

Roadmap to developing and delivering world-class research 2024-2026







Foreword

We are delighted to present our roadmap to developing and delivering world-class research.

This roadmap will shape the strategic direction for research at King's College Hospital NHS Foundation Trust from October 2024 until October 2026, building on our previous five year research strategy (2019-2024).

In 2021, the Trust launched the 'Strong Roots, Global Reach' strategy which included the 'BOLD' vision of four key ambitions. One of these ambitions is to be leaders in research, innovation and education.

Research is an integral part of the Trust and we pride ourselves on developing new treatments, ground-breaking surgical techniques, and using innovative technology to enhance patient care.

Since the launch of our research strategy in 2019, we have:

- increased commercial and academic research activity
- developed a supportive Trust-wide research culture where staff understand the benefits of conducting clinical research and are encouraged to do so
- developed an Advanced Therapies and Biomedical Sciences Hub to deliver therapies that are based on cells, genes and small molecules

While these are significant achievements, we know that we can go further. Our new roadmap focuses on supporting and developing staff to become the research leaders of tomorrow, increasing participation of under-represented groups in research, harnessing new technology, increasing collaborations and ensuring we implement the recommendations from the Lord O'Shaughnessy report.

We are excited for the next stage of research at King's and look forward to working towards achieving our ambitions for our patients, staff and local communities.



Professor K Ray Chauduri R&D Director



Ann-Marie Murtagh R&D Director



Professor Anil Dhawan R&D Director

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Our vision

As a world class innovator in research we will drive the development of treatments for tomorrow; cell based, clinical and surgical.

Building on our international reputation for research, through our centres of excellence, industry partnerships and academic networks, we will deliver world class research across our key areas of excellence: critical care & trauma medicine, haematology, neurosciences, liver disease, transplantation, fetal medicine, metabolic paediatrics and end of life services.

We will do this to drive new and improved specialist treatments and innovations for the benefit of patients, locally, national and globally.

In the last five years...

NUMBER OF PARTICIPANTS IN RESEARCH STUDIES



156,922

AVERAGE NUMBER OF FULL TIME RESEARCH STAFF PER ANNUM



200

NUMBER OF COMMERCIAL STUDIES COMPLETED



273

NUMBER OF RESEARCH STUDIES APPROVED



1,608

TOTAL COMMERCIAL RESEARCH TRIAL INCOME



£34,610,765

NUMBER OF NON-COMMERCIAL CONTRACTS EXECUTED



1,220

Neurosciences

Successfully delivered a world-first clinical trial exploring the effects of ballet dancing on Parkinson's disease

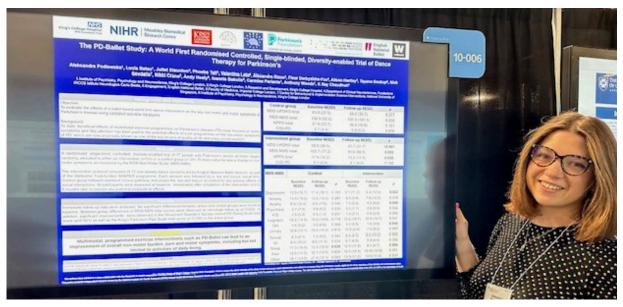
Parkinson's disease (PD) is a condition in which parts of the brain become progressively damaged over many years.

In collaboration with the English National Ballet (ENB), the King's Parkinson's Foundation accredited Centre of Excellence (led by Professor K Ray Chaudhuri) explored the effects of ballet dancing on the symptoms of Parkinson's disease.

Participants of this trial – known as the PD-Ballet study – were either given dance sessions or standard clinical care to help with their symptoms. These were given at random, and those who had the dance sessions were taught weekly by the ENB School of Dance in east London for three months.

The preliminary results from this trial indicate there to be a significant improvement in non-motor symptoms (symptoms which do not affect movement such as pain, memory, sleep and more) for people with PD, with further analysis and results to be released soon.

These initial results were presented at a prestigious international conference (American Academy of Neurology Congress) in April 2024.



