

A large, stylized letter 'C' composed of four segments in different colors: maroon, brown, lime green, and dark blue. The 'C' is positioned on the left side of the slide, partially overlapping the blue background.

North West radiotherapy research strategy



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Executive summary



Foreword – Prof Tim Maughan

Radiotherapy plays a vital role in modern cancer care, contributing to the treatment of around half of all people diagnosed with cancer. Despite its central importance, radiotherapy research has historically received less attention and investment than other areas of oncology.



Yet the opportunities before us have never been greater. Advances in imaging, data science, artificial intelligence, personalised treatment approaches and clinical trial methodology are transforming what is possible, creating new opportunities to improve outcomes and experiences for patients.

The North West has a rich history of collaboration, innovation and research excellence. Across our 3 radiotherapy providers, academic institutions, charities, industry partners and patient communities, there is an extraordinary breadth of expertise and a shared commitment to improving care. This strategy recognises that no single organisation can realise this ambition alone. Meaningful progress will come through partnership, shared learning and collective action.

As we look to the future, we must challenge ourselves to be ambitious. Can we ensure excellence in radiotherapy delivery for every patient across the North West? Can we accelerate the adoption of new technologies and techniques, expand access to advanced treatments such as stereotactic ablative radiotherapy (SABR), and ensure innovation is implemented equitably? Can we achieve rapid set up of clinical trials, reducing barriers to study activation and recruitment? Are we developing the next generation of chief investigators and clinical academics from within

our own workforce? Most importantly, can we ensure that the benefits of research reach all sections of our population, including those who are frail, living with multiple long term conditions, or facing socioeconomic disadvantage? The answer to these questions will not come from any one organisation working alone. It will come through collaboration across our clinical teams, academic partners, patients, charities, industry and national programmes. By working together, the North West has the opportunity not only to adopt innovation, but to significantly contribute to its development.

What is particularly exciting about this strategy is that it has been created by the people who will help deliver it. Through surveys, workshops, public engagement and a strengths-based Appreciative Inquiry approach, colleagues from across the region have come together to define a shared vision for radiotherapy research. The result is not simply a document, but a commitment to building a connected research community that supports staff at every stage of their research journey and places patients at the heart of everything we do.

The strategy sets out a clear framework for developing the workforce, strengthening partnerships and making better use of data to enhance research delivery. The strategy recognises the need to ensure that research opportunities

and the benefits they bring are accessible to all patients and staff, regardless of geography, professional background or tumour type.

The challenge now is implementation. Success will not be measured by the publication of this strategy, but by the collaborations we create, the questions we answer, the innovations we adopt, and ultimately the improvements we achieve for patients. The establishment of the North West radiotherapy research coordination and oversight groups provide mechanisms for turning ambition into action and ensuring that research becomes an increasingly visible and valued part of everyday clinical practice.

I am confident that the North West is exceptionally well positioned to become a leading UK region for radiotherapy research. By working together, sharing expertise and supporting one another, we can create a research environment that not only generates new knowledge but translates it rapidly into better outcomes and experiences for the patients we serve.

I look forward to seeing this strategy evolve and to celebrating the impact that will be delivered through the commitment, enthusiasm and collaboration of colleagues across the region.

C Development of this strategy

Designed as a network, not a document

This strategy was developed using the 4 D's of Appreciative Inquiry and the same principles it promotes: collaboration, iteration and shared ownership.

	Goal	Methods
 Discovery	To identify the current research landscape	• Analysis of existing departmental, Trust and professional body research strategies. • Distribution of online survey to professionals and a separate online survey to the public.
 Dream	What would excellent look like?	• World Café workshop with key stakeholders.
 Design	What is achievable in practice?	• World Café workshop with key stakeholders.
 Destiny	How will this be delivered?	• Co-production of strategy document and implementation plan.

Rather than being produced by a single author or organisation, this strategy has been co-designed through a comprehensive process of engagement events, cross-professional workshops, public input and iterative drafting.

We hope that the production of this strategy is a reflection of the commitment from those within the region to continue to work collaboratively to drive patient centred research. This strategy has been shaped by the people who will deliver it. It will evolve with the region as its research landscape grows. Those within it will learn and drive innovation.

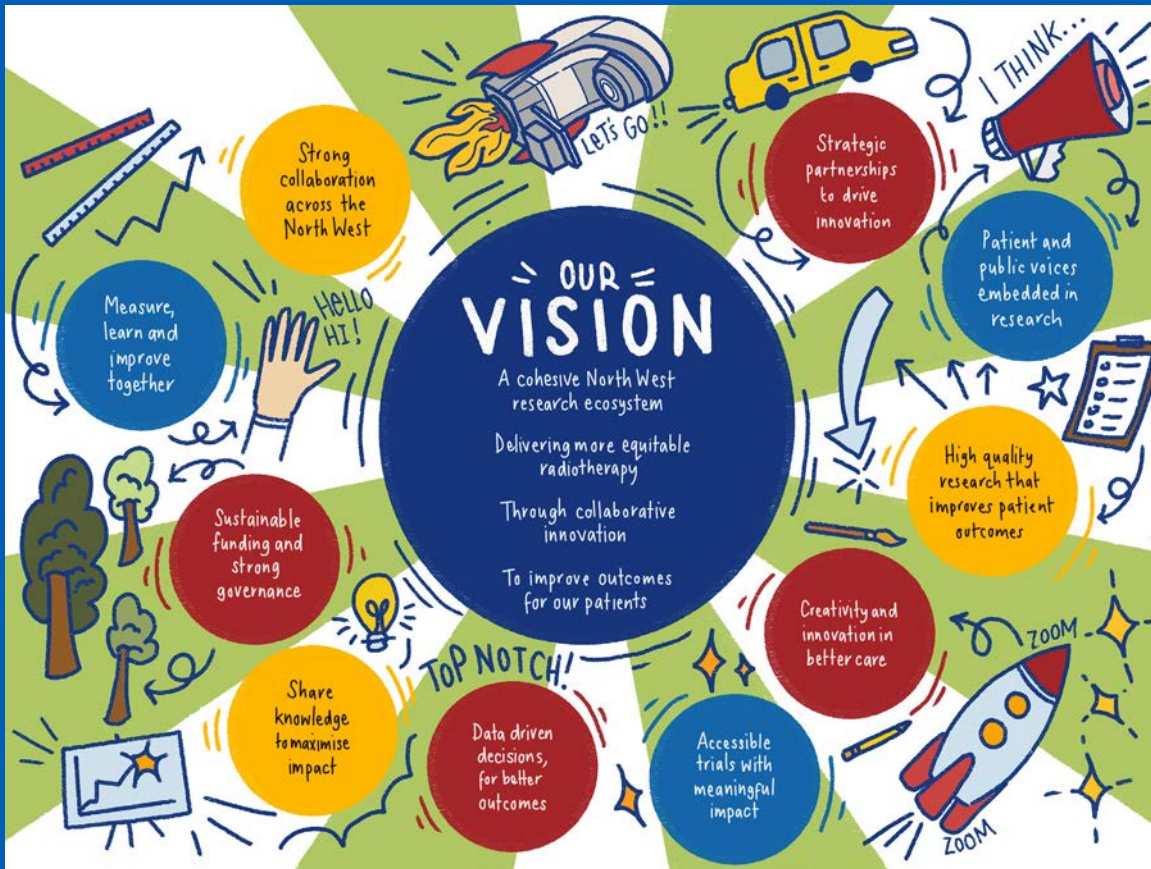
This strategy is aligned with the National Cancer Plan for England and wider NHS cancer ambitions. In particular the focus on improved outcomes, equity of access, participation in research, better use of data and faster translation of innovation into care. It also complements the strategic direction of The Christie NHS Foundation Trust, The Clatterbridge Cancer Centre and Lancashire Teaching Hospitals. Each of which highlights research growth, partnership working, innovation, workforce development and collaboration with academic institutions. Throughout this strategy, short exemplars from the 3 centres and their academic partners illustrate how these principles could be applied in practice.



Development of this strategy

How will we implement this?

To achieve our vision, this strategy is accompanied by an implementation plan for the next 5 years, found at the end of this document.



The key delivery bodies will be as follows:

North West research strategy coordination group

Made up of representatives from the NW SSCN and external partners, membership to include:

- project manager
- patient representative
- research radiographer
- clinical lead
- equality and diversity lead
- network manager
- meeting frequency: tbc

North West research strategy oversight group

Made up of representatives from the NW RT SSCN and external partners, membership to include:

- scientific lead
- all coordination group members
- industry partner (rotational)
- charity partner/s
- patients
- academics from all higher education institutions in the region
- X 3 Trust research and innovation (R&I) representative (1 per provider)
- X 3 radiotherapy R&I representative (1 per provider)

Frequency of meetings: quarterly (1 replaced by research exchange day).



Chapter 1: Vision, scope, and mission statement

Vision

This strategy aims to provide a cohesive North West research ecosystem that delivers more equitable radiotherapy through collaborative innovation to improve outcomes for our patients through research developed with our patients.



