NHS
Barts Health
NHS Trust

Barts Health NHS Trust
Research Strategy
2019 - 2024

WeCare
Our vision, values and behaviours

Barts Health NHS Trust
Research Strategy – 2019-2024

Research and innovation is an integral part of what we do

Our patients want us to engage in research. Research benefits patients directly, providing access to new treatments, future patients who receive better care, and helps the economic development of our region. Research active healthcare organisations have been shown to deliver better outcomes for their patients, partly because of a better organisational culture and partly because they are well placed to identify and implement new innovations. The culture of research active organisations promotes excellence in patient care alongside the skills needed to develop and lead outstanding clinical services. Research is a fundamental part of our work to improve the public health of east London, and this is recognised by regulators such as the Care Quality Commission. We have developed an innovative research strategy to promote clinical and academic excellence with greater healthcare and financial benefits for the Trust.

Aligning with the Trust clinical strategy

The first objective of the Trust is to deliver outstanding patient care, and our research is critical to achieving this. To be successful, our research activity must be conducted as a business, allowing us to demonstrate the benefits of this work to the organisation and to our patients. This approach will support a sustainable growth in research activity and in the essential infrastructure which underpins it. Many clinical studies require extensive support from routine clinical services such as clinical pathology, imaging, pharmacy, and information technology. A successful research strategy must therefore align with our clinical strategy to ensure we meet the needs of both the Trust and individual researchers. The Trust Research Board co-ordinates this activity, working with research leads from each Clinical Board, as well as Clinical Support Services, to ensure effective communication and implementation of the research strategy across the organisation. We must maintain and grow our research portfolio, making greater contributions to the leadership of research as well as to patient recruitment. We will achieve this by developing research infrastructure and our multi-professional research workforce across the Trust, strengthening existing partnerships, including through the Life Sciences Initiative and making better use of our local expertise and experience.

Our current activity

Research is a highly collaborative enterprise. Our activity reflects our partnerships with Queen Mary University of London (Queen Mary), the National Institute for Health Research (NIHR), charity partners, commercial partners and other academic organisations. These include (but are no means confined to) the UCL partners, university partners such as City, Greenwich and Middlesex, and neighbouring NHS organisations. In 2017/18, the Trust recruited 16,800 patients into 430 NIHR portfolio studies, and for the second year in a row, we topped the league table for commercial research activity with 158 studies. We are seventh in the NIHR league tables for patients recruited into studies and sixth for the number of studies we recruit to. We lead 30 of our own studies of various types. Queen Mary, our main academic partner, leads 60 studies and was ranked in the top ten for clinical medicine in the last Research Excellence Framework. All research involving patients at Barts Health and Queen Mary is co-ordinated by the Joint Research Management Office (JRMO), which provides regulatory governance, contracts, finance and other administrative services for both organisations. In the last financial year, the Barts Health research turnover was £26m, of which £6.5m relates to commercial research and £15.5m to infrastructure services such as the North Thames Clinical Research Network (CRN), the Applied Research Collaboration (previously termed CLAHRCs) and the Cardiovascular Biological Research Centre (BRC). The appendix provides a glossary of the terminology used in this document, and in the wider management of our research.

Aligning with National Institute for Health Research (NIHR) strategy

As the Research & Development arm of the NHS, the NIHR sets a national research strategy which we must align with. NIHR is our leading funder providing around £16m to the Trust research business each year. NIHR sets the standards to which we must perform and benchmarks our research activity against other Trusts. The stated aims of the NIHR align closely with the core research philosophy of the Trust. Whilst these are reinforced through numerous competitive funding applications, we may be even more successful in new bids for infrastructure funding if we gave these more detailed consideration.

The Barts Health Clinical Strategy

Theme	Summary
1. Clinical and academic excellence	We will pursue the highest standards for all of our services on all of our sites – this commitment to high quality patient care is our core ambition. In a smaller number of areas, we will build on our existing clinical and research strengths to develop centres of clinical and academic excellence. We also need to develop new sources of strength consistent with our population needs and our ambition to be a major life sciences hub.
2. Reducing variation and improving productivity	We must realise the many opportunities to reduce variation between the trust and its peers and between sites within the trust in order to improve quality and productivity of services. Bearing down on unwarranted variation in quality, outcomes and cost will support the trust's financial recovery as well as our ambition for providing the highest quality care.
3. Meeting the needs of our whole population	We have a large, growing, diverse and changing patient population. It is therefore crucial that we ensure our services meet the needs of our whole population with equity of access and outcomes and tailoring of our services to the needs of particular patient groups. The great diversity of our patient population is a huge source of strength and one of the key drivers of the trust's life sciences opportunity.
4. Networking service to improve standards	We need to develop networks of services within the trust and across Northeast London and beyond to drive higher standards and more efficient care. Joining up patient pathways, sharing resources and spreading best practice within and beyond the trust will be a key mechanism for driving higher standards.
5. Prevention and pathway redesign	We need to change the way many of our services operate in order to prioritise prevention, empower our patients and integrate primary, community and secondary care. Giving patients more control and creating more integrated pathways of care will be crucial to managing growing demand, improving patient experience and ensure our health system can live within its means in the longer term.

