

ISSUE 17

CELEBRATING KEY MILESTONES

The CAMRIN team has been busy over the past few months driving forward key projects, attending major industry events, and celebrating significant milestones. In this issue, we cover our participation in recent conferences, the near-completion of the Digital Diagnostic Network (DDN) Project, results from a recent audit, and a special spotlight on our Clinical Programme Manager, Carol, who recently received her long service award for over 40 years of dedication to the NHS.

Since the last issue, CAMRIN has participated in several important events. In May, we presented at the 9th NHS Radiology Summit hosted by Convenzis, followed by the UK Imaging and Oncology Congress (UKIO) 2024 in June. We also hosted the National Getting It Right First Time (GIRFT) team for Radiology, showcasing the excellent innovative work the network does.

One of our major achievements is the Digital Diagnostic Network (DDN) Project, which is almost fully completed. This issue explores how we plan to build on the infrastructure we've established and the future potential it holds. Additionally, we share the findings of a recent audit on patients who required volumetric imaging prior to brain tumour surgery, offering insights into its impact on patient care.

A special moment for us was celebrating our Clinical Programme Manager, Carol, who received her long service award after more than 40 years of dedicated service in the NHS. We reflect on Carol's journey and her pivotal role in enhancing radiology and imaging services.

Finally, we bring you updates on business intelligence, workforce initiatives, clinical pathways, digital delivery, and our transformation programmes, keeping you informed on our ongoing efforts to advance the services we provide.

In the meantime, if you would like us to come and visit you in your department, please get in touch.

David White
CAMRIN Clinical Lead



STAFF APPOINTMENTS ACROSS THE NETWORK

**Colette Hignett left her role as Senior Information Quality Analyst
Cheshire and Merseyside Imaging Network (CAMRIN)**

**Andrew Bleasdale joined the Trust as Radiology IT Systems Manager
The Clatterbridge Cancer Centre NHS Foundation Trust (CCC)**

**Julie Crockett joined the Trust as Service and Development Lead
The Clatterbridge Cancer Centre NHS Foundation Trust (CCC)**

**Julie Crockett left her role as Deputy Head of Operations - Imaging
Liverpool University Hospitals NHS Foundation Trust (LUHFT)**

**David Ludwig returned to the Trust as PACS/RIS Manager
Mersey and West Lancashire Teaching Hospitals NHS Trust (MWL)**

**Ynyr Edwards joined the Trust as a Head and Neck Consultant Radiologist
Wirral University Teaching Hospital NHS Foundation Trust (WUTH)**

9TH NHS RADIOLOGY SUMMIT HOSTED BY CONVENZIS

On May 15th the CAMRIN team attended the 9th NHS Radiology Summit: Addressing the NHS radiology crisis, hosted by Convenzis. The conference was an opportunity for the CAMRIN team to meet radiology colleagues from across the country and partners and suppliers in industry to discuss current issues, and the potential for the future of radiology. The event itself focused on:

- Technological advancements in radiology,
- Workforce sustainability,
- Financial resilience,
- Population health
- Patient-centred care.

Talks were delivered by Dr David White, CAMRIN Clinical Lead and Chris Sleight, Chief Officer of the GM Diagnostic Network. There was also a discussion and a Q&A session focused on interdisciplinary collaboration, with input from NHS England, GIRFT, the Society & College of Radiographers and the North-West Imaging Academy.

The CAMRIN team gained a lot of insight into the future for radiology in the NHS through the conference and were able to forge lasting links with other NHS diagnostic networks across the country.



UK IMAGING & ONCOLOGY CONGRESS (UKIO) 2024



If a deadly poison has broken out in your lab and you need to find an antidote rapidly, you need to have Bonnie, Faye, and Iain from the CAMRIN team on speed dial! As at this year's UK Imaging and Oncology (UKIO) Conference they managed to 'Escape The Van' in an outstanding 4 minutes and 38 seconds, which was the best time recorded at the event! The conference wasn't all about putting our collective expertise to the test and team bonding though. As this year's conference packed a lot in, focusing on tackling workforce shortages, advancing autonomous AI in radiology, and addressing the growing demand for imaging services.