Scope

This strategy will:

- provide common principles for the radiotherapy research community in the North West by setting our shared purpose and promoting a cultural shift in the positive value of radiotherapy research
- outline approaches for multi-provider collaboration across the North West, inclusive of external partners, and methods to facilitate the transition for this into routine clinical practice
- adopt a "local where possible, centralised when required" approach, ensuring specialised expertise, infrastructure and research opportunities are shared across the region while maintaining local delivery wherever appropriate
- highlight the patient voice within research with a focus on achieving accurate representation of the diversity of the population in the North West and aiming to step beyond public involvement and increase co-designed research with our patient and public partners
- set out mechanisms to support the research endeavours of our colleagues across the region including mentorship, career progression and innovation support
- improve equitable access to research opportunities for patients and staff, irrespective of geography, tumour site, organisation or professional background
- highlight the value of all aspects of research and commitment to support clinical trials, qualitative work, service development and audit. Enhance the region's ability to generate, share and use data to support innovation, learning healthcare systems, research delivery and continuous service improvement
- support the rapid translation of research findings and innovation into routine clinical practice for the benefit of patients across the North West



Chapter 1: Vision, scope, and mission statement





Chapter 2: Regional collaboration and infrastructure

Purpose

To build a coordinated, efficient, and future-ready research environment across the North West radiotherapy network. This includes establishing shared systems, aligned processes, and collaborative structures that reduce duplication, increase capacity, and work to improve patient outcomes through research.

Strategic aims

- 1 Strengthen regional collaboration through formal working groups and shared planning.**
- 2 Work towards the standardisation of research infrastructure including data platforms and digital systems.**
- 3 Create a shared regional view of active, planned, and proposed studies.**
- 4 Enable equitable access; “local where possible, centralised when required” allowing access to clinical trials and innovation to be considered irrespective of geography or tumour site.**
- 5 Adopt a “do things well, once” approach to reduce duplication, pool strengths, and coordinate delivery.**

Principles for collaboration

- **Equity of access:** opportunities and benefits shared across all Trusts.
- **Sustainability:** build long-term capability (people, infrastructure, skills) and align to NHS Net Zero ambitions.
- **Consistency:** shared processes and platforms wherever possible.
- **Transparency:** open visibility of studies and workforce needs.
- **Efficiency:** reduce duplication and streamline workflows.
- **Interoperability:** systems designed to work across Trusts.
- **Patient focus:** reducing inequalities and improving access.

Chapter 2: Regional collaboration and infrastructure

Key components



North West radiotherapy research coordination group

A formal group responsible for regional research planning and the implementation of this strategy, this is detailed in **How will we implement this?** The coordination group will identify multi-site opportunities, have an awareness of study delivery across the region, and provide mechanisms to link clinicians, physicists, radiographers, academics, and external partners.

Action 1: The North West Specialised Services Clinical Network will set up the coordination group which will be responsible for regional research planning and the implementation of this strategy.



Shared research database

The North West clinical trials database, set up in 2024, has supported the sharing and oversight of clinical trial activity in the North West. The database has the potential to reduce duplication and expose early opportunities for collaboration across the region.

Action 2: The clinical trials database will be expanded to create a live region-wide register capturing all open, planned, and archived studies, key contacts, resource needs, and opportunities for cross Trust involvement. The database will be maintained by collaboration between providers, the coordination group and The City of Liverpool College.



Regional research exchange days

Regional research exchange days will be set up annually to support multi-disciplinary action across Trusts and external partners. The day will be an opportunity to celebrate research successes across the region, promote collaboration and highlight the current research landscape in the North West. Sessions may include oral/poster sessions, early-career researcher platforms, industry engagement, and public patient involvement (PPIE) showcases. Structured networking sessions, connection rounds, will provide opportunities to share ideas, identify supervision and multidisciplinary project teams, supporting idea generation and provide a mechanism for translating conversations into collaborative research activity.

Action 3: The coordination group and the North West Radiotherapy Network will set up annual regional research exchange days.



Shared digital and data infrastructure

To fully realise the potential of continuous learning, real-time insight, and evidence-informed practice improvement a shift from fragmented data collection to deliberate data generation is required. The North West will develop a coordinated approach to radiotherapy data infrastructure, governance and access. This will build on learning from national radiotherapy benchmarking activity while avoiding dependence on any single commercial product. This is discussed further in **Chapter 6**.



Chapter 3: Workforce development and culture

Purpose

To build and sustain a skilled, confident, and research-active radiotherapy workforce across the North West. This chapter outlines the structures, processes, and cultural shifts needed to embed research into everyday practice to offer clear development pathways and accessible opportunities for all staff groups.

Strategic aims

- 1 Embed research as a core component of clinical roles.**
- 2 Ensure protected research time through job-planned activities.**
- 3 Develop a strong clinical-academic pipeline from students to senior research leaders.**
- 4 Provide structured mentorship and peer support.**
- 5 Work towards alignment of research expectations for roles across Trusts.**
- 6 Promote inclusivity and widen access to research opportunities.**
- 7 Explore opportunities for joint appointments.**

Workforce principles

- Champion equity and inclusivity, offering opportunities across bands, roles and Trusts.
- Where possible, enable protected time for staff to engage in research activities.
- Provide career-long support for those interested in developing research skills.
- Encourage collaboration and shared supervision models across Trusts.
- Facilitate access to routine training in research skills and governance.
- Recognise and celebrate research engagement in line with local contexts.

Chapter 3: Workforce development and culture

Key components



Workforce stability

We acknowledge that there are issues with permanent funding for research roles, this strategy will seek to maximise potential for research activity within current constraints by:

Action 4: The coordination group will carry out Capacity and Demand Modelling for the research workforce.

Action 5: Produce provider workforce plans using the outcomes of research workforce Capacity and Demand Modelling and assess the requirement for protected research time in other non-research specific clinical roles.



Protected time and role design

Protected time for research activity is paramount to facilitating research activity in all forms. This strategy is committed to working towards protected research time being embedded in all suitable roles.

Action 6: The research workforce Capacity and Demand Modelling will allow the mapping of skill gaps and the alignment of research roles.

Action 7: The coordination group will facilitate a workshop to compare and explore standardisation of job descriptions for research-active roles.

Action 8: The coordination group will advertise cross-Trust secondment activities to support continuity and role development.

Action 9: The coordination group will work with providers to encourage rotational research opportunities.



Mentorship, peer support and clinical-academic development

The region will seek to strengthen clinical academic pathways by:

Action 10: The coordination group will evaluate established frameworks such as the Early Career Researcher (ECR) Framework and Vitae Researcher Development Framework (RDF).

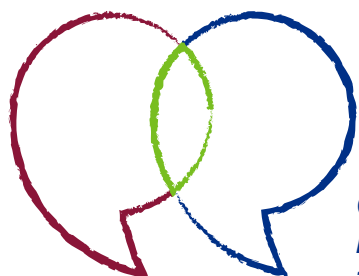
Action 11: The coordination group will use the evaluation of the current research frameworks to develop and tailor them to a North West framework that supports progression from early research exposure to advanced postgraduate study. These could consider a coordinated supervisory network for local research projects and will consider the role of a regional mentorship programme.

Action 12: Existing peer learning groups such as journal clubs and writing workshops will be promoted and shared across institutions through the coordination group.

Action 13: Providers will help ensure research activity is promoted by embedding research discussions within appraisals and one-to-one meetings, creating a supportive, connected environment that nurtures clinical academic development across all professions.



CLATTERBRIDGE



CREATE has led to clear, tangible results for both patients and staff.

Case Study: The CREATE Group Clatterbridge Cancer Centre

CREATE is an inclusive, multi-professional group that supports innovation and improvement across The Clatterbridge Cancer Centre. It was developed in response to a common challenge: staff often have brilliant ideas for improving care, but don't know how to progress them. CREATE provides a supportive space where anyone can bring forward a proposal or problem and receive practical advice and encouragement.

Since 2023, the group has met monthly, with each session featuring a different speaker, often a staff member or patient, who presents an idea, challenge, or project update. Ideas are discussed as a group, and members offer guidance on project design, audit processes, stakeholder engagement, funding opportunities, and implementation.

The team includes people from a range of clinical, research, and innovation backgrounds, and works together to keep each idea patient-centred and feasible. CREATE has supported 14 different projects across The Clatterbridge Cancer Centre, from radiotherapy and HIV care to sleep interventions and digital referrals. CREATE helps turn ideas into action and builds staff confidence along the way.

CREATE has led to clear, tangible results for both patients and staff. Highlights include:

- a sleep study developed with occupational therapists, including eye masks, earplugs, and wearable vital sign monitors to reduce night-time disruptions. This project received support from a local business and funding support from the charity
- a project on HIV and cancer care that contributed to the development successful PhD application
- approved QUIP applications, funded projects, completed audits, and improved clinical practices across multiple departments

Chapter 3: Workforce development and culture

Key components



Training, accreditation and skills development

Training and upskilling the workforce is required to increase the capacity and capability for research activity in the region, this will be facilitated by:

Action 14: The coordination group will work with HEI partners to create a review team to provide abstract and writing skills support to promote dissemination of North West Research, locally, nationally and internationally.

Action 15: Providers will be encouraged to make Good Clinical Practice (GCP) training mandatory to core staff groups to ensure we comply with the international standard for conducting clinical research maintaining the protection of the rights, safety, and wellbeing of trial participants, and meaning that the data generated is credible and reliable.