The principles which govern the Trust Research Strategy

Leadership

We will develop a leadership framework to support and promote our research across professional boundaries. This will allow us to identify and resolve problems in a strategic way, agree specific research priorities for the Trust and the patients we care for, and ensure the contributions research makes are understood in every aspect of what we do.

Infrastructure

We will strengthen our research infrastructure so this is better placed to support our current research and to promote growth in areas of importance to the Trust. This will also ensure that our research is of the highest quality and demonstrably safe for the patients who take part. We will actively engage with national programmes that create opportunities for us to develop a strong multi-professional research workforce.

Life Sciences Initiative

The Trust research strategy will work synergistically with the Life Sciences strategy. These strategies have many common themes and most of our research leaders play an important role in both. We must use opportunities provided by the life sciences initiative to develop our research infrastructure in terms of people, capability and physical infrastructure. We must maximise opportunities to develop and commercialise new intellectual property alongside other commercial aspects of research and innovation.

Added value

The research activities of the Trust must add value to our core business. In addition to providing opportunities for our patients to receive new treatments and improvements in care, we must be able to demonstrate beneficial effects on the quality of patient care, recruitment and retention of staff, clinical leadership and the Trust financial position.

Integration

We do not want research activity to be confined to a minority of elite clinical services, but to be integral to routine care for all of our patients. We will develop multi-professional programmes to make research part of everyone's role. We will continue to focus on our existing successful work but give greater emphasis to research in all patient groups, across all sites in the Trust. We will consider how best to represent the diversity of our patient care and fully represent our research priorities to reflect this. We will work with patient representatives to guide the focus of our research. We will act more effectively as a partner to the research active organisations we work with including university, health, social care and third sector organisations to deliver

major strategic initiatives as part of our Trust commitment to working effectively with our partners within the wider health system. We will take advantage of opportunities offered by major initiatives such as the East London Patient Record and Discovery programmes.

Reputation

We will ensure that the Trust is widely recognised as a research active organisation which plays a world leading role in the development of clinical innovations. We will promote our research successes actively and widely both in terms of specific innovations and our general contribution; we will celebrate examples of how our work informs policy change. This will help us to realise more of the benefits of this work as highlighted above, attracting high calibre clinician researchers to our organisation, and showing our patients that improving their care is a key priority for us.

High-level aims of the Trust Research Strategy

- Build strength and depth in our key research themes in collaboration with Queen Mary.
- Work with Queen Mary and other academic partners, neighbouring NHS organisations, NIHR, funders and commercial partners to strengthen existing partnerships and develop both the quantity and quality of our research portfolio with a specific focus on the Life Sciences Initiative.
- Conduct research of high quality ensuring this is safe for patients who participate and provides the best possible information to inform the future care of our patients.
- Increase patient participation in research, particularly those trials with potential for impact on our local population, our hospitals and the wider NHS.
- Strengthen research governance procedures and make them more efficient.
- Ensure key research infrastructure is always accessible and providing an efficient cost-effective service to our research leaders.
- Ensure our research output actively influences efficient service design, contributing to improved patient pathways, clinical outcomes and patient experience.
- Work with academic partners to create a strong and resilient research-skilled workforce and develop researchers from all backgrounds.
- Increase research literacy and multi-professional engagement to develop a culture that fosters research skills and impact across our workforce.
- Position ourselves to take advantage of one-off capital opportunities, strategic investment and pump-priming opportunities.
- Work to improve the health of the local population by implementing our research findings through quality improvement initiatives in partnership with public health authorities, local authorities, commissioning groups and other relevant bodies.
- Creating a focused commercial business plan geared towards substantial growth in our commercial research portfolio.