The conference emphasized collaboration and innovation, with engaging sessions on healthcare technologies, such as AI's ability to alleviate pressure on the NHS, particularly in radiology departments. Autonomous AI solutions were highlighted throughout the event as game-changers for their ability to reduce radiologist workloads so they have more time to focus on cases with abnormalities. In addition to their ability to reduce patient wait times and improve efficiency. As the AI technology discussed has the potential to streamline operations, especially in primary care and large-scale screening projects, benefiting both practitioners and

patients, which is much needed, given the widely reported resource pressures the NHS is currently facing.

UKIO 2024 wrapped up with a strong message: the future of healthcare lies in integrating AI to enhance clinical workflows, combating workforce challenges, and ultimately improving patient outcomes across the UK. Attendees could then take their pick between a number of social events hosted by suppliers across different venues. Including networking opportunities provided by our AI for Chest X-ray project supplier Annalise, 4Ways, Everlight Radiology, Philips, and Soliton. All of which enabled attendees to engage in informal conversations with peers, suppliers, and industry professionals, fostering better relationships.

We're already looking forward to the next UKIO, which is currently planned to be scheduled between 2-4 June 2025 at the ACC Liverpool. You can find out more details and keep abreast of the latest updates, by visiting: <https://www.ukio.org.uk/future-dates>.

NATIONAL GIRFT TEAM FOR RADIOLOGY VISIT

The National Getting It Right First Time (GIRFT) team for Radiology paid a visit to the Cheshire and Merseyside Radiology Imaging Network (CAMRIN) in June 2024, following their commitment to meet all 22 Imaging Networks this year. Read the article below to find out more about the types of questions they posed to the Network and how the meeting went overall.

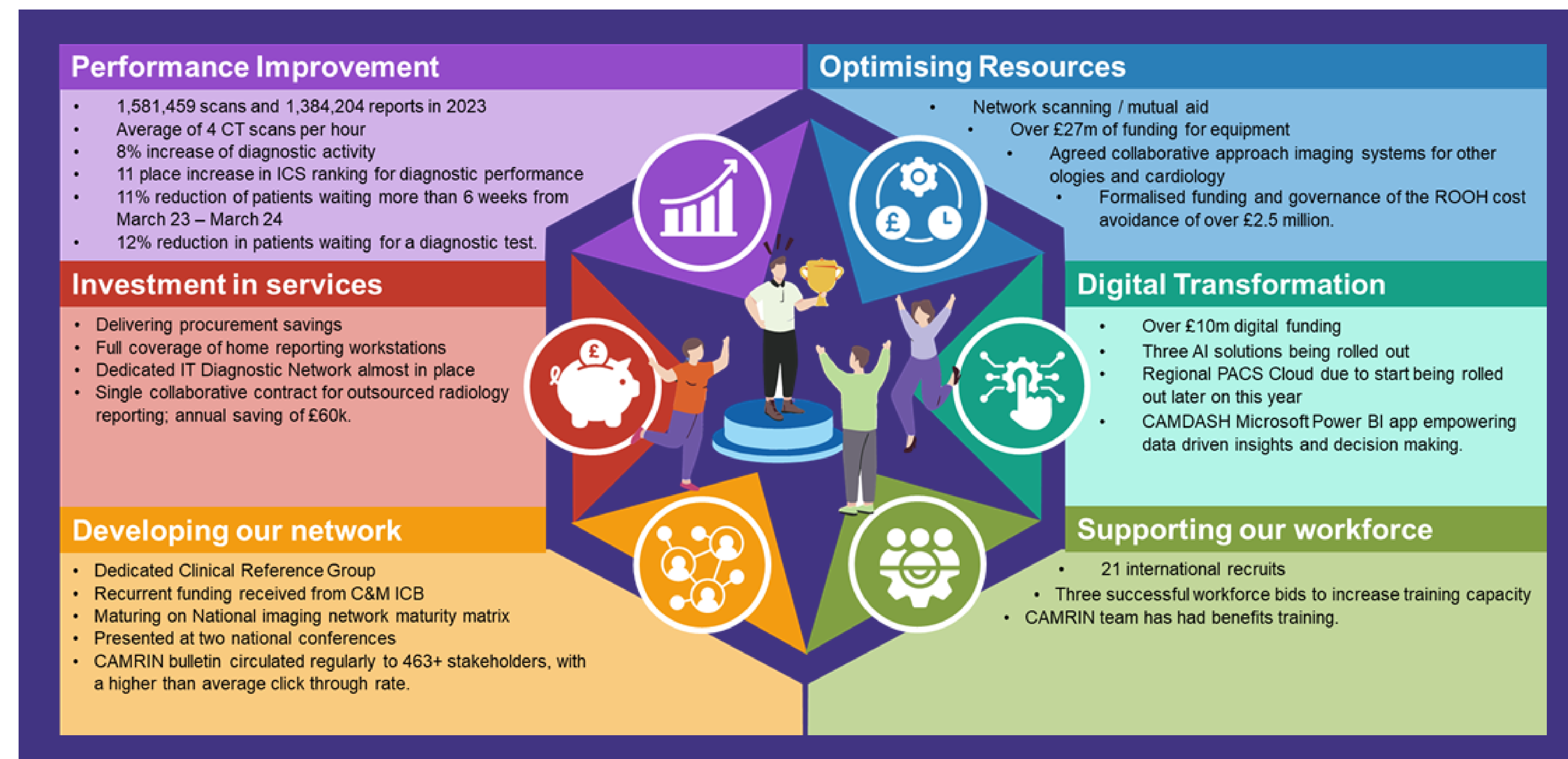
The Cheshire and Merseyside Radiology Imaging Network (CAMRIN) hosted the National GIRFT team for Radiology in June 2024, following their commitment to meet all 22 Imaging Networks during 2024. Prior to the meeting the GIRFT team sent over benchmarking data and the questions they were looking to be answered. In preparation the CAMRIN Team prepared a set of slides to answer the questions and share the excellent work that the network has achieved.