Pictured above: Aleksandra (Ola) Podlewska, PhD Research Fellow presenting at the American Academy of Neurology Congress

Reaching diverse communities

Participation in research varies greatly among different ethnicities and this has an impact on people's experiences of healthcare and how treatments can be applied to patients from ethnic minority backgrounds.

Building on the King's Model – a new approach led by Professor Chaudhuri with a multidisciplinary team across King's Health Partners, aimed at helping to increase the participation of people from ethnic minority backgrounds in research – the team spoke with participants from the PD-ballet study about the potential barriers to taking part in research.

This feedback led to the introduction of 'patient champions' who helped share the message about this trial to populations they would otherwise have a hard time reaching, as well as making sure that there were representatives from the ENB available to address any concerns participants had.

This approach proved successful with 20% of the participants being from diverse backgrounds which is over double that of an average neurology clinical trial.

Additionally, the team have also been auditing the data around research trials at King's and surveying the different areas involved in research about their efforts, insights and challenges in recruiting from underrepresented groups. These findings will help to ensure that there is a consistent approach across the Trust.



King's Clinical Research Facility

Making Equality, Diversity and Inclusion a priority

The King's Clinical Research Facility (CRF) is a purpose-built facility located at King's College Hospital which supports clinical trials in mental health, neurology, general and acute medicine.

In 2023, the King's CRF launched their first ever Equality, Diversity and Inclusion (EDI) strategy. This sets out their ambition for ensuring that researchers, staff and public members' lived experiences and opinions are heard and respected, influencing and enriching their work.

It focuses on using data to inform decision-making and address any barriers that underrepresented groups may face, working collaboratively to develop inclusive communications aimed at increasing participation from diverse groups, and increasing education, training and support for staff to embed EDI within research culture.

The King's CRF EDI strategy is closely linked to their work around Patient and Public Involvement (PPI). PPI is where research is carried out in collaboration with patients, families, and members of the public. This was demonstrated at the end of 2023 when one of their PPI members - who has taken part in a clinic trial and is passionate about making research more inclusive - co-delivered an EDI training session for research staff.

The King's CRF team will expand on this work over the coming months with a new EDI action plan which will be developed in collaboration with three PPI members.



Neuroradiology



Fighting brain cancer with a new treatment option that utilises patient's own immune system

DCVax is a new treatment option for patients with glioblastoma (GBM), the most aggressive type of brain cancer. It involves using dendritic cells (the master cells of the immune system) to educate the immune system to attack cancer cells in the brain.

A Phase III international multi-centre clinical trial investigating the use of DCVax in GBM patients was led by the Trust under the supervision of the Chief Investigator (CI), Professor Keyoumars Ashkan.

Results published in a highly renowned journal (JAMA Oncology) in November 2022 demonstrated that DCVax improved the average overall survival of patients with one subtype of GBM by nine months, and patients with another subtype by three months. Survival of patients at five years also more than doubled when compared to patients who did not receive the treatment (13% vs 5.7% respectively).

The evidenced benefit of DCVax suggests that it should be considered as an option for treating GBM. DCVax is currently going through the process needed to obtain regulatory approval in the UK to make it available as part of the care for GBM patients.

Gastroenterology

Investigating the use of AI to detect pre-cancerous growths

A colonoscopy can be used to identify pre-cancerous growths - also known as adenomas - in the bowel, however this requires significant training to perform comfortably and to a high-enough standard. This means that there can be a varying level of success in identifying these pre-cancerous growths, and so the use of technology to improve this is being explored.

Following a collaboration with medical technology manufacturer Medtronic, at the start of 2023, Dr Bu Hayee (Clinical Director for Liver, Gastroenterology, Upper GI and Endoscopy at King's) was awarded a £2.4m grant from the Department of Health and Social Care/NHS AI Lab in collaboration with the National Institute of Health and Care Research. This grant supported a research study which explores how artificial intelligence (AI) can be used in computer-assisted detection during a colonoscopy, as well as the AI equipment used for this.

The study - known as the NAIAD study (National Study of Artificial Intelligence in Adenoma Detection for colonoscopy) - uses a computer system connected to existing colonoscopy equipment to highlight pre-cancerous growths on screen. The study will focus on whether the use of this technology improves the performance of colonoscopists and if so, improving the detection rate which will reduce the risk of bowel cancer.