Specific objectives

1. Trust Research Board

We will develop the role of the newly established Trust Research Board. This is chaired by the Chief Medical Officer and includes representation from each of the Clinical Boards, as well as Clinical Support Services, and will include nursing and allied health professional representation. The Research board will lead the Trust research strategy and report to the Clinical Academic Strategy Board. The existing Joint Clinical Research Board will continue to provide a research oversight function, shared between the Trust and Queen Mary, allowing us to monitor and discuss matters of strategic importance to the quality and quantity of our research.

Success criteria:

The Trust Research Board will be fully operational by the start of Year 1.

2. Research governance

We will work with Queen Mary to develop a research governance service with a dual focus on patient safety and scientific quality. We will develop governance processes which are fast, proportionate and relevant to the clinical environments where research is conducted. We will ensure this service can facilitate the research activity of academic staff working with all our university partners.

Success criteria:

The JRMO Research Governance team will be re-structured by the start of Year 1. We will establish a target timeline for approval of new studies by the middle of Year 1. A key-worker scheme to give researchers a single point of contact for new study proposals will be functioning by the middle of Year 1.

3. Commercial research activity

The Research Strategy is aligned with the Trust Commercial Strategy. We will work with the Trust's Commercial and Life Sciences teams to substantially increase revenue from commercial research. We all achieve this through growth in the number of commercial clinical trials hosted at the Trust and the number of patients recruited to these trials. This objective will be supported by improved research infrastructure including out-patient clinical research facilities, research pharmacy and the number of research active consultant leaders across our hospital sites.

Success criteria:

We will increase turnover for commercial research to £10 million p.a. by Year five. We will continue to routinely place in the top three NHS Trusts for commercial research.

4. Out-patient clinical research facilities

We will review the facilities for out-patient clinical research across the Trust and ensure these provide an efficient, high-quality service which represents value for money. We will ensure these facilities have adequate estates support. We will co-ordinate these services with similar facilities within Queen Mary. We will consolidate existing estates facilities and seek to develop additional facilities to secure the long-term future of research requiring out-patient visits to hospital within the Trust and neighbouring life sciences facilities.

Success criteria:

We will complete the new Clinical Research Facility premises at the Royal London Hospital by the middle of Year 1. We will run an integrated out-patient research service in several sites across the Trust and Queen Mary by the end of Year 3. We will bid successfully at a national level for infrastructure funding to support this service by Year 5. We will develop a strategic proposal to partner with commercial research organisations in an integrated facility in the proposed Life Sciences Buildings on the Whitechapel site by the end of Year 1.

5. Clinical Support Services for research

We will renew our research pharmacy services to ensure adequate capacity to meet current activity levels as well as planned growth. We will support the research pharmacy team to develop new working practices which allow us to deliver safe research in a timely way. We will ensure estates facilities are adequate for the demands we place on the pharmacy service. We will ensure that imaging capacity and capability is aligned with the needs of the Trust's current and future portfolio of research studies.

Success criteria:

We will provide a report on the Trust research pharmacy service by the end of Year 1 with detailed recommendations for service development. The Research Pharmacy service at the Royal London Hospital will be relocated to the Pathology and Pharmacy building by the middle of Year 1 (2019). We lead a consultation on future needs for research imaging services by the end of Year 2.

6. Research finances

We will work with the Chief Finance Officer to ensure the financial management of research is robust and transparent, and that research finances do not become confused with those of the clinical services where research takes place. We will work to ensure a sustained growth in research income, allowing investment in research infrastructure, as well as providing revenue which can be used to improve patient care.

Success criteria:

We will work with the Finance team to develop a plan for efficient and effective management of research finances by the middle of Year 1. We will establish procedures to make researchers better aware of financial governance requirements by the middle of Year 2. We review the management research finances to allow clear and transparent financial management of individual research projects by the end of Year 2.

7. Bioinformatics and information governance

We will consider how the large resources of clinical data held by the Trust can be used to support investigator led research for patient benefit, as well as contributing to the Life Sciences Initiative. In partnership with Queen Mary, we will develop research programmes in bioinformatics. We will ensure we have adequate core facilities to facilitate high-quality bioinformatics research which complies with the latest information governance regulations. We will ensure all clinical researchers can easily access secure facilities for the storage of clinical trials data.

Success criteria:

We will establish a secure data facility with robust information governance procedures to support research using NHS patient data by the middle of Year 2. We will establish a service which enables external partners to conduct research using our patient data by the end of Year 3.