- To what extent can you share images and reports across the network?
- To what extent are the constituent radiology departments in your network working together?
- How are the network structures being used to:
 - Improve equity and speed of access?
 - Improve quality and patient outcomes?
 - Improve efficiency?
 - Support research and innovation?
- What are the principal challenges that you've faced and how have you overcome them?
- What benefits have been realised so far, what are anticipated and what are your plans for future sustainability including funding?

The CAMRIN central team rounded up a wide range of people to attend and present some of the excellent innovative work the network does. The team felt it was good to be able to share the work they do that is not captured within the National Imaging Maturity Matrix. Some examples of this are:

- Radiology Out of Hours Hub
- Diagnostic IT network
- PACS Cloud
- Other ologies
- Collaborative medical physicist project
- CAMDASH (our real time dashboard)
- Our diagnostic mutual aid pathway
- CAMRINs approach to benefit realisation
- Peer review outcomes
- Waiting list recovery.

The review meeting was a resounding success, some things that were highlighted were the sheer amount of work that the network is leading on, the excellent collaborative culture of the Trusts and stakeholders in the network, and the innovative nature of the network.



DIGITAL DIAGNOSTIC NETWORK UPDATE



The Digital Diagnostic Network (DDN) Project has made great strides since our last update, as 25 out of 26 optical spectrum access (OSA) circuits have now been installed, had edge switches installed against them, and are now fully connected. This means there's just one OSA circuit left to be installed at the Countess of Chester NHS FT for the Chester – Leighton circuit, and this is expected to be in, have an edge switch installed against it, and be fully connected by the end of November 2024.

That said we're now exploring and in discussions with key stakeholders about how we can build on the DDN and utilise it for other pieces of work, for the benefit of our NHS staff, and the patients that we serve. During September's Digital Design Authority (DDA) meeting we began to consider some of the opportunities that the DDN presents. Such as for LIMS, Digital Pathology, Cardiology PACS, Other 'Ologies, Site to site connectivity, Internet breakout, HSCN break out, Telephony (SIP), Public Cloud Peering, EPR Convergence, Secure Backups, Emergency Red Phone Solution, System Interoperability Transit, Patient Entertainment (IPTV), Unstructured Data Tiering, and Infrastructure Convergence.