Action 16: The NW RT SSCN workforce education training group will work towards an annual training calendar being shared across the region with relevant research training opportunities included in it. This will ensure equity of access to opportunities across the region, promote research skill development and upskill the workforce.



Inclusivity and accessible opportunities

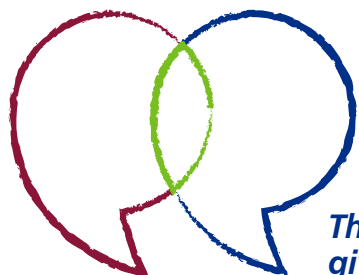
Research opportunities should be accessible to all and will therefore be promoted to all staff including students and support roles.

Action 17: The coordination group and the NW RT SSCN workforce education training group will conduct an 'Inclusivity and accessible opportunities' review of the current barriers linked to time, visibility and experience, to identify and promote best practice across the region.

Action 18: The outcomes of the Inclusivity and accessible opportunities review will be used to co-produce provider specific recommendations to improve access to research for staff.

Action 19: The coordination group and the NW RT SSCN workforce education and training group will work with providers to introduce introductory shadowing and taster experiences for research roles. The SPOKE placement at Lancashire Teaching Hospitals is an example of this in current practice and will be built upon within implementation.

Action 20: Representation from all staff groups will be invited to Regional research exchange days, hosted by the network, to share and celebrate research activity from all staff groups, with content made accessible to all providers and contributors post event for dissemination



The placement gives an opportunity to gain experience and knowledge in both research and clinical trials.

Case Study: SPOKE research and clinical trials placement for radiotherapy students at Lancashire Teaching Hospitals.

As a department we have always supported our students with their education and involvement with research and trials. In 2021 we reviewed this provision and in partnership with staff from Lancashire Clinical Research Facility (LCRF) we formalised the sessions into a 2-day SPOKE placement.

We feel strongly that learning about clinical trials and research is an important aspect for every healthcare professional. Even if you don't think you want to pursue a career in clinical trials and research! HCPC Standards of Proficiency require practitioners to understand, evaluate, and apply evidence-informed practice to deliver safe, effective, and high-quality patient care.

The placement gives an opportunity to gain experience and knowledge in both research and clinical trials. It is designed that any training and activities undertaken will comply with specific objectives set by academic institutions.

The programme consists of sessions covering the background and principles of research within radiotherapy and the wider NHS

community. Students will also complete Good Clinical Practice (GCP) training through the NIHR Learn platform. The second day is spent at the LCRF, where students will see how research theory is applied in practice through observing patient visits and participating in role-play activities designed to explore and promote best practice

The experience with the clinical research team will play a key role in understanding the importance of research culture within the Trust and the NHS and how by being involved in all aspects of research we are continually improving the quality and choices available for patients and healthcare overall. The SPOKE placement receives consistent positive feedback from students.



Chapter 4: Partnerships - HEIs, industry, charities and vendors

Purpose

To create coherent, equitable, and mutually beneficial partnerships that accelerate radiotherapy research, strengthen workforce capability, and improve patient outcomes across the North West. This chapter formalises how the network will work with higher education institutions (HEIs), industry and vendors, charities, and patient/public organisations to support research delivery.

Strategic aims

- 1 Strengthen clinical-academic collaboration via shared posts, aligned governance and aligned research priorities to provide joint supervision widening supervisory capacity and upskilling the workforce in multiple methodologies to build sustainable clinical-academic careers.**
- 2 Develop industry/vendor relationships for innovation pilots, research collaborations, staff training and structured long-term partnerships.**
- 3 Maximise opportunities for gaining charitable and external funding for fellowships, research roles, equipment, and PPIE activities.**
- 4 Enable equitable access; “local where possible, centralised when required”, allowing access to clinical trials and innovation irrespective of geography or tumour site.**
- 5 Adopt a “do things well, once” approach to reduce duplication, pool strengths, and coordinate delivery.**

Partnership principles

- **Strength through partnerships:** partnerships will improve research activity and outcomes by maximising the capabilities of each partner.
- **Mutual benefit and patient value:** partnerships must translate to tangible benefits for patients and services.
- **Transparency and ethical integrity:** clear data provisions, and independence in design, analysis, and reporting.
- **Equity of access:** opportunities and benefits shared across all Trusts - not concentrated in larger centres.
- **Sustainability:** build long-term capability i.e. people, infrastructure, skills.
- **Embedded PPIE:** patient partners involved in research scoping, governance, delivery, and dissemination.

Partnership models



Academic (HEI) partnerships

The strategy will aim to maximise partnerships with the HEI sector by:

Action 21: The coordination group will work with providers to encourage the uptake of honorary contracts and joint appointments between providers and HEI partners. This will strengthen collaboration and broaden supervisory capacity.

Action 22: The coordination group and providers should work directly with HEI partners to explore opportunities for joint supervision panels for undergraduate and postgraduate study. This will encourage the use of student dissertations to fulfil research and service development needs of providers and allow the upskilling of the clinical workforce through academic activities. It will also work to strengthen the working relationships between HEIs within the region and the providers.

Action 23: The coordination group will work with providers and HEIs to support the alignment of research priorities. The Manchester University and Christie collaboration provides a working model for how this could be implemented across the region.

Case Study: Manchester One Manchester Radiotherapy Related Research (RRR) group

In Manchester, the HEI–NHS partnership for radiotherapy is operationalised through a formal, named Radiotherapy Related Research (RRR) group. The RRR group implements a 'One Manchester' approach to cancer team science, explicitly linking The Christie NHS Foundation Trust and the University of Manchester in a single, integrated programme that spans biology, clinical oncology, physics, software development, engineering and imaging, and supports subgroups such as Advanced Radiotherapy and Radiotherapy Big Data embedded within The Christie radiotherapy service.



The RRR group implements a 'One Manchester' approach to cancer team science

As an HEI–NHS partnership model, the Manchester RRR group exemplar demonstrates:

- named, co-owned group structure - a single RRR group with defined clinical and non-clinical leads, embedded in both Manchester University and The Christie, providing clear ownership and strategic direction for radiotherapy research
- integrated multidisciplinary teams - mixed HEI and NHS staff organised around shared work packages and crosscutting hubs rather than separate institutional projects
- embedded translational infrastructure and data systems - commissioned alongside high-volume radiotherapy services, enabling continuous learning from routine care and rapid translation into practice



Chapter 4: Partnerships - HEIs, industry, charities and vendors

Partnership models



Industry and vendor partnerships

Collaborative vendor funded research will be explored during the strategic implementation by:

Action 24: The research oversight group will invite membership from Industry partners on a rotational basis.

Action 25: The industry partner will be responsible for providing updates on potential education training support and upskilling provided by radiotherapy and imaging manufacturers, software vendors, pharmaceutical companies and other vendors.

Action 26: Industry partners will be invited to regional research exchange days to present novel technology innovations and to discuss opportunities for collaboration within the connection rounds at these events.



Charities and philanthropy

The strategy will aim to maximise partnerships with the voluntary, community and social enterprise (VCSE) sector by:

Action 27: The coordination group will be responsible for facilitating joint applications to large-scale funding opportunities within the charity sector. The regional research exchange days and the oversight group meetings will provide mechanisms for the combined strengths of clinical departments, HEIs and Industry vendors to be drawn upon to create competitive applications.

Action 28: The coordination group will promote research fellowships and research posts advertised by third-sector organisations across the region.

Action 29: The coordination group will engage with third sector organisations to establish opportunities for funding novel radiotherapy equipment for use in research and/or service development and travel and accommodation costs associated with clinical trials.



Chapter 5: Patient and public involvement and engagement

Purpose

Patient and public involvement and engagement (PPIE) is central to delivering radiotherapy research that is relevant, inclusive and co-produced with patients and communities. This chapter outlines a coherent and patient-centred regional approach to PPIE, ensuring radiotherapy research across the North-West is shaped by the communities it serves and working towards meaningful co-production.

Strategic aims

- 1 Ensure the North West wide population is represented in the research activity of the region with focus on increasing visibility of underserved communities and groups.**
- 2 Provide simplified, accessible information for all patients.**
- 3 Identify sustainable funding with a commitment to incentivise involvement.**
- 4 Establishment of PPIE Champions across the region.**
- 5 Embed patient presence on every project team and work towards a co-production approach for all new projects.**
- 6 Promote inclusivity and widen access to research opportunities.**

PPIE principles

- **Equity, diversity and inclusion:** Actively seek involvement from those who experience barriers to research involvement.
- **Accessibility:** clear, jargon-free, easy to understand information available in a range of formats.
- **Respect and value:** patient insight seen as expertise.
- **Continuous:** PPIE from idea generation to dissemination and beyond.
- **Transparency:** explanations of how the patient voice has shaped research design and priorities to be shared openly.

Chapter 5: Patient and public involvement and engagement

Key components

Patients will be embedded within the governance structures of the strategy by:

Action 30: The coordination group will invite membership from patient partners, providing a patient perspective to all decision making.

Action 31: An agenda spot will be held for patient experience to be discussed at each regional coordination group meeting and outcomes cascaded to the wider network.

Regional PPIE guidance

The strategy will aim to standardise PPIE standards across the region to support implementation of best practice and reduce variation.



Action 32: The coordination group will develop standards for how PPIE is used in all research projects for the region, existing national guidance will be drawn up to inform this.