Participants of this study are patients who are due to have a colonoscopy, however it does not disrupt their usual care and no additional visits to hospital are needed.

King's started recruiting patients for this study in October 2023 and as of May 2024 have over 1500 participants across 30 sites.



Liver

Investigating the use of blood pressure medication to prevent liver disease progression

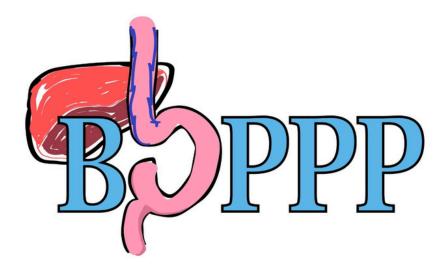
Each year in the UK, around 4,000 people die from cirrhosis (scarring of the liver caused by long-term liver damage). The scar tissue prevents the liver from working properly causing oesophagus veins to swell - referred to as 'varices' - which can lead to fatal bleeding and other life-threatening complications.

A study led by Vishal Patel (Chief Investigator) and Mark McPhail (Chief Scientific Investigator) at the Trust, and supported by the National Institute for Health and Care Research, aims to determine whether administering a commonly used beta-blocker, carvedilol, or placebo can prevent complications of chronic liver disease such as bleeding, fluid build-up, confusion and infections.

This study - known as Beta blockers Or Placebo for Primary Prophylaxis of oesophageal varices in cirrhosis (BOPPP) - received further funding for an extension in 2023 and expects to reach the new target of 740 participants by June 2024.

Participants in the BOPPP study are either given the beta-blocker medication, carvedilol, or a placebo drug for three years, with participants not knowing which treatment they are receiving. During this time, they are observed regularly with follow up appointments scheduled every six months.

With recruitment active across 55 UK sites, the BOPPP trial is currently the largest primary preventative trial in portal hypertension, with the outcomes likely to be pivotal in guiding treatment choices for patients with cirrhosis worldwide.



Liver

First of its kind support group for people with liver disease

Feedback from patients led to the launch of a support group for people with MASLD (Metabolic Dysfunction-Associated Steatotic Liver Disease). Known as 'LIVFIT' and recognised by the Global Liver Institute, it is the first of its kind in the UK for patients with this disease.

MASLD - previously known as non-alcoholic fatty liver disease or NAFLD - is a condition caused by a build-up of fat in the liver.

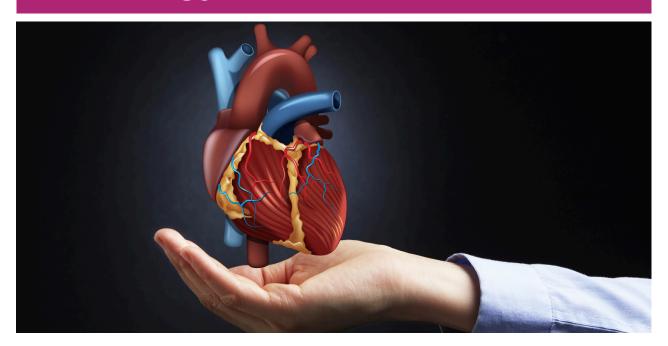
Led by Dr Saima Ajaz, Specialty Doctor in Hepatology at the Institute of Liver Studies at King's, the LIVFIT support group focuses on diet and lifestyle counselling, as well as highlighting opportunities for newer treatments and research.

In the five years since the support group launched, patients have heard from nutritionists, stress management specialists, osteopaths, liver consultants and more about the lifestyle changes that can be made to support their wellbeing.

Members of the LIVFIT support group have also helped to shape the patient experience of research, reviewing patient information and presenting at international events.



Cardiology



Predicting brain damage in patients who have suffered cardiac arrest

We are at the forefront of care of patients who have suffered with an Out of Hospital Cardiac Arrest (OOHCA) in the UK.

A cardiac arrest is when a person's heart stops pumping blood around their body and they stop breathing normally, and this can cause considerable illness or death. Patients have an extremely high risk of long-term brain damage after cardiac arrest, but this can be challenging to predict early on after admission.