One of the actions from the DDA was for Trust colleagues to think about any other opportunities that the DDN may offer, that weren't covered on the call, as we'll be capturing these to support further internal discussions about the future of the Network. If you have any suggestions or feedback on how we could build on the Network moving forwards, please contact the CAMRIN team in the first instance at: camrin@liverpoolft.nhs.uk.

AUDIT ON PATIENTS WHO REQUIRED VOLUMETRIC IMAGING PRE SURGERY

Dr. Samantha Mills and Dr Taha Sewedy from The Walton Centre (WCFT) recently carried out an audit on patients who required volumetric imaging prior to brain tumour surgery.

Of the 213 patient records audited:

34 patients received had no volumetric imaging at the base hospital.

179 patients had a volumetric scan outside WCFT but 39 (22%) required a repeat volumetric study, of which 13 scans were repeated due to technically suboptimal imaging outside the Trust due to either inadequate field of view (5) or patient movement artefact (8). The rest were repeated for either research purposes (6) or need of Diffusion tensor images (13) or acquiring perfusion images (1) or update study (4), while 2 scans were repeated despite adequate quality.

Whilst it is challenging to control the need for repeat imaging due to patient compliance and movement artefact, suboptimal imaging due to inadequate coverage is at the control of the operator. An inadequate field of view accounted for 12% of all patients in whom volumetric imaging was repeated.

Key success:

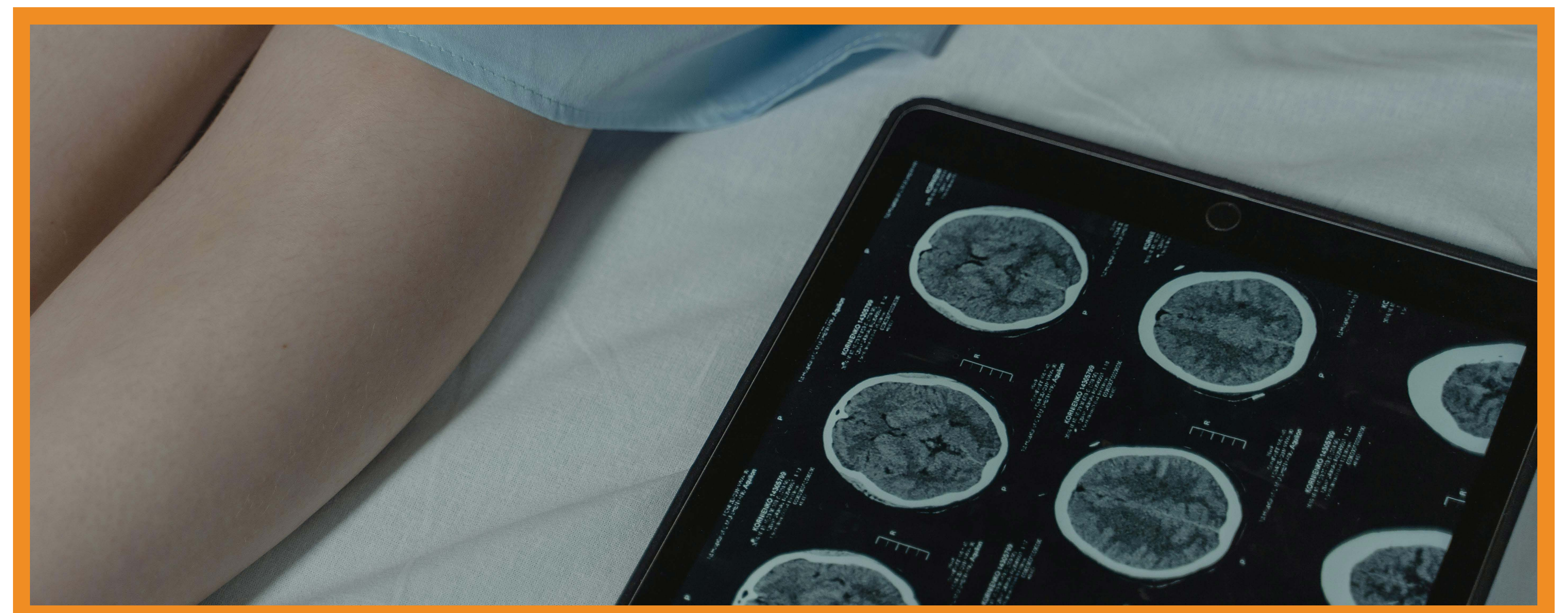
Most patients (84%) do have a volumetric study prior to transfer to WCFT and the majority of these studies (78%) are adequate for surgical planning.