Action 33: Patient and public involvement and engagement champions will be recruited and trained at each provider, with the aim of supporting PPIE at a local research level, guided by the network principles set out in this strategy.



Action 34: The coordination group will create a remuneration framework following NIHR payment rate guidance for PPIE involvement to promote patient inclusion and increase equity.



Action 35: The coordination group will develop an accessible materials toolkit. This will include guidance on how to make PPIE digitally accessible to allow virtual participation for all.

Action 36: The coordination group will develop easy-read templates for researchers to adapt to individual studies.

Action 37: Providers will be responsible for disseminating and adhering to the new remuneration framework, the accessible materials toolkit and the easy read templates, including implementing the new standards into centre guidelines, supported by PPIE champions.

Community outreach

It is important that North West research activity is promoted to patients. The strategy will aim to raise awareness with our population by increasing visibility of the strategy and the coordination group.

Action 38: The coordination group will identify and establish relationships with Cancer Alliances, charities and community groups in order to engage with underserved communities with an aim of working collaboratively on future research endeavours.

Action 39: The coordination group will liaise with Cancer Alliances to partake in and support existing outreach events to engage with underserved communities.



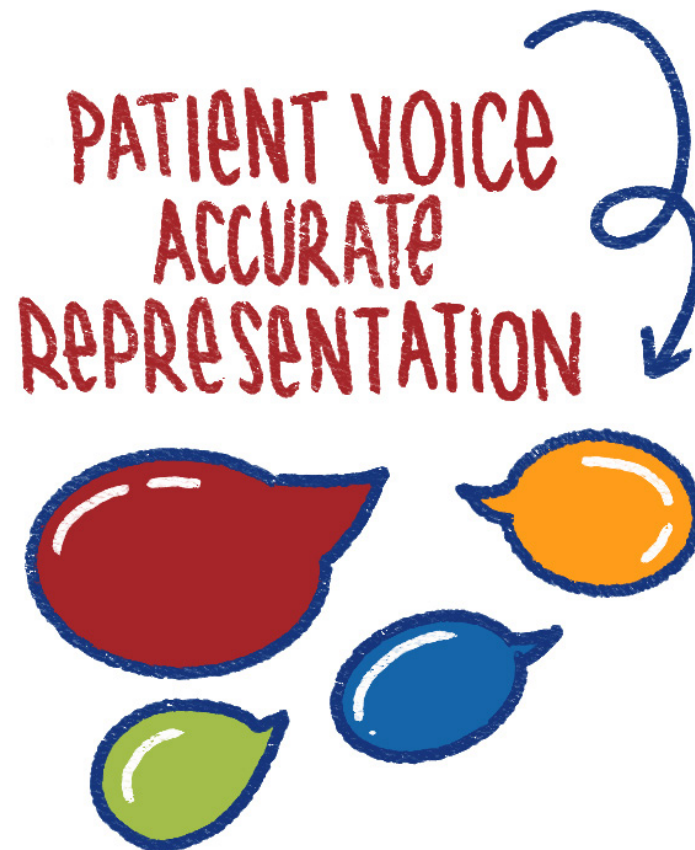
Patient participation at regional research exchange days

The strategy will support patient participation in the implementation of the strategy by:

Action 40: A number of delegate places will be provided to patients/public for the regional research exchange days with “meet the researcher” sessions planned for these days to allow the public to see the research being undertaken in the region.

Action 41: Patient researchers will be invited to partake in the connection rounds planned for the regional research exchange days, allowing both the patient researcher and the clinical researcher to learn from each other.

Action 42: Patient researchers will be encouraged and supported to present their findings and their experiences, both as a patient and a researcher in a format that suits them and their topic such as LinkedIn, blog post, conference presentation, public engagement events.





Chapter 6: Research delivery - Innovation, trials, data and dissemination

Purpose

This chapter sets out the region's coordinated approach to delivering radiotherapy research, from idea generation through design, delivery, analysis, dissemination and implementation across the three cancer centres and their academic partners. This will ensure the safe and consistent delivery of research and equitable access across all providers. It defines the end-to-end processes, standards and infrastructure needed to accelerate high quality research, improve patient access and embed continuous learning across the North West.

Strategic aims

- 1 Deliver safe, efficient and high-quality research across all providers and underpinned by collaboration.**
- 2 Support a clear pipeline from idea to implementation, drawing on clinical and academic expertise.**
- 3 Improve equitable access to research opportunities for patients and staff.**
- 4 Work towards rapid region wide implementation of successful novel research outcomes through shared processes and improved regional dissemination.**
- 5 Strengthen data, digital and workforce capability to support region wide research projects.**

Research delivery principles

- **Patient-centered:** enabling equitable research participation for all patients across the region and a commitment to research working to improve outcomes, safety, equity or experience.
- **Equity centred:** equity of access to research opportunities for patients, implementation of research outcomes to be shared at pace across the region to reduce disparity in care options, equity of research opportunities for staff across the region to engage with.
- **Scientific integrity:** high standards of clinical safety, research governance, quality assurance and peer review for all relevant research activity producing robust, ethically sound research across the region.
- **Collaboration:** follow a "do things well once" philosophy to pool expertise, share infrastructure and coordinate across institutions to maximise research outputs and reduce duplication.
- **Integration across the pathway:** radiotherapy dose and delivery data should be linked with diagnosis, staging, systemic therapy, imaging, toxicity, outcomes, patient experience and wider clinical context to work towards the improvement of clinical outcomes and targeted research for the needs of our population.

Innovation

Purpose

Innovation and technology development are central to delivering kinder, faster, safer and more personalised radiotherapy across the North West. This chapter outlines how innovation across the region will be encouraged and regional collaboration through innovation will be facilitated.

Strategic aims

- 1 Promote innovation through strengthening regional capability via training, supervision, partnerships and mentorship.**
- 2 Ensure equitable access to advanced radiotherapy innovation across the region.**
- 3 Integrate technology effectively and sustainably.**
- 4 Provide opportunities to facilitate idea generation and collaboration across the region.**

Key components

The network will support innovation aligned with patient needs by creating structured routes for idea development through:



Action 43: Connection rounds at regional research exchange days will provide a space for idea generation and project team development.

Action 44: Industry membership of the coordination group will allow identification of novel technologies for innovative use.



Action 45: Patient membership of the coordination group will provide patient perspectives on research topics and areas of interest to allow idea generation.

Action 46: The coordination group will leverage the multi-site collaborative framework established by this strategy to rapidly scale and implement successful local innovations across the entire North West region.



Chapter 6: Research delivery - Innovation, trials, data and dissemination

Trial delivery

Purpose

To ensure that radiotherapy trials and research studies across the North West are delivered efficiently, providing equitable patient access. Trial delivery should sit within the wider research pipeline and support access to complex and less common cancer studies where appropriate. This section describes the structures, standards, and operating model required to deliver multi-site radiotherapy trials at pace and scale.

Strategic aims

- 1 Improve access and recruitment using joined-up referral and support pathways.**
- 2 Work towards single front door access for clinical trials in the region.**
- 3 Centralise rare, or less common cancer clinical trials and take a proactive approach to opening trials for these groups.**
- 4 Support workforce capability and confidence to create a sustainable clinical trials workforce that is funded appropriately.**
- 5 Support workforce development to expand Principal Investigator (PI) capacity with the allied health professions (AHP) team within the region.**

Key components

Single-front-door-feasibility and accessibility

This strategy will improve access, transparency and coordination of radiotherapy clinical trial delivery by:



Action 47: The coordination group will work with The City of Liverpool College to expand the existing patient and clinician facing clinical trials database in order to promote equitable patient access and streamline trial recruitment.

Action 48: The coordination group will promote the database within each provider to promote clinician use, providing a single point for clinicians to gather all relevant trial information.

Action 49: The coordination group will promote the database externally to improve transparency and empower patients to be able to make better informed decisions regarding trial involvement.

Action 50: The public-facing clinical trials database will include translated information videos for open clinical trials, where appropriate with regards to clinical trial inclusion/exclusion criteria, increasing accessibility to various population groups.

Action 51: The coordination group will form a working party to examine existing informal cross-referral relationships between providers, formalising them into standardised pathways based on identified examples of best practice.

Action 52: The coordination group will engage with third sector organisations to explore funding support for patient travel and accommodation for clinical trial participation.



Simplifying processes

The strategy will seek to address current limitations in processes for trial quality assurance and set up, it is suggested that the volume of staff in the region and the varied strengths at each of the sites could provide opportunities to simplify delivery without compromising governance or quality assurance.

Action 53: The coordination group will instigate discussions with Radiotherapy Trials Quality Assurance (RTTQA) regarding a network quality assurance approach.

Workforce Development

The strategy will aim to develop the clinical trials workforce to increase clinical trial activity, this will be facilitated in the mechanisms described in **Chapter 3**. Specific clinical trial workforce development includes:

Action 54: The coordination group will facilitate a workshop to evaluate the clinical trial education at each provider. The workshop will allow synchronisation of clinical trial education for students in the region, creating a work-package for student clinical education to be used across all providers.

Action 55: The student work-package for clinical trial education will be expanded to be relevant to newly qualified members of staff and its rollout encouraged within preceptorship and induction processes at each provider.