Alongside Dr. Nilesh Pareek and his colleagues at the British Heart Foundation Centre of Excellence and King's College London, we have developed a risk score - known as MIRACLE2 - for use by clinicians at heart attack centres to predict brain damage in these patients.

In the original MIRACLE2 study, which was published in the European Heart Journal in 2020, the score predicted brain injury with high accuracy. When it was used to predict brain damage in nearly 900 patients from three heart attack centres in Europe, the score also performed well.

MIRACLE2 has since been adopted worldwide, influencing guidelines nationally and internationally such as the British Cardiovascular Interventional Society and the American Heart Association. It is also at the centre of a wider programme of research led by King's College Hospital and in collaboration with major centres across the UK and globally.

Cardiology

Successful study leads to new opportunities for cardiology at the Princess Royal University Hospital (PRUH)

ORION-4 is a randomised clinical trial exploring whether a new medicine which helps to lower bad cholesterol reduces the risk of heart attacks and strokes in people who have already had one of these conditions.

Participants will typically be part of this study for around five years and will either receive an injection of the medicine (inclisiran) or a placebo every six months, with an additional injection after the first three months. Participants do not know which treatment they will receive.

The Princess Royal University Hospital started recruiting for this study in April 2022 and by September 2023, global recruitment had reached over 16,000 people. The PRUH was the highest recruiting site in the UK for the ORION-4 study, recruiting more than double of their initial target.

The success of ORION-4 has led to new opportunities for cardiology at the PRUH including an opportunity to now open a commercial trial in heart failure.

Pictured below: PRUH ORION-4 research team



Fetal Medicine



Utilising fetal ultrasound to determine the risk of developing preeclampsia

The Fetal Medicine Research Institute's Harris Birthright Centre offers high-quality services to thousands of pregnant women annually.

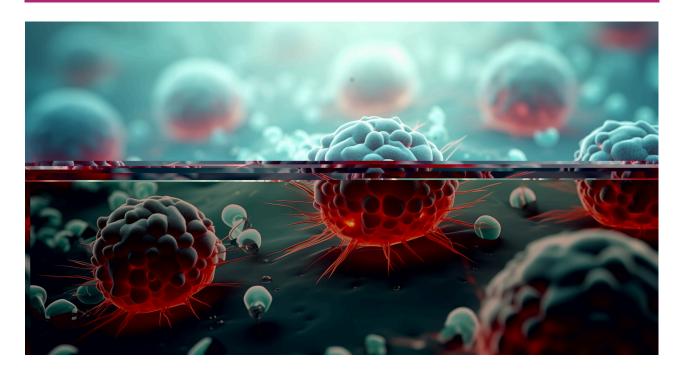
Led by Professor Kypros Nicolaides, alongside Consultant Research Midwife Argyro Syngelaki, the Institute has one of the highest recruitment rates by King's College Hospital for Clinical Research Network (CRN) portfolio studies, ensuring cutting-edge research is continually delivered.

We are conducting a trial to determine if delivering at term based on the risk of developing pre-eclampsia can reduce the condition's incidence and prevent associated complications. Pre-eclampsia affects about 3% of pregnancies and is characterised by high blood pressure, protein in the urine or abnormal blood tests. It can lead to serious complications for both the mother and the baby.

At 35-36 weeks of pregnancy, all women at the Institute are offered an ultrasound scan to determine their risk of developing pre-eclampsia using the FMF competing-risks model, which combines their medical history, blood pressure and blood test results. It is not yet clear if having this information improves pregnancy outcomes.

In this proposed trial, pregnant women who are 35-36 weeks gestation and having a routine fetal ultrasound will be randomly assigned to one of two groups: pre-eclampsia screening by the FMF competing-risks model and planned risk-informed early-term birth, or usual care (waiting for spontaneous labour onset unless birth is medically necessary). The primary outcome will be to compare pre-eclampsia between the two groups.

Haematology



Using patients' own immune cells to treat their cancers

Our haematology research focuses on cutting-edge areas such as bispecific antibody therapies which target various blood cancers such as lymphomas, myeloma (a type of bone marrow cancer) and lymphoid and myeloid leukaemia.