Key concerns:

12% of patients required repeated imaging due to an inadequate field of view (missing the tip of the nose or top of the head). This is above the anticipated 5% failure rate due to coverage.

Although all CAMRIN imaging departments have the WCFT volumetric scanning protocol and the results of the audit were encouraging, Dr Maneesh Bhojak, Consultant Neuroradiologist and Clinical Director of Radiology at WCFT passed on a gentle reminder to colleagues to include the nose and a bit of air above the vertex when carrying out these scans at the CAMRIN Clinical Reference Group held on 8th July. This will avoid the need for scans to be repeated at The Walton Centre which may cause delays for patients undergoing surgery. It will also leave MRI slots free for other cases.

For further information on the protocol for volumetric scans for pre-operative brain tumour patients, please contact [**Sharon Gould, MRI Principal Radiographer at The Walton Centre.**](#)



LONG SERVICE AWARD FOR CAROL CUNNINGHAM

Congratulations to our Clinical Programme Manager Carol Cunningham who has recently received her long service award for working in the NHS for more than 40 years. Read the article below to learn more about the roles Carol has held during her career and about the part she has played in improving Radiology and Imaging services, and please join us in celebrating her achievements.

Carol Cunningham, our Clinical Programme Manager has recently received her long service award for working in the NHS for more than 40 years. Happy to have had such a varied and enjoyable career and to have seen so many advances in imaging, it is apt that the award has been made by Liverpool University Hospitals, who host the CAMRIN central team, as she has returned to the place her career began.

Starting as a student at the old Liverpool Royal Infirmary, clinical experience was gained during placements at hospitals in the Liverpool area, some of which no longer exist – the old Alder Hey Childrens Hospital, David Lewis Northern Hospital, Royal Southern Hospital, Ear Nose & Throat Hospital, Liverpool Dental Hospital, The Liverpool Clinic, Liverpool Maternity Hospital, Myrtle Street Childrens Hospital and the old Liverpool Women's Hospital.

Then there was an exciting move to what was then the 'new' Royal Liverpool Hospital when it first opened in 1978. Firstly as a student, then as a newly qualified radiographer, there was a lot of what was then considered 'state of the art' equipment there to get to grips with. This made the equipment at the Infirmary look like museum pieces. Single handed on-call in the busy A&E department was great experience for a shy young lady and was 'character building' to say the least!

The next move was to Alder Hey, working under Professor Helen Carty, a well know expert in paediatric radiology. Professor Carty had heard about the new technology 'Computerised Axial Tomography' (CAT), so Carol, along with everyone else in the department got fully immersed in the Alder Hey CAT Scanner Appeal, with every spare minute being spent knitting, baking, or running raffles to raise funds.

When visitors from what was the Merseyside Regional Centre for Radiation Oncology, now The Clatterbridge Cancer Centre came to view the gamma camera at Alder Hey, as they were thinking of purchasing one, they mentioned that they already had a CT Scanner and were looking for staff. After hand-delivering her application form, as there was a postal strike, Carol was successful and made the move 'over the water' to the Wirral.



30 years later, after gaining experience in oncology imaging, CT and Nuclear Medicine and guiding the service through such significant changes as 'Agenda for Change', implementing the first 'Picture Archiving and Communication Systems' (PACS) and a major refurbishment of the department, Carol felt it was time to 'wind down' slightly to allow her to care for elderly relatives.