Action 56: The coordination group will organise a review of clinical trial funding at each provider, which considers establishing a more sustainable funding model for radiotherapy clinical trials staff.





Chapter 6: Research delivery - Innovation, trials, data and dissemination

Data

Purpose

To establish the North West as a leading region for radiotherapy data, digital innovation and learning healthcare practice. This will require a shift from fragmented, retrospective data extraction towards deliberate, prospective generation of high-quality, analysable data at the point of care.



The region will work towards an integrated data ecosystem that links technical radiotherapy data, clinical context, operational information, outcomes, toxicity, patient-reported measures and wider determinants of health.

The North West will not simply collect radiotherapy data; it will build the infrastructure, workforce, governance and partnerships needed to turn data into continuous patient benefit. This will create the conditions for data to become meaningful: supporting safer treatment, reducing unwarranted variation, improving patient experience, enabling pragmatic research, accelerating innovation and delivering continuous improvements.

Strategic aims

- 1** Establish the North West as a national vanguard for AI and data-driven radiotherapy practice by integrating clinical, technical, and experiential data streams.
- 2** Shift from retrospective “data mining” to proactive “data farming,” ensuring structured, high-quality, analysable data is generated at the point of care.
- 3** Integrate information to create a coherent picture of the patient pathway, linking treatment delivery with objective outcomes and lived experience.
- 4** Unlock data liquidity across clinical systems to break down institutional silos and facilitate real-time, cross-provider insights.
- 5** Use data to support pragmatic trial design, feasibility assessment, recruitment, real-world evaluation and adaptive service improvement.
- 6** Align local data governance and metadata standards with national information architecture to enable secure, privacy-preserving research and innovation.



Key components

Regional data infrastructure, governance and interoperability

The North West will develop a coordinated approach to radiotherapy data infrastructure, governance and access. This will build on learning from national radiotherapy benchmarking activity while avoiding dependence on any single commercial product. Digital and data infrastructure should be used as a foundation for continuous learning and evidence-informed practice as stated in **Chapter 2**.

Action 57: The coordination group will establish a North West radiotherapy data working group, with representation from clinical oncology, therapeutic radiography, physics, dosimetry, informatics, research delivery, information governance, digital teams, academic partners and patient/public contributors.

Action 58: The data working group will develop a regional radiotherapy data roadmap describing priority datasets, governance requirements, technical dependencies, data standards, workforce needs and opportunities for alignment with national programmes.

Action 59: The Data Working Group will define and implement minimum regional standards for radiotherapy benchmarking and research datasets, including agreed data items, metadata, naming conventions, data quality checks and export requirements. These standards will apply to ProKnow and any future ProKnow-like platform, ensuring that data generated through regional benchmarking can be reused for audit, research, AI evaluation, service improvement and national collaboration.

Data liquidity and regional data assets

Radiotherapy generates large volumes of technical, clinical and operational data, but much of this remains locked within individual systems or accessible only through manual extraction. The North West will prioritise improved data liquidity: the ability for data to move securely, meaningfully and appropriately between systems, teams and approved research environments. Furthermore, the region will also look beyond standard radiotherapy datasets to identify new data assets that can improve research, trial design and clinical decision-making.

Action 60: The data working group will complete a regional data flow mapping exercise, identifying where key radiotherapy data are generated, stored, duplicated, manually transferred or inaccessible across treatment planning systems, oncology information systems, imaging systems, electronic patient records, trial systems and patient-reported data platforms.

Action 61: The data working group will define a pragmatic North West radiotherapy core dataset, including technical, clinical, operational, outcome, toxicity, patient-reported and equity-related data items, mapped against existing national datasets and standards where possible.

Action 62: The data working group will develop and maintain a regional radiotherapy data asset catalogue, describing available datasets, data owners, access routes, quality considerations, governance requirements and potential research use.





Chapter 6: Research delivery - Innovation, trials, data and dissemination

Key components (continued)

Patient-centred outcomes, pragmatic trials and continuous learning

A learning radiotherapy system must understand not only what treatment was delivered, but how it was experienced and what outcomes mattered to patients. The region will therefore work towards better integration of patient-reported outcome measures, patient-reported experience measures and qualitative or narrative insight where appropriate. This will directly support trial delivery and will utilise the PPIE principles from **Chapter 5**, ensuring that patient priorities shape data use and that research is designed around meaningful outcomes.

Action 63: The coordination group will work with PPIE champions to identify priority patient-reported outcome (PROM) and experience measures (PREM) for regional radiotherapy research and service improvement.

Action 64: The data working group will collaborate with research delivery teams to develop a standard data feasibility process for proposed trials, supporting rapid site selection, recruitment planning, and the identification of underserved groups.

Action 65: The region will deliver targeted, data-enabled pilot projects where routinely collected data is used to provide timely feedback into clinical practice (e.g., addressing variation in dose metrics, toxicity, or trial recruitment).

AI, innovation, workforce and partnerships

The North West should position itself as a key regional environment for radiotherapy AI, automation and data-driven innovation. This will require high-quality data, strong governance, clinical leadership, patient involvement and close links with national innovation programmes.

AI and automation should be treated as part of a wider learning system rather than just a standalone technology. The region should therefore focus on creating the conditions for safe AI evaluation: curated datasets, clear clinical use cases, bias assessment, prospective monitoring, workforce capability and transparent communication with patients. This component links to **Chapter 3, 4** and the Innovation section of this chapter. It recognises that data-driven radiotherapy cannot be delivered by software alone; it requires skilled, supported and connected staff across clinical, scientific, technical, academic and informatics roles.

Action 66: The coordination group and the data working group will identify national AI, data and innovation programmes relevant to radiotherapy and establish routes for North West participation.

Action 67: The data working group will develop a practical regional framework for evaluating AI and automation tools. This will include requirements for clinical safety, data quality, bias assessment, patient acceptability, and post-implementation monitoring.

Action 68: The coordination group will work with government, HEI, industry, vendor, and charity partners to identify funding opportunities for regional data infrastructure, analytics posts, fellowships, and AI evaluation.

Dissemination

Purpose

To ensure that research across the North West radiotherapy network is visible, shared, celebrated, and translated into improved patient care. Effective communication strengthens collaboration, increases staff engagement, attracts partners, and supports rapid uptake of new evidence and innovation. Sharing research findings with the wider public also increases awareness among patients, providing tangible output from research and encouraging patient-centred research and PPIE.



Strategic aims

- 1** Make NW radiotherapy research visible regionally, nationally, and internationally.
- 2** Promote a culture of shared practice across all providers.
- 3** Increase public awareness of research opportunities and achievements.
- 4** Ensure materials are accessible and equitable for all audiences.
- 5** Strengthen collaborations with HEIs, industry, charities, and clinical partners.
- 6** Nurture a culture of research and publication among students



Chapter 6: Research delivery - Innovation, trials, data and dissemination

Key components

Key audiences

Internal: Radiotherapy staff, Trust executives, research and development teams, academic partners, students and trainees.

External: Patients and the public, charities, industry, commissioners, policymakers, national research bodies.

Communication channels and approaches

The network will use a mix of internal, external, academic, and celebratory channels to maximise reach and engagement. A strategic approach will be adopted to ensure that outputs are created in formats that are accessible by people from a diverse range of backgrounds.

Routine internal communication

Action 69: The coordination group will compile and distribute a quarterly NW RT research newsletter to all staff, students, PPIE group members and academic partners. This will include accessible summaries of research activity and outputs. A call for updates will be circulated prior to publication to ensure all partners are able to contribute.

External communication and public visibility

Action 70: The coordination group and The City of Liverpool College will expand the existing public-facing clinical trials database with live study lists and patient-friendly summaries. Pages will include translated versions of key outputs and British Sign Language (BSL) versions of narrated resources, as detailed in **Chapters 2, 5 and 6**.

Action 71: The NW RT SSCN LinkedIn profile will share bespoke social media content promoting achievements and opportunities from the North West research strategy, including translated and BSL-supported outputs. Contribution will be sought from researchers, PPIE members and research-active students across the region.

Action 72: The coordination group will share press releases for major grants, publications, and cross-trust initiatives within regional media outputs.



Knowledge sharing and academic dissemination

Regular regional research exchange days will enable researchers to share their findings with the wider network including clinical staff, academic partners, students and members of PPIE groups.

Action 3: The coordination group and the North West Radiotherapy Network will set up regional research exchange days and repeat them annually.

Action 73: The coordination group will support all project leads within the Network to develop a dissemination strategy, with sustainable dissemination strategies such as presentation at UKIO or UK-based conferences and prioritising journal submission encouraged. Collaborative dissemination plans will make use of existing academic partnerships to target open-access journals and support researcher visibility.

Action 14: The coordination group will work with HEI partners to create a review team to provide abstract and writing skills support to promote dissemination of North West Research, locally, nationally and internationally.

Action 74: The coordination group will work with The City of Liverpool College to expand the public-facing clinical trials database to include a publication repository and publish all outputs including posters, slides etc.