We also focus on the innovative treatment, Chimeric Antigen Receptor T (CAR-T) cell therapy. This is a type of immunotherapy which involves collecting and using the patients' own immune cells to treat their condition.

Recently, we participated in CARTITUDE-5, a phase III trial led by Dr Reuben Benjamin, Consultant Haematologist at King's College Hospital. CARTITUDE-5 aims to determine whether myeloma cell-specific CAR-T cell therapy improves outcomes for patients with multiple myeloma compared with those who receive standard, non-myeloma cell-specific therapy.

We are also involved in global trial, VOYAGE, which is a first-in-human study that aims to test the safety and pharmacokinetics of the bispecific antibody MGD006 in patients with acute myeloid leukaemia or myelodysplastic syndromes. MGD006 is designed to target and attach to both tumour cell-killing T cells and cancerous B cells, facilitating T cell-mediated elimination of cancer cells. Led by Dr Victoria Potter, Consultant Haematologist at King's, we are currently the highest recruiter in the UK for this trial.

HIV and Sexual Health

Study finds kidney failure among black people with HIV can be attributed to sickle cell gene

Black ethnicity is a major risk factor for chronic kidney disease, suggesting that genetic factors are an important determinant of kidney disease progression in this population.

The GEN-AFRICA study (led by Dr Frank Post, Consultant Physician in HIV Medicine and Infectious Diseases at King's College Hospital) aimed to explore the genetic risk factors for kidney disease in black people with HIV infection.

Supported by 15 sites across the UK, it enrolled more than 3,000 participants from 2018 until 2020 and has since reported that about 60% of kidney failure in black people with HIV is attributable to variants of the apolipoprotein L1 gene or sickle cell trait. This genetic susceptibility is particularly common among people of West African and Caribbean descent.

We have since initiated several GEN-AFRICA sub-studies to explore the role of social determinants of health in the development of multiple long-term conditions such as cardiovascular disease, diabetes, and chronic kidney disease, and to describe the clinical epidemiology of COVID-19 – including beliefs about vaccination in this population.



Children

Use of additional treatment results in children free from hepatitis

Hepatitis C is a virus that can infect the liver and if left untreated, could potentially cause serious damage over many years.

The virus can be spread by people coming into contact with the blood of an infected person. This can also be spread during pregnancy to an unborn child with symptoms not presenting until much later.

Hepatitis C can be treated with medication, however this isn't always effective due to drug resistance. Throughout 2018 and 2019, the King's paediatric research team worked with biopharmaceutical companies Gilead and Abbvie to explore whether combination viral therapy (two or more medications which help the body fight infections) would be a more effective treatment for children.

As part of the group of Gilead and Abbvie sponsored trials, patients initially received combination viral therapy for 12 weeks and in one of the Abbvie sponsored trials, if the patient showed a good response with zero traces of the virus in their blood after eight weeks, then treatment did not need to continue.

30 children ranging from the age of three to 17 were successfully treated and have had long-term follow up to ensure they have remained hepatitis free.



Ophthalmology



Exploring treatment options to improve long-term vision following eye cell damage

The centre of the retina (macula) at the back of the eye contains cells that give us our central vision that we use for reading and recognising faces.

These cells can be damaged by a disease called wet age-related macular degeneration (AMD), where new abnormal blood vessels grow through the macula and leak fluid affecting vision.

Eye injections of medications called anti-vascular endothelial growth factor (anti-VEGF) can slow down the progression of wet AMD. There are also other treatment options such as injecting the anti-VEGF medication and a drug called tissue plasminogen activator (TPA) with gas into the eye, and performing an operation called a vitrectomy however it is not clear which treatment is the most effective in improving vision long-term.

The TIGER study, led by Professor Timothy Jackson, Consultant Ophthalmic Surgeon at King's College Hospital, is investigating whether performing Vitrectomy, injecting TPA and gas in addition to regular injections of anti-VEGF will help with this.

This multicentre, pan-European study is still actively recruiting with a focus on establishing additional European sites.

Anaesthetic, Critical Care, Emergency Department, Respiratory and Trauma

Academic achievements and professional development

Giving staff the opportunity to learn new skills and gain additional experience not only helps their confidence and career advancement, but also means that we ensure that we stay up-to-date with the latest developments, providing better care for our patients.