After a short while, old friends and colleagues told Carol about a 'Sustainability and Transformation' project that had started up, looking at how imaging services across Cheshire and Merseyside could be strengthened and improved, so she was lured back to take part. When the NHS drew up its strategy to transform imaging services in England by forming imaging networks, colleagues across Cheshire and Merseyside were already working closely together and a lot of the ground work had been done to form an imaging network. A major feature was the shared PACS which had been established several years earlier. This allows patient images from any trust in Cheshire and Merseyside to be viewed at any other trust in the network.

Pleased to be part of the Cheshire and Merseyside Radiology Imaging Network (CAMRIN) Programme Management Team, Carol is playing her part in addressing the challenges facing imaging services – rising demands, workforce shortages and ageing imaging equipment, all of which put pressure on delivering timely imaging services and high-quality patient care. Carol works with members of the Cheshire and Merseyside Cancer Alliance to review the imaging component of the various cancer pathways with the CAMRIN Clinical Leads for each area to ensure that processes are efficient and that patients experience consistent high quality imaging wherever in the network they attend. Carol also manages the CAMRIN Clinical Reference Group, a forum developed for Radiology Clinical Directors and Service Managers and invited guests to discuss any clinical issues facing imaging and to agree what actions should be taken, in line with guidelines, recommendations and best practice.





BUSINESS INTELLIGENCE

Over the past few months, the team has been working hard to enhance the **CAMDASH** Power BI App so we're able to better utilise it as a tool for responding to data requests from the Diagnostics Programme Management Office (PMO). Key improvements include adding into the 'Performance' section the average scans per hour by modality and room, the did not attend (DNA) or was not brought (WNB) figures, and the imaging reporting turnaround times for CT, MRI, and NOUS. This has made completing the monthly Goal and Performance trackers that need to be submitted to the Diagnostics PMO easier and provides a clearer picture of operational efficiency across our footprint.

At present we're able to ingest data into **CAMDASH** from nine Trusts in our region that use the same software platform referred to as RIS (Radiology Information System), to manage and store imaging data. In order to bring information from our two Trusts not on the same system (Countess of Chester NHS FT and Wirral University Teaching Hospital NHS FT) into the app, we're working with Trust colleagues to set up self-hosted integration runtimes (SHIRs). As these SHIRs will enable us to move data from on-premise sources or private networks at each of the Trusts into **CAMDASH** securely. In the interim these Trusts are being asked to manually provide the data needed to support submissions.

To further improve data quality within **CAMDASH**, we've recently started to send regular exception reports to Data Quality Leads, that highlight any data anomalies identified within the app. These reports help Trusts to correct any inaccuracies in their own data, at the source, which subsequently also ensures that data flowing from various systems into **CAMDASH** is accurate and reliable. Additional updates include a trial of a Prostate Pathways Tracker Report, now live in the Clinical Pathways section, and the incorporation of analytics for the AI for Chest X-rays Project, into the Benefits Metrics section, to help with reporting back to NHS England.

Looking ahead, we are collaborating with Trusts to collect their latest DM01 submissions to update this data within the app to ensure **CAMDASH** remains up to date. Additionally, the team is also in the process of designing a new user interface (UI) of the app within a test environment. This redesigned UI will be cleaner, more intuitive, and optimised to make better use of the available space, making it easier to navigate for users. Once the design has been completed within the test environment we'll be working closely with our most active **CAMDASH** users to ensure that the new UI design meets their needs, ahead of rolling it out on the live system so that all app users can benefit from it.



WORKFORCE

Thank you to everyone who has been attending the Modality Leads groups, we have now started the Imaging Support worker and Assistant Practitioner groups. The themes from these meetings are shared at the CAMRIN **Workforce Delivery Group**. The meetings are a great way of getting to know colleagues in other Trusts, sharing best practice, developing ideas, and supporting each other. If you are a Modality Lead and haven't had an invite to your group please let the CAMRIN team know.

Validation of the baseline data for the workforce calculator tool for Radiographers (In-hours) is now complete. This will contribute by providing valuable, standardised data, as we work through our five-year plan. The next step will be to collate the out of hours staffing levels at each Trust.

