology Protection Committee; d. Consultants Meeting groups; e. Directorate of Radiology; and f. Radiology Management team. 	<p>Green</p>	<p>In 2017 we recommended that the Health Board review the groups that regularly discuss radiology issues and develop a terms of reference (TOR) for each.</p> <p>All radiology groups have been reviewed and a governance structure is in place. All groups have a TOR which states frequency of meeting, the purpose, objectives, membership of each group, and accountability and reporting arrangements. Each TOR is reviewed every two years.</p> <p>The management structure within the radiology directorate ensures all senior managers have an awareness of what is happening across all sites to enable them to respond appropriately and quickly to any issues that arise. We were told that at least one senior manager always attends key meetings within the directorate governance structure.</p> <p>Some radiology directorate meetings were stood down during the peak of COVID-19, but this was offset by the radiology management team holding twice-daily meetings. Directorate meetings have subsequently been reinstated.</p>

Recommendations to be addressed	Status ¹	Summary of progress
<p>The service should establish a Terms of Reference for each group that clearly sets out the membership, regularity and scope and governance of each group.</p>		
<p>R7 Review radiology performance reports to ensure that they provide sufficient information to the groups and committees that receive them to ensure that group and committee members are fully sighted of key issues relevant to the service. The service should consider the inclusion of:</p> <ul style="list-style-type: none"> a. demand and capacity data; b. explanation for variation in performance since previous position; and c. benchmarking data. 	<p>Green</p>	<p>In our 2017 report, we identified that radiology performance reporting could be strengthened to ensure group and committee members were fully sighted of the key issues.</p> <p>The radiology service holds a weekly Referral to Treatment (RTT) meeting where all performance data is reviewed. Any variations in performance are considered at this meeting – actions are identified to improve performance and an action log is maintained to ensure progress in delivering actions is monitored. As outlined in the ‘summary of progress’ section of Recommendation 6, the weekly directorate RTT team meetings were stood down at the height of the pandemic, but RTT issues were considered by the twice-daily COVID-19 response meetings.</p> <p>The radiology directorate have monthly learning and discrepancy meetings to review any reporting issues and monitor reporting quality.</p> <p>Previously, there was a National NHS Benchmarking data collection exercise covering radiology services, but this ceased in 2018. The Health Board had intended to collect the same data for internal use, such as trend analysis, in 2019-20, but this had to be deferred to 2021-22.</p> <p>Performance information from RADIS needs to be downloaded manually by the Clinical Information Services Manager. Service managers cannot easily</p>

Recommendations to be addressed	Status ¹	Summary of progress
		<p>extract the data themselves from RADIS. This is something the Health Board has raised with Digital Health and Care Wales, but as yet a solution has not been provided.</p> <p>The Health Board submitted backlog/activity information to the national Imaging Essential Services Group (IESG) which was formed by the Welsh Government during COVID-19 to review the impact of the pandemic on radiology services across Wales.</p>
<p>R8 Further develop its equipment replacement programme to ensure that it complies with IR(ME)R requirements to include an equipment list which details the manufacturer, serial number, year of manufacture and year of installation.</p>	<p>Green</p>	<p>The radiology directorate has an equipment list which meets IR(ME)R⁴ requirements and is closely monitored and updated as appropriate by the service manager responsible for assets.</p> <p>There is a Radiology Capital Replacement Group which meets monthly to manage all capital projects from planning to implementation; this group was suspended during the height of COVID-19 but has now recommenced meeting.</p> <p>The equipment replacement programme in place has ensured the funding of several projects in 2021-22, including replacing the CT scanner in Ysbyty Ystrad Fawr, and general rooms in both the Royal Gwent Hospital and St Woolos Hospital. There was a lot of movement of equipment during COVID-19, so a robust and up-to-date asset register was crucial.</p> <p>The radiology service is working with procurement staff to roll out electronic asset tagging which will allow equipment audits to be done remotely without the need to disrupt equipment use.</p>

⁴ Ionising Radiation (Medical Exposure) Regulations

Recommendations to be addressed	Status ¹	Summary of progress
<p>R9 The Health Board should review the G2 speech system in use by radiologists to identify ways to improve its reliability and to manage the risks that arise when the system does not work as intended.</p>	<p>Superseded</p>	<p>Radiology no longer use the G2 speech system and are now using the clinical workflow voice recognition service provided by Fujifilm. The Fujifilm service has improved reliability, but there remain some speed issues due to server network capacity of the central server, used by NHS Wales.</p> <p>The Radiology Clinical IT Manager works with the Health Board IT service and Fujifilm on a regular basis to help continual improvement.</p>



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