Our Anaesthetic, Critical Care, Emergency Department, Respiratory and Trauma (ACERT) team (formerly two separate teams known as ACET and Respiratory) actively encourages professional development with many of their staff achieving academically, alongside their day-to-day roles.

To date, two ACERT team members have completed their PhDs with a further four members at various stages of their PhD studies. One of ACERT's Clinical Research Practitioners has also embarked upon a PhD which is a first for their team. Funded externally, these PhDs focus on areas such as the development of nurse-led and allied health professional-led ultrasound within Critical Care, a peer support programme to support the families of ICU survivors and a tool to evaluate the impact of prognosis for people living with advanced cancer. In the last five years, these PhDs have generated approx. £4m in terms of salaries, equipment and industry support.

Additionally, four nurses have completed the NIHR Pre-doctoral Clinical and Practitioner Academic Fellowship (PCAF). This programme supports people who are looking to start or advance their career in health and social care research methodology.

Separately, an ACERT nurse is currently undertaking the NIHR Senior Research Leader programme and as part of this will explore using informatics to improve research delivery, efficiency and quality of data. Through harnessing the potential of Epic, the Trust's new electronic patient record, we can identify more patients and offer them the opportunity to take part in clinical research.

Members of our ACERT team have also been recognised at a national level, with a nurse recently awarded a TOPOL Fellowship. This Health Education England fellowship supports NHS leaders to drive digital transformation in healthcare.

We also have one of our ACERT nurses as an alumnus of the NIHR 70@70 Research Leadership Group. This group champions senior nurses and midwives who have shown significant contributions to research therefore building research-led patient care.

Congratulations

Roseline Agyekum, Community Kidney Nurse Researcher, won the bronze award in the Renal Nurse of the Year category at 2024's British Journal of Nursing (BJN) awards.



Roseline was recognised for her work on the HIDDEN-CKD project. Funded by the charity, Kidney Research UK, HIDDEN-CKD provides community kidney screening to people from African and Afro Caribbean backgrounds to reduce kidney health inequalities within the ethnic community in South East London.

Roseline visits community centres, churches and mosques to provide basic health checks such as weight, height and blood pressure and then checks participants' kidney health via a urine sample. Roseline will follows up with patients she has screened to try and help them best manage their condition, looking at medication, exercise and changes to their diet, empowering individuals to self-manage and thereby reduce their risk of kidney disease.

Since the project started in October 2022, over 1,500 people have taken part and Roseline has referred over 100 people for follow-up investigations with their GP. Eight people with early-stage and three with late-stage chronic kidney disease (CKD) have been identified so far.

Supporting services

Radiology

We are the first centre in the UK to begin a phase IV clinical trial to further evaluate the efficacy of a new radiotherapy treatment on patients with skin cancer.

The EPIC-Skin study is looking at the use of rhenium radionuclide therapy when applied to non-melanoma skin cancer, of which there are 147,000 new cases recorded in the UK each year, and more than 7.7 million globally.

During the single-session treatment, a barrier material - similar to cling film - is placed on the cancerous lesion. Liquid radiotherapy is then applied, penetrating both the material and the cancerous skin beneath.

The standard treatment for non-melanoma skin cancer is surgical removal, which can risk scarring or loss of function, Rhenium treatment uses a non-invasive paste containing β-emitting particles directly to the lesion, which target cancer cells without the need for surgery and without damaging adjacent healthy tissue.

The targeted treatment is used on patients with a recurrence of non-melanoma skin cancer or where conventional treatment is not suitable.

Research and Development team

The Research and Development (R&D) team supports staff on the planning, funding and delivery of their non-commercial research projects.

Recently, the R&D team introduced a new internal system to improve efficiency in their governance process. This system tracks team workload and capacity in real time, the progress of studies and their performance against regulatory key performance indicators and offers multi-user collaboration.

This system worked well and has been replicated across other areas including contracts and costings. This means that we have a detailed overview of spending and income, we can identify areas that may need additional support and plan resources more accurately.