8. Consultant leadership

We will support consultants based at Whipps Cross and Newham University Hospitals to become research active. We will achieve this by funding protected research time (awarded through a competitive process) and mentorship from experienced researchers, to develop and lead clinical research on these sites and to act as role models to other researchers. This local leadership will ensure we can increase research activity amongst all staff including trainee doctors, nurses and

therapists. By offering research opportunities more widely within our patient population, we expect to improve our ranking in the annual NIHR league tables for patient recruitment.

Success criteria:

We will support ten consultants based at Whipps Cross and Newham University Hospitals to become research active by the end of Year 4. We will consistently place in the top three of the annual NIHR league tables for patient recruitment by the end of Year five.

9. Clinical academic leadership

We will establish new clinical academic roles within departments with little or no current research activity. We will work with our partner universities to appoint new clinical senior academics in key strategic areas such as orthopaedics and geriatric medicine, developing research and promoting integrated clinical-academic services. We will use consultant job planning and nursing & allied health professional workforce planning constructively to recognise the importance of research in developing the clinical services of the future.

Success criteria:

We will work with our partner universities to appoint two new clinical senior academics in key strategic areas such as orthopaedics and geriatric medicine by the end of Year 4.

10. Nursing, Midwifery and allied health professionals (NMAHPs)

We will promote investigator led research across professional boundaries, supporting academic career development amongst staff in all clinical roles, as well as research professionals such as trial managers and research governance staff. We will support and develop NMAHP research leadership, appointing research leads through a co-ordinated research hub. We will actively facilitate research in areas which do not currently have medically led research programmes. We will ensure our research infrastructure supports research led by staff based in all of our academic partner organisations and remove any barriers to these collaborations.

Success criteria:

We will investigate and report on the status of NMAHP researchers across the Trust by the end of Year 1. We will appoint six NMAHP research leads by the end of Year 3.

11. Infrastructure funding bids

We will become a more active partner to Queen Mary in major infrastructure funding bids such as NIHR Biological Research Centres (BRCs), ensuring the Trust aims are fully considered. By developing a more effective and co-ordinated research infrastructure, and by more clearly expressing the Trust ambition to be a leader in research, we expect to increase the number of successful major infrastructure applications to national funders.

Success criteria:

We will be an active partner on major infrastructure bids to Barts Charity, NIHR and other key strategic funders. We will increase the size of the NIHR BRC(s) hosted by the Trust by the end of Year 5.

12. Clinical trials infrastructure

We will work with Queen Mary to promote access for Trust staff to high quality infrastructure to support the conduct of clinical trials. We will ensure the clinical studies that we sponsor are of the highest quality, are safe for our patients to participate, and provide robust clinical evidence to improve the care of future patients.

Success criteria:

We will work with Queen Mary to develop a shared clinical trials infrastructure service which support all Barts Health sponsored clinical trials by the end of Year 3.

Appendix: Glossary of terms

Terms describing research methods

Basic science and clinical research
Basic research typically based in a lab, studying cells/animals/tissues to determine physiological and pathological processes which may deliver new therapies. Clinical research: taking understanding gained from basic research into the clinical domain, often in the form of clinical trials.

Clinical Trial of an Investigational Medicinal Product (CTIMP)
A CTIMP is a clinical trial of a drug. These are subject to extensive additional regulations beyond the core research ethics approvals and are therefore more complex and challenging to undertake. See MHRA below.

Cohort study
This is a study that follows a group of people, over time, who have a common characteristic or risk factor.

Observational study
Observational studies include a wide range of studies which measure what happens in healthcare but do not involve testing a particular drug, device or treatment.

Phase I, II, III and IV trials
These are terms which describe different types of drug trials, from the first time a new treatment is tested in humans (phase I), the first time a treatment is tested in patients (phase II), to trials which are performed to gain regulatory approval for routine use of a treatment (phase II) and trials that explore benefits and side effects of the treatment after it has been approved and is routinely used in patient care.

Pragmatic clinical trials
Pragmatic clinic trials are designed to help chose between care options and focusing on effectiveness of interventions in routine patient care, as opposed to novel or new drug treatments.

Qualitative research
This involves multiple methods of data collection not involving numerical data, used to develop deep understanding of people perceptions on the world

Quantitative research
This assumes a measurable, numerical data set, with results reported through statistical analysis.

Randomised Controlled Trial (RCT)
A way of testing a testing a drug, device or treatment to see how effective and safe it may be. These trials are carefully designed and regulated to ensure they are safe for

patients and provide reliable information to guide future patient care. They are considered the most important way to generate new evidence about healthcare treatments and represent an important part of the Trust research business.