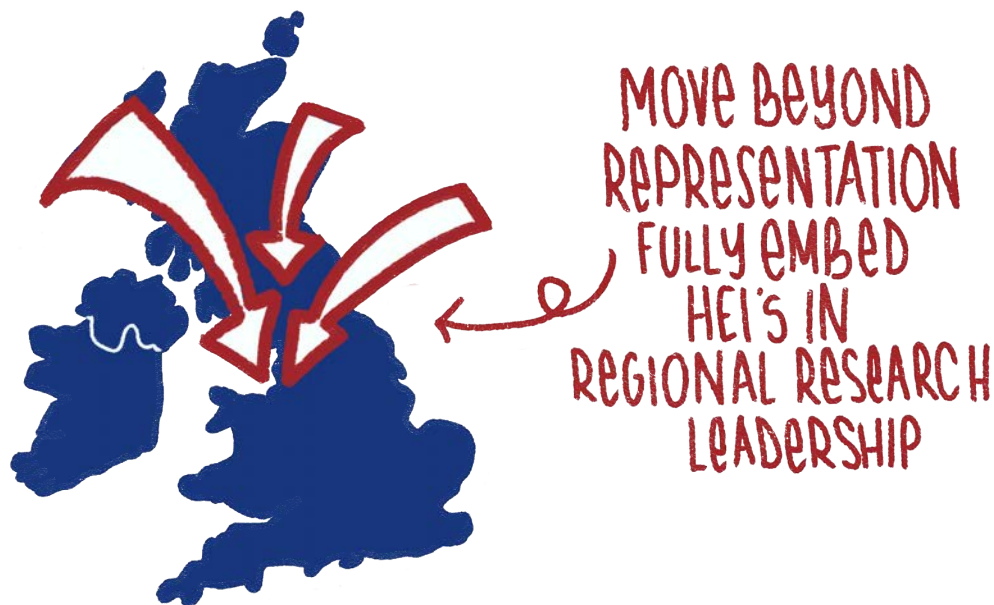
Celebrating success

The regional research exchange days will enable celebration of research and also provide awards for presenters from clinical staff, students and multi-disciplinary teams.

Action 3: The coordination group and the North West Radiotherapy Network will set up Regional research exchange days and repeat them annually.

Action 75: The NW RT research newsletter will publish case studies demonstrating patient benefit as well as sharing examples at Regional research exchange days and via public-facing database.

Action 76: The NW RT research newsletter will spotlight features of award-winners, research staff, trainees, and PPIE contributors as well as via the public-facing database.





Implementation plan

This implementation sets out the proposed delivery of the actions set out in the strategy over the next 5 years. The actions in the strategy are organised by the strategy chapters.

Progress against the implementation plan will be reviewed at North West Research oversight group meetings and by the North West Radiotherapy Specialised Services Clinical Network oversight group.

Key delivery bodies:

- North West research strategy coordination group
- North West research strategy oversight group
- North West Radiotherapy Specialised Services Clinical Network (NW RT SSCN)
- North West radiotherapy providers (The Christie NHS Foundation Trust, The Clatterbridge Cancer Centre Lancashire Teaching Hospitals).

Chapter 2- Regional collaboration and infrastructure

North West Radiotherapy research coordination group

Actions	Responsible body	Timeline	Details and measurement
1. The North West Specialised Services Clinical Network will set up the coordination group which will be responsible for regional research planning and the implementation of this strategy.	NW RT SSCN	1 year	Establishment of coordination group (Y1)
Shared research database 2. The clinical trials database will be expanded to create a live region-wide register capturing all open, planned, and archived studies, key contacts, resource needs, and opportunities for cross-Trust involvement. The database will be maintained by collaboration between the coordination group and The City of Liverpool College.	Coordination group The City of Liverpool College Individuals from each provider responsible for provider specific updates.	1-2 years	• Plan developed (Y1) to deliver the expansion of the clinical trials database to include: - open studies - planned studies - archived studies • Regular maintenance/spot checks from coordination group for accuracy.
Regional research exchange days 3. The coordination group and the North West Radiotherapy Network will set up annual regional research exchange days.	Coordination group	1-2 years (repeated annually)	Establishment of first regional research exchange day.

Chapter 3 - Workforce development and culture

Workforce stability

Actions	Responsible body	Timeline	Details and measurement
4. The coordination group will carry out Capacity and Demand Modelling for the research workforce, building on existing modelling being carried out by the North West Radiotherapy Specialised Services Clinical Network.	Coordination group NW RT SSCN workforce education and training group	1-2 years	Completion of research Capacity and Demand Modelling (Y2).
5. Produce provider workforce plans using the outcomes of Research Workforce Capacity and Demand Modelling and assess the requirement for protected research time in other non-research specific clinical roles.	Providers	2-3 years	- Research workforce plans developed by each provider (Y3). - Annual review of workforce plans against modelling outputs (ongoing).
Section: Protected time and role design			
6. The Research Workforce Capacity and Demand Modelling will allow the mapping of skill gaps and the alignment of research roles.	Coordination group NW RT SSCN workforce education and training group Providers	2-3 years	- The coordination group will work with providers to complete a regional skills gap analysis completed (Y2). - Annual review of workforce plans against gap analysis and modelling, ongoing.
7. The coordination group will facilitate a workshop to compare and consider standardisation of job descriptions for research-active roles.	Coordination group NW RT SSCN workforce education and training group	2 years	- The coordination group will organise and oversee the completion of a workshop (duration 1 day) with relevant professionals (Y2). - This workshop will aim to inform any future updates to job descriptions for research-active roles within individual providers.

Chapter 3 - Workforce development and culture

Workforce stability

Actions	Responsible body	Timeline	Details and measurement
8. The coordination group will advertise cross-Trust secondment activities to support continuity and role development.	Coordination group Oversight group NW RT SSCN workforce education and training group Providers	Ongoing	- The research oversight group quarterly meetings and the workforce education and training group will facilitate the promotion of secondment opportunities and role development activities (ongoing). - Aim to have all providers participating in role development opportunities by Y5.
9. The coordination group will work with providers to encourage rotational research opportunities.	Coordination group NW RT SSCN workforce education and training group Providers	1-2 years	The research oversight group quarterly meetings will facilitate conversations with providers regarding rotational research opportunities supported by the work of the workforce education and training group (ongoing).
Mentorship, peer support and clinical-academic development			
10. The coordination group will evaluate established frameworks such as the Early Career Researcher (ECR) Framework and Vitae Researcher Development Framework (RDF).	Coordination group	2-3 years	The coordination group will be responsible for publishing of North West Researcher Framework (Y3).
11. The coordination group will use the evaluation of the current research frameworks to develop and tailor them to a North West framework that supports progression from early research exposure to advanced postgraduate study. These could consider a coordinated supervisory network for local research projects and will consider the role of a regional mentorship programme.	Coordination group	2-3 years	The coordination group will be responsible for publishing of North West Researcher Framework (Y3).

Chapter 3 - Workforce development and culture

Workforce stability

Actions	Responsible body	Timeline	Details and measurement
12. Existing peer learning groups such as journal clubs and writing workshops will be promoted and shared across institutions through the coordination group.	Coordination group NW RT SSCN workforce education and training group	Ongoing	The research oversight group and the RT NW SSCN workforce education training group will promote quarterly meetings can be used to promote existing peer learning groups (ongoing).
13. Providers will help ensure research activity is promoted by embedding research discussions within appraisals and one-to-one meetings, creating a supportive, connected environment that nurtures clinical academic development across all professions.	Provider	Ongoing	North West radiotherapy research coordination group will monitor this activity throughout strategy implementation.
Training, accreditation and skills development			
14. The coordination group will work with HEI partners to create a review team to provide abstract and writing skills support to promote dissemination of North West research, locally, nationally and internationally.	Coordination group HEI	2-3 years	The coordination group will work with HEI partners to see the delivery of skills training sessions (Y2). These training sessions will be repeated annually.
15. Providers will be required to make Good Clinical Practice (GCP) Training mandatory to core staff groups to ensure we comply with the international standard for conducting clinical research maintaining the protection of the rights, safety, and wellbeing of trial participants, and meaning that the data generated is credible and reliable.	Provider	1-2 years	Providers will identify core staff groups to engage with for GCP training aiming for 50% compliance by end of year 1 and 100% compliance by end of year 2.
16. The NW RT SSCN workforce education training group will work towards an annual training calendar being shared across the region with relevant research training opportunities included in it. This will ensure equity of access to opportunities across the region, promote research skill development and upskill the workforce.	NW RT SSCN workforce education and training group	2-3 years	- The NW RT SSCN workforce education training group will promote any available funded training opportunities (ongoing). - The coordination group will identify relevant courses throughout the region (Y2). - Compilation and publication of annual training calendar (Y3).

Chapter 3 - Workforce development and culture

Workforce Stability

Actions	Responsible body	Timeline	Details and measurement
Inclusivity and accessible opportunities			
17. The coordination group and the RTNW SSCN workforce education training group will conduct an 'Inclusivity and accessible opportunities' review of the current barriers linked to time, visibility and experience, to identify and promote best practice across the region.	Coordination group NW RT SSCN workforce education and training group	2-3 years	The coordination group will complete the review end of year 3.
18. The outcomes of the 'Inclusivity and accessible opportunities review' will be used to co-produce provider specific recommendations to improve access to research for staff.	Coordination group Oversight group NW RT SSCN workforce education and training group Providers	3-4 years	- Recommendations made year 3. - Providers will be encouraged to action recommendations by end of year 4.
19. The coordination group and the RT NW SSCN workforce education training group will work with providers to introduce introductory shadowing and taster experiences for research roles.	Coordination group Oversight group NW RT SSCN workforce education and training group Providers	3-4 years	- Establishment of current taster/shadowing sessions at each provider (Y3). - Promotion of best practice across region (ongoing).
20. All staff will be invited to regional research exchange days, hosted by the network, to share and celebrate research activity from all staff groups.	Coordination group	1-2 years	Establishment of first regional research exchange day (Y1).