Supporting services

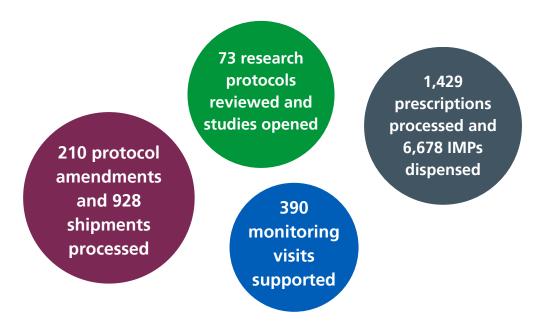
King's Liver Biobanks - 2023/2024 activity

The King's Adult Liver and Paediatric Liver Research Biobanks collect, store and distribute samples to support research studies.

For the first time in the Biobank's history, in 2023/2024 we took the first step towards sustainability, successfully initiating a cost recovery tariff for the use of samples. This will likely increase as we increase our visibility to external collaborators.



Pharmacy Clinical Trials - 2023/2024 activity



Action Plan - How we will get there

Brilliant People

Research project

How we will do it

Measure of success

Supporting the training and development of research staff

Collaborate with King's Health Partners, NIHR, Research Delivery Network (RDN) and the Trust apprenticeship team to identify learning opportunities

The number of Trust research staff completing research training courses

To provide support for new Principal Investigators (PI) in order to grow the portfolio and the next generation of research leaders Dedicate proportion of R&D funding towards greenshoots initiatives for new PIs

Supporting and mentoring nurses, midwives and AHPs to take on first time PI roles Greenshoots funding competition each year

At least 5 new PIs per annum

Increase the number of studies with Associate PI (API) involvement from current baseline of four

Outstanding Care

Research project	How we will do it	Measure of success
Increasing awareness around the value and importance of PPI input in research in order to drive future-focused growth and innovation	To identify and connect all the existing PPI groups at the Trust to subsequently form a centralised PPI initiative	Active PPI network at the Trust and awareness among research staff
To ensure research represents the diverse local population by improving representation on our public and patient involvement groups	Pilot with frailty to look into setting up 'ad hoc' drop-in sessions where older people and patients can attend and be consulted on research ideas	Drop-in sessions in place Recruitment to frailty studies increased
Increased research imaging capacity	Create an out-of-hours research service in the Radiology Care Group	Number of out-of-hours research slots created during the week, in the MRI and CT departments
Embed research as core Trust business	Regular meetings with key clinical leads to promote research and encourage clinical staff to be involved in research	One new clinical area actively in research per annum
Bridge dialogue between a range of specialties working on projects requiring interdisciplinary collaboration	Build on existing collaboration (e.g. CHIP study with Haematology, REBUILD with Psychiatry)	Delivery of cross- disciplinary research - four collaborative projects per annum

Research project

How we will do it

Measure of success

To remain in the top 10 **NHS Trusts for** recruitment into NIHR portfolio trials

Fair and transparent funding model for distribution of Research Network funding within the Trust

Quarterly Research Delivery Unit (RDU) portfolio reviews and active management of all studies

We are benchmarked as one of the top 10 recruiting Trusts (as per NIHR Open Data Platform) in the UK each year

To work with colleagues in the national steering groups to develop new opportunities for commercial research in line with the government's published O'Shaughnessy report

Explore ways to develop commercial research across all RDUs, harnessing the regional and national clinically specific networks

Ensure swift set up and recruitment to time and target to further develop our reputation as an efficient and responsive Trust able to deliver commercial research at scale

Build further strong relationships with pharma and the Clinical Trials Office (CTO) to ensure robust financial management of commercial funding - as this is essential for the ongoing employment of research delivery staff

Meet the NIHR annual target of 80% of all commercial studies recruiting to time and target

Partner with a commercial company towards an innovation that can be tested in commercial research