Following discussions with the members of the CAMRIN **Workforce Delivery Group** and lessons learned from the other Allied Health Professions groups we agreed not to progress work to align and standardise job descriptions across Cheshire and Merseyside. Instead, we have begun to review person specifications associated with

roles. Band 5 Diagnostic Radiographers have been reviewed from participating Trusts, which has confirmed that each Trust has the same Knowledge and skills requirements.

Yvonne and Carol are both members of the Society of Radiographers (SOR) Imaging Support Workers (ISW) education and skills project Task and Finish group. This is also linking with a North West Imaging Academy (NWIA) ISW project. Further information will be shared as these projects develop.

The Diagnostics Programme has appointed a Workforce lead- Jo Williams. The CAMRIN **Workforce Delivery Group** will be working closely with Jo, as her role develops.

A fortnightly CAMRIN Workforce Bulletin for information on the latest regional and national workforce news, as well as training opportunities and workforce and CPD events is circulated to Radiology Service Managers.



CLINICAL PATHWAYS

The CAMRIN Radiology Clinical Reference Group (CRG), chaired by Dr Niven, Deputy Medical Director at The Walton Centre NHS Foundation Trust, is providing a forum for tackling any clinical issues facing our imaging departments, so that we can have a unified approach and ensure that all of our patients receive the same high quality imaging wherever they attend.

The group meets bi-monthly and topics presented and/or discussed under the standing agenda items over the last few months include:

Cancer: Imaging and biopsy of patients presenting with metastatic spinal cord compression; pathways from U/S to MRI & MDT for sarcoma patients; liver surveillance programme.

Radiology: Stroke imaging; radiology alerts and notifications; access to unreported PET CT images; Liverpool Head Injury Tomography Score (HITS); New NICE guidance for follow up of patients with melanoma; head and neck imaging issues; MRI services for cauda equina; Nuclear Medicine/Radiopharmacy Update; Allegro Volumetric Scans for Pre-operative Brain Tumour Patients.

Governance: Trust processes for tracking Faster Diagnosis (FD) patients; Quality Systems for Imaging Networks (QSIN).

Education: Regular updates from the North West Imaging Academy on their offerings; presentation from the North West School of Radiology asking trusts to consider whether they can accommodate more radiology trainees in order to increase numbers.

Digital: CAMRIN digital projects overview; IT Diagnostic Network and PACS Cloud Project Update; RAD-Alert module from Rivendale, which has been procured along with PACS Cloud; AI for Chest X-Ray.

Clinical pathways/Community Diagnostic Centres: Progress on outcome of the Diagnostic Pathway Survey carried out in 2023.

Trusts have been invited to host the **CRG** meetings and this has given each of them the opportunity to give an update on any developments to their services, along with any issues they may be experiencing. So far, Alder Hey and Warrington Hospital have hosted meetings.

Dr Niven would like to visit any CAMRIN trusts in the area not yet visited, in order to find out what particular issues they may be facing, with a view to identifying any that could be tackled as a network to bring about improvements.

If you have any questions about the **Clinical Reference Group** or would like to arrange a visit to your imaging department or to host a meeting, please email [Dr Niven](#) or [Carol Cunningham](#), Clinical Programme Manager.

Alongside the CRG, we also have focused work looking at individual pathways, which you can read more about below:

The Urology Imaging Group meets quarterly to review imaging protocols in use for patients with suspected cancer somewhere in the urinary tract, with a view to identifying best practice and adopting this across the network. Areas reviewed so far include prostate, kidneys and bladder. The recent focus has been on imaging of patients presenting with haematuria. There is a wide variation in protocols used for CT Urograms and MRI bladder, with some trusts using modern systems for reducing the dose required to produce optimum images on CT, which allows a comprehensive examination to be performed without exposing patients to a large radiation dose.