Chapter 4 - Partnerships: HEIs, industry, charities and vendors

Academic (HEI) partnerships

Actions	Responsible body	Timeline	Details and measurement
21. The coordination group will work with providers to encourage the uptake of honorary contracts and joint appointments between providers and HEI partners.	Providers Coordination group Oversight group (HEI partners)	Ongoing	- The coordination group will work with providers and HEI providers to set ambitions across: - number of honorary contracts established - number of joint appointments created - number of staff holding NHS/HEI joint roles
22. The coordination group and providers should work directly with HEI partners to explore opportunities for joint supervision panels for undergraduate and postgraduate study.	Providers Coordination group Oversight group (HEI partners)	Ongoing	- The coordination group will work with providers and HEI providers to set ambitions across: - number of joint supervision panels established - number of MSc students supported - number of PhD students supported - number of HEIs participating
23. The coordination group will work with providers and HEIs to support the alignment of research priorities.	Providers Coordination group Oversight group (HEI partners)	Ongoing	Opportunities for priority alignment will be discussed at quarterly Oversight meetings (ongoing).

Industry and vendor partnerships

24. The research coordination group will invite membership from Industry partners on a rotational basis.	Coordination group	Ongoing	- First member to be included when coordination group established (Y1). - Rotational basis to be determined (ongoing).
25. The industry partner will be responsible for providing updates on potential education training support and upskilling provided by radiotherapy and imaging manufacturers, software vendors, pharmaceutical companies and other vendors.	Coordination group Industry partner	2-3 years	Updates will be given at oversight group meetings (ongoing)

Chapter 4 - Partnerships: HEIs, industry, charities and vendors

Academic (HEI) partnerships

Actions	Responsible body	Timeline	Details and measurement
26. Industry partners will be invited to regional research exchange days to present novel technology innovations and to discuss opportunities for collaboration within the connection rounds at these events.	Coordination group	1-2 years (Ongoing)	• Establishment of first regional research exchange day (Y1). • Connection rounds in operation by second regional research exchange day (Y2). • Continual invitation to industry members (ongoing).
Charities and philanthropy			
27. The coordination group will be responsible for facilitating joint applications to large-scale funding opportunities within the charity sector.	Coordination group Oversight group	2-3 years	• First joint application to be made by end of year 3.
28. The coordination group will promote research fellowships and research posts advertised by third-sector organisations across the region.	Coordination group	Ongoing	• Dependent on availability of opportunities.
29. The coordination group will engage with third sector organisations to establish opportunities for funding novel radiotherapy equipment for use in research and/or service development and travel and accommodation costs associated with clinical trials.	Coordination group Oversight group	2-3 years	• Dependent on availability of opportunities.

Chapter 5 – Patient and public involvement and engagement

Academic (HEI) partnerships

Actions	Responsible body	Timeline	Details and measurement
30. The group will invite membership from patient partners, providing a patient perspective to all decision making.	Coordination group	1-2 years	Establishment of coordination group with patient representative recruited using NW RT SSCN processes (Y1).
31. An agenda spot will be held for patient experience to be discussed at each regional coordination group meeting and outcomes cascaded to the wider network.	Coordination group	Ongoing	The agenda slot will be included in regular meetings (ongoing).
Regional PPIE guidance			
32. The coordination group will develop standards for how PPIE is used in all research projects for the region.	Coordination group (EDI lead)	1-2 years	- The EDI Lead will support the publication of regional PPIE guidance, utilising existing standards (Y1) - The coordination group will monitor the percentage of new projects adopting guidance (ongoing).
33. Patient and public involvement and engagement champions will be recruited and trained at each provider, with the aim of supporting PPIE at a local research level, guided by the network principles set out in this strategy.	Coordination group (EDI lead) Provider	1-2 years	- At least one PPIE champion identified at each provider (Y1). - The number of champions trained will be monitored. - An annual champion network meeting will be established (Y2).
34. The coordination group will create a remuneration framework following NIHR payment rate guidance for PPIE involvement to promote patient inclusion and increase equity.	Coordination group (EDI lead)	1-2 years	- The EDI lead will oversee the publication of the framework and lead an annual review monitoring progress (Y2). This will consider: - the number of providers implementing framework - the percentage of contributors reimbursed through framework

Chapter 5 – Patient and public involvement and engagement

Academic (HEI) partnerships

Actions	Responsible body	Timeline	Details and measurement
35. The coordination group will develop an accessible materials toolkit. This will include guidance on how to make PPIE digitally accessible to allow virtual participation for all.	Coordination group (EDI lead)	2-3 years	• Toolkit published (Y2).
36. The coordination group will develop easy-read templates for researchers to adapt to individual studies.	Coordination group (EDI lead)	2-3 years	• Easy-read template library published (Y3).
37. Providers will be responsible for disseminating and adhering to the new remuneration framework, the accessible materials toolkit and the easy read templates, including implementing the new standards into centre guidelines, supported by PPIE champions.	Providers PPIE champions Coordination group (EDI lead)	Ongoing	• This will be monitored by PPIE champions internally and coordination group externally.
Community Outreach			
38. The coordination group will identify and establish relationships with Cancer Alliances, charities and community groups in order to engage with underserved communities with an aim of working collaboratively on future research endeavours.	Coordination group (EDI lead) Cancer Alliances Oversight group	1-2 years	• The coordination group will monitor (ongoing): - number of community groups introduced - number of formal partnerships established - representation of underserved communities in engagement activities
39. The coordination group will liaise with Cancer Alliances to partake in and support existing outreach events to engage with underserved communities.	Coordination group (EDI lead) Cancer Alliances Oversight group	1-2 years	• The coordination group will monitor (ongoing): - attendance levels. - evaluation feedback - number of new contacts established.

Chapter 5 – Patient and public involvement and engagement

Academic (HEI) partnerships

Actions	Responsible body	Timeline	Details and measurement
Patient participation at regional research exchange days 40. A number of delegate places will be provided to patients/public for the regional research exchange days with “meet the researcher” sessions planned for these days to allow the public to see the research being undertaken in the region.	Coordination group	1-2 years	- Establishment of first regional research exchange day (Y1) - Meet the researcher sessions to be up and running by second regional research exchange day (Y2) .
41. Patient researchers will be invited to partake in the connection rounds planned for the regional research exchange days.	Coordination group	1-2 years	- Establishment of first regional research exchange day (Y1) - Connection rounds in operation by second regional research exchange day (Y2)
42. Patient researchers will be encouraged and supported to present their findings and their experiences, both as a patient and a researcher in a format the suits them and their topic such as LinkedIn, blog post, conference presentation, public engagement events.	Coordination group Oversight group	2-3 years	- The coordination group will monitor (ongoing): - number of patient-led dissemination outputs - number of public engagement activities involving patient researchers

Chapter 6. Research delivery: Innovation, trials, data and dissemination

Innovation

Actions	Responsible body	Timeline	Details and measurement
43. Connection rounds at regional research exchange days will provide a space for idea generation and project team development.	Coordination group Oversight group Providers	2-3 years	• Connection rounds to be operational by year 2 of regional research exchange days (Y2) .
44. Industry membership of the coordination group will allow identification of novel technologies for innovative use.	Coordination group (Industry member)	Ongoing	• First member to be included when coordination group established (Y1). • Rotational basis to be determined, ongoing.
45. Patient membership of the coordination group will provide patient perspectives on research topics and areas of interest to allow idea generation.	Coordination group (patient member)	Ongoing	• The first patient member to be included when coordination group established (Y1, ongoing).
46. The coordination group will leverage the multi-site collaborative framework established by this strategy to rapidly scale and implement successful local innovations across the entire North West region.	Coordination group Oversight group Providers	Ongoing	• The oversight group will monitor (ongoing): - number of innovations identified - number adopted by multiple providers - time from local implementation to regional rollout - number of providers implementing shared innovations

Trial delivery

Single-front-door-feasibility and accessibility	Coordination group	1-2 years	• The coordination group and The City of Liverpool College will monitor: - expansion of database to include open studies. - secondary expansion to include planned studies. - final expansion to include archived studies - regular maintenance/spot checks from coordination group for accuracy
47. The coordination group will work with The City of Liverpool College to expand the existing patient and clinician facing clinical trials database in order to promote equitable patient access and streamline trial recruitment.	The City of Liverpool College Individuals from each provider responsible for provider specific updates.		