Translational research
This is research which takes findings from laboratory basic science and applies them in early studies in patients.

Terms describing research infrastructure

Academic Health Science Networks (AHSN)
These were established by NHS England in 2013 to promote innovation in clinical practice. AHSNs are intended to enable the NHS and academia to work collaboratively with industry to identify, adopt and spread innovation and best practice. Our local AHSN is UCL Partners (UCLP) which serves a population of six million people across parts of north London, Hertfordshire, Bedfordshire and Essex.

Biomedical Research Centre (BRCs)
BRCs are partnerships between NHS organisations and universities, conduct translational research (see above) to develop new scientific breakthroughs into treatments for patients. There are 20 BRCs across the UK which are funded by the NIHR. The Barts Cardiovascular BRC, based at the Heart Centre, is currently our only such facility although we would like to increase the amount of this support in future funding rounds.

Clinical Research Facilities (CRCs)
These centres provide premises, facilities and nursing staff to help our researchers run out-patient research studies to a high regulatory standard. This allows the Trust to participate in sophisticated clinical trials, most of which are commercially funded by drug companies. There are two of these facilities within the Trust, one located at the Royal London Hospital and the other at Whipps Cross Hospital. QUEEN MARY also has a CRC based in the Heart Centre at the Charterhouse Square campus, hosting a number of trials which Trust patients participate in.

Clinical Research Network (CRN)
The CRN is a part of the NIHR which funds the costs of NHS staff that support research (e.g. research nurses) and provides specialist training so that patients can be confident that research is being delivered by trained, experienced front-line NHS staff. The CRN also funds the costs of using NHS facilities such as scanners and x-rays that are needed in the course of studies, so that research is not subsidised with funding that has been provided for patient care. The CRN is divided into 15 Local CRNs, ours being the North Thames CRN which we also host.

Clinical Trials Units (CTUs)
Based at Charterhouse Square and the Royal London hospitals, these units, which are managed by QUEEN MARY, offer a bespoke service for the management of clinical trials that are sponsored by the University and Trust. They include the

Pragmatic CTU, the Centre for Experimental Cancer Medicine, the William Harvey Clinical Research Centre, and the Cancer Prevention Trials Unit. They provide data management services, quality monitoring of trials in progress and trial management services.

Health Research Authority (HRA)
The HRA is a part of the NHS research infrastructure which is responsible for protecting and promoting the interests of patients and the public in health and social care research. In particular the HRA is responsible for processes which ensure research is ethically reviewed and approved, and makes independent recommendations on the use of identifiable patient information in research where it is not practical to obtain consent.

Joint Research Management Office (JMRO)
The JRMO is a joint venture of Barts Health with Queen Mary. It manages the administration of our research activities including costing and contracting for research, research governance support, and a full range of ongoing financial management services. It aids researchers applying for grants, with a focused International and EU section offering specialist advice on those complicated areas. The JRMO is involved in policy development and implementation, in oversees research governance and supports research quality systems on behalf of both Queen Mary and the Trust.

Medicines and Healthcare products Regulatory Agency (MHRA)
The MHRA regulates medicines, medical devices and blood components for transfusion in the UK, and has an important function in additional regulation of clinical trials of drugs (CTIMPs see above) and devices. The MHRA conducts periodic inspections of the research within the Trust, and of individual CTIMPs. A major part of our research governance activity is to ensure that the Trust complies with the regulations which the MHRA enforces.

National Institute for Health Research (NIHR)
The NIHR was founded in 2006 to provide a uniform platform to deliver patient centred research to improve the health and wealth of the UK. The NIHR is responsible for many parts of the national research infrastructure including Clinical Research Networks, Biological Research Centres and CLAHRCs (see below). The NIHR is also the largest UK funder of healthcare research projects and individual researchers, and as such is our single most important source of research income.

North Thames CLAHRC
CLAHRC is an unwieldy abbreviation for ‘Collaborations for Leadership in Applied Health Research and Care’ which will soon be shorted to ‘Applied Research Collaborations’. The North Thames CLAHRC is hosted by Barts Health and funded by NIHR. It is collaboration between 50 different partners (universities, NHS organisations, local authorities, industry, etc.) and has a primary focus on research into the implementation of new treatments into routine patient care.

Sponsor
This is the organisation or company that takes on responsibility for initiation, management and financing (or arranging the financing) of a particular research project. Barts Health sponsors around 30 research projects at any one time.