DIGITAL DELIVERY

CAMRIN are currently working with Cardiology Leads across the network to look at bringing the Cardiology services on to a central solution where images can easily be shared across the region. Liverpool Heart and Chest and the LUHFT Royal site have the new solution and we are currently working with LUHFT Aintree, Liverpool Women's Hospital and Alder Hey Children's Hospital to also join the central solution.

We are then hoping to be able to move all of these Trusts onto a **Cloud** solution, utilising the Digital Diagnostic Network (DDN) that will provide fast connectivity from the data centre to Trusts.

PACS Based Reporting is continuing to be rolled out across the Trusts and we are currently in a position of:

- Alder Hey - 100%
- Countess of Chester - 100%
- Liverpool Heart and Chest - 100%
- LUHFT Royal - 100%
- Mid Cheshire - 100%
- LUHFT Aintree - 80%
- Warrington - 40%

Additionally, The Walton Centre are awaiting integration and Wirral are underway with testing, and works continue at other sites.

National directive is to move all onsite solutions to the cloud so now that the **Ologies pilot** has been completed we are in talks to look at moving all the images into the **Cloud** solution once delivered. Feedback from the pilot sites has been very positive and several Service Leads have provided some fantastic case studies that we are currently making into posters so that these can be shared with other

services to truly see the benefits that the system has brought to the network.

We have received many expressions of interest forms (EOI) from services across the region and will be reviewing these so that we can look to start getting more service accessing the Ologies central solution.

The CAMRIN Digital programme is continuing with the works to implement the three **AI solutions** and engagement from stakeholders is underway to drive through the clinical safety workshops that will support all the required assurance documents for the AI products.

Since the last bulletin CAMRIN has selected Annalise as the AI supplier as part of the **AI Diagnostic Fund** and implementation of the tool is well underway.

The Annalise.ai chest X-ray decision support solution can detect up to 124 findings on chest radiographs – alerting the medical teams to the possibility of findings indicative of cancer more quickly while promoting a smooth workflow. The aim is to enhance efficiency and care quality within the lung cancer detection pathway to streamline the process and enable clinicians to detect (or rule out) cancer more quickly.

It really is an exciting time for the region as the pilots for the AI projects get underway and we are looking forward to hearing about the progress as AI becomes more embedded in the Network.....we will keep you posted!



TRANSFORMATION

Work for the CAMRIN transformation programme is continuing to develop and realise benefits for the network, offering a range of transformation projects.

The CAMRIN review into **Interventional Radiology** Services across Cheshire and Merseyside has continued to develop, CAMRIN has appointed Dr Gerard Doyle and Helen Ross as the clinical and operational leads of the review, respectively.

We have been actively visiting IR departments across C&M to see how Trusts operate and speak to staff to understand the challenges they face and the innovation each trust is implementing. We hope that we can use the data we are gathering to propose solutions that will reduce health inequalities and provide a more robust and efficient service for the benefit of staff and patients.

The Cheshire and Merseyside **Medical Physics Service** has demonstrated the importance of medical physics across multiple Trusts in Cheshire and Merseyside, they have worked with radiologists and radiographers at Countess of Chester, Clatterbridge Cancer Centre, Liverpool University Hospitals and Mid-Cheshire to optimise the Advanced Acceleration Technology installed on MRI scanners in these Trusts. The work has already yielded reduced scan times, and staff have provided feedback including:

“The support from the **Medical Physicists** has been instrumental in the AAT project at LUHFT, without their expert knowledge and skills I do not think we would have been able to or had the confidence to accelerate the sequences to the level that they have been.”

The medical physics service “has been invaluable... and allowed us to achieve significant time savings across multiple examinations.”



Alexi Shenton
CAMRIN Programme Lead

GETTING IN TOUCH

Thank you for taking the time to read the bulletin today, please share with your colleagues. We are always looking for people to get involved in the network and to help us support the 11 Trusts who make up the network.

We welcome your involvement, comments, and ideas. If you have any feedback, would like to share ideas, an issue or priority, which you feel should be taken into consideration for any of the workstreams.

The central CAMRIN programme management office would also like to come and visit your departments, so if you would like a visit, please let us know.

Please don't hesitate to get in touch via:
camrin@liverpoolft.nhs.uk