Chapter 6. Research delivery: Innovation, trials, data and dissemination

Trial delivery

Actions	Responsible body	Timeline	Details and measurement
48. The coordination group will promote the database within each provider to promote clinician use, providing a single point for clinicians to gather all relevant trial information.	Coordination group Providers	Ongoing	The coordination group will work with providers to promote and deliver awareness sessions (Y2).
49. The coordination group will promote the database externally to improve transparency and empower patients to be able to make better informed decisions regarding trial involvement.	Coordination group Oversight group	Ongoing	- The coordination group will monitor (Y2): - website traffic and unique visitors - number of patient enquiries generated - number of trial referrals originating through database - patient feedback
50. The public-facing database will include translated information videos for open clinical trials, increasing accessibility to various population groups.	Coordination group Providers The City of Liverpool College	Ongoing	- The coordination group will monitor (Y2): - number of translated videos produced - number of languages available - video access and viewing figures - accessibility review undertaken annually
51. The coordination group will form a working party to examine existing informal cross-referral relationships between providers, formalising them into standardised pathways based on identified examples of best practice.	Coordination group Providers Oversight group	2-3 years	- The working party will be established Y2. - Standardised referral pathway published (Y3) - The coordination group will monitor: - number of cross-provider referrals Y2-3 - increase in cross-provider recruitment Y3
52. The coordination group will engage with third sector organisations to explore funding support for patient travel and accommodation for clinical trial participation.	Coordination group Providers Oversight group	2-3 years	- Organisations engaged and funding streams identified (Y2). - Funding secured Y3-onwards. - The coordination group will monitor the number of patients supported annually, (ongoing from Y3).

Chapter 6. Research delivery: Innovation, trials, data and dissemination

Trial delivery

Actions	Responsible body	Timeline	Details and measurement
Simplifying Processes 53. The coordination group will instigate discussions with RTTQA regarding a network quality assurance approach.	Coordination group Providers	2-3 years	• RTTQA meetings completed (Y2) • Regional QA proposal developed (Y2) • QA framework agreed (Y3). • The coordination group will monitor the number of providers participating Y3, ongoing.
Workforce development 54. The coordination group will facilitate a workshop to evaluate the clinical trial education at each provider.	Coordination group Providers	2-3 years	• Review completed (Y2). • Gap analysis produced (Y2). • Recommendations published (Y2). • Number of recommendations adopted (Y3).
55. The student work-package for clinical trial education will be expanded to be relevant to newly qualified members of staff and its rollout encouraged within preceptorship and induction processes at each provider.	Providers	1-2 years	• Providers to update package according to their newly qualified training needs (Y2).
56. The coordination group will organise a review of clinical trial funding at each provider, which considers establishing a more sustainable funding model for radiotherapy clinical trials staff.	Coordination group Providers	1-2 years	• Funding review to be completed and recommendations published (Y1). • Improvement in workforce sustainability indicators will be monitored by the coordination group (ongoing).

Chapter 6. Research delivery: Innovation, trials, data and dissemination

Data

Actions	Responsible body	Timeline	Details and measurement
Regional data infrastructure, governance and interoperability			
57. The coordination group will establish a North West radiotherapy data working group, with representation from clinical oncology, therapeutic radiography, physics, dosimetry, informatics, research delivery, information governance, digital teams, academic partners and patient/public contributors.	Coordination group	1-2 years	• Terms of Reference agreed Y1 with Data Working group operational by Y2.
58. The Data Working Group will develop a regional radiotherapy data roadmap describing priority datasets, governance requirements, technical dependencies, data standards, workforce needs and opportunities for alignment with national programmes.	Data working group	1-3 years	• Data roadmap published, Y1/2. • Annual review completed, (ongoing). • The data working group will monitor the number of organisations contributing and alignment with national programmes demonstrated, (ongoing).
59. The data working group will define and implement minimum regional standards for radiotherapy benchmarking and research datasets, including agreed data items, metadata, naming conventions, data quality checks and export requirements.	Data working group	1-3 years	• Minimum dataset agreed, Y2. • The data working group will monitor provider compliance rates and carry out an annual data quality audit (ongoing).
Data liquidity and regional data assets			
60. The data working group will complete a regional data flow mapping exercise, identifying where key radiotherapy data are generated, stored, duplicated, manually transferred or inaccessible across treatment planning systems, oncology information systems, imaging systems, electronic patient records, trial systems and patient-reported data platforms.	Data working group Providers	1-3 years	• Mapping exercise initiated Y1 and completed Y2. • Improvement plan developed, Y2-3.

Chapter 6. Research delivery: Innovation, trials, data and dissemination

Data

Actions	Responsible body	Timeline	Details and measurement
61. The data working group will define a pragmatic North West radiotherapy core dataset, including technical, clinical, operational, outcome, toxicity, patient-reported and equity-related data items, mapped against existing national datasets and standards where possible.	Data working group Providers	2-4 years	• Core dataset agreed (Y2). • The data working group will monitor the number of providers contributing and dataset completeness rates (ongoing). • Annual reporting dashboard established (Y3).
62. The data working group will develop and maintain a regional radiotherapy data asset catalogue, describing available datasets, data owners, access routes, quality considerations, governance requirements and potential research use.	Coordination group Data working group Providers	3-4 years	• Catalogue published (Y3). • The number of projects utilising catalogue will be monitored.
Patient-centred outcomes, pragmatic trials and continuous learning			
63. The coordination group will work with PPIE champions to identify priority patient-reported outcome (PROM) and experience measures (PREM) for regional radiotherapy research and service improvement.	Coordination group Data working group Providers PPIE champions	2-3 years	• Agreed PROM/PREM set published (Y2). • Number of providers collecting agreed measures (ongoing).
64. The data working group will collaborate with research delivery teams to develop a standard data feasibility process for proposed trials, supporting rapid site selection, recruitment planning, and the identification of underserved groups.	Data working group Providers	2-3 years	• Standard process documented (Y3). • The Data Working Group will monitor the number of studies using process, the time taken to complete feasibility assessments and user satisfaction scores.
65. The region will deliver targeted, data-enabled pilot projects where routinely collected data is used to provide timely feedback into clinical practice (e.g., addressing variation in dose metrics, toxicity, or trial recruitment).	Data working group Providers	4-5 years	• The data working group will monitor: - number of pilots initiated - number completed - practice changes resulting from pilot findings - reduction in identified variation

Chapter 6. Research delivery: Innovation, trials, data and dissemination

Data

Actions	Responsible body	Timeline	Details and measurement
AI, innovation, workforce and partnerships			
66. The coordination group and the Data Working Group will identify national AI, data and innovation programmes relevant to radiotherapy and establish routes for North West participation.	Coordination group Data working group	2-3 years	- The data working group will monitor: - number of national programmes identified - number of applications submitted - number of programmes joined
67. The data working group will develop a practical regional framework for evaluating AI and automation tools.	Data working group	2-3 years	- Framework published (Y3). - An annual review will review the number of AI tools evaluated and the number of providers implementing framework.
68. The coordination group will work with government, HEI, industry, vendor, and charity partners to identify funding opportunities for regional data infrastructure, analytics posts, fellowships, and AI evaluation.	Coordination group Data working group Oversight group	Ongoing	- The coordination group will monitor: - number of funding opportunities identified - number of applications submitted - value of funding secured - number of posts/fellowships supported

Dissemination

Routine internal communication

69. The coordination group will compile and distribute a quarterly NW RT research newsletter to all staff, students, PPI group members and academic partners.	Coordination group Oversight group Providers	Ongoing	- First newsletter to be published Q2 Year 1. - Repeated quarterly.
External communication and public visibility			
70. The coordination group and The City of Liverpool College will expand the existing public-facing clinical trials database with live study lists and patient-friendly summaries.	Coordination group The City of Liverpool College Providers	Ongoing	As per action 2

Chapter 6. Research delivery: Innovation, trials, data and dissemination

Dissemination

Actions	Responsible body	Timeline	Details and measurement
71. The NW RT SSCN LinkedIn profile will share bespoke social media content promoting achievements and opportunities from the North West research strategy, including translated and BSL-supported outputs.	Coordination group Oversight group NW RT SSCN Providers	Ongoing	Coordination and oversight group meetings will allow feedback and opportunity signposting, regular updates via LinkedIn (ongoing).
72. The coordination group will share press releases for major grants, publications, and cross-trust initiatives within regional media outputs.	Coordination group	Ongoing	As and when required.
Knowledge sharing and academic dissemination			
73. The coordination group will support all project leads within the network to develop a dissemination strategy.	Coordination group Oversight group Providers	Ongoing	All new projects to have a dissemination strategy by Y2.
74. The coordination group will work with The City of Liverpool College to expand the public-facing clinical trials database to include a publication repository and publish all outputs including posters, slides etc.	Coordination group The City of Liverpool College Providers	Ongoing	Aim for outputs to be published on patient-facing database by Y2.
Celebrating success			
75. The NW RT research newsletter will publish case studies demonstrating patient benefit as well as sharing examples at regional research exchange days and via public-facing database.	Coordination group Oversight group The City of Liverpool College Providers	Ongoing	Quarterly newsletter to be operational by Y2.

Chapter 6. Research delivery: Innovation, trials, data and dissemination

Dissemination

Actions	Responsible body	Timeline	Details and measurement
76. The NW RT research newsletter will spotlight features of award-winners, research staff, trainees, and PPIE contributors as well as via the public-facing database.	Coordination group Oversight group The City of Liverpool College Providers	Ongoing	• Number of spotlight articles published annually. • Representation across all professional groups. • Number of patient/public contributor features. • Engagement metrics (views, shares, clicks).

The network would like to thank all partners for their support in developing and implementing this strategy.



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