Commercial research income to be mininum of £6.5m annually

Research project	How we will do it	Measure of success
To ensure we are able to meet the national KPI of 80% of all open studies recruiting to time and target	Individual RDU portfolio reviews to identify studies not recruiting to time and target. Sponsored studies that are consistently underperforming to be closed as per the NIHR national guidelines Increased scrutiny on the deliverability of studies in set up phase Review of Trust/KCL cosponsor arrangement	Consistently achieving the 80% national target for recruiting to time and target as per the Open Data Platform benchmarking site for non-commercial studies sponsored or cosponsored by the Trust
Harnessing new technology	Increased artificial intelligence (AI) projects within the Radiology Care Group	Delivery of an Al research project using Al for reporting of DATSCAN images Delivery of an Al research project to optimise post-therapy 177Lu-DOTATATE single-time point imaging, to derive tumour and normal organ dosimetry. Delivery of an Al project aimed at using Al for fracture detection

Research project	How we will do it	Measure of success
Harnessing new technology	Leverage in-house data analytic expertise, and new Apollo system to increase research participation and facilitate research in Al/big data projects	Harness MyChart for consent to contact Communications plan aimed at encouraging patients to 'give consent to be contacted' actioned Apollo analyst support for research data initiatives
Reducing the time from submitting expression of interest form (EOI) to first patient recruited	Close collaboration of PIs and study teams with R&D/CTO Engage supporting departments - pharmacy and radiology Implement formal 'decline of set up' for non-responding research teams (three requests over a month)	Increase the number of studies that take less than 90 days to set up by 10% from 2023/2024 baseline
Increase the proportion of experimental medicine and early phase studies carried out at the King's Clinical Research Facility (CRF)	Encourage clinical investigators to undertake early phase research with the support of the CRF Prepare and submit a bid for the NIHR commercial research delivery centre funding call	Increase the proportion of experimental medicine and early phase studies by 10% from its 2019/2020 base Bid for NIHR commercial research delivery centre submitted by deadline

Research project	How we will do it	Measure of success
Continue to develop Advanced Therapies that are based on cells, genes and small molecules	Commence first in human liver cell therapy for acute liver failure in children Collaborate with KCL's diabetes group to develop cell transplantation Develop in-house CAR-T therapies led by Dr Reuben Benjamin (UK cancer research and Pharma) Continue to develop the Advanced Therapies Academy	Recruit first patient to children's liver cell therapy trial by end of 2024 Establish a collaborative project with KCL diabetes team by April 2025 Set up CAR-T study by December 2024 and recruit first patient by April 2025 To hold one workshop and one annual meeting to showcase our Advanced Therapy investigational Medicinal Products (ATiMP)

Diversity, Equality and Inclusion at the heart of everything we do

Research project

How we will do it

Measure of success

A key priority for research at the Trust is ensuring our research is inclusive and includes under-served communities

Diversity and Protected Characteristics Audit: A Trust-wide audit of research studies recruits statistics based on gender, ethnicity, sexual orientation, and disability status

Information will be collected as to how each Research Delivery Unit (RDU) monitors and evaluates this information, and acts on any evidence that recruitment is not inclusive

Completed audit questionnaire to act as baseline further improvements in inclusivity within research

Increasing collaborations with primary care and community to deliver a truly representative research reflecting the needs of the community we serve

Creating relationships with primary care providers and local community groups to increase awareness and accessibility

Obtain community input in the design of patientfacing materials, efforts to reaching out and engage these populations in research, and address logistic barriers including financial constraints

Two new collaborations with primary care or the community established each year

Increase participation of marginalised/underrepresented populations in research - 5 studies per annum

Diversity, Equality and Inclusion at the heart of everything we do

Research project

How we will do it

Measure of success

To pilot strategies for reporting on diversity and under-served population enrolment in **Clinical Research Facility** (CRF) Studies

Engage with the CRF PPI and EDI groups

Increase understanding of how we can better engage with underserved groups

Support teaching sessions on diversity and cultural intelligence

Measure the increases in recruitment numbers of ethnic/diverse participants taking part in CRF studies and trials on an annual basis

Regular feedback sessions from PPI and EDI groups to inform the work of the CRF

Enabling staff to attend training around diversity and cultural intelligence

Putting 'the King's Model' for diversity in research and recruitment on the map

A systematic review of the breakdown of gender and ethnicity among clinical trial recruits from 2017-2023 is ongoing

Peer reviewed publication in high impact journal

Review the set up process for commercial and non commercial studies to include discussion around health inequalities

Change feasibility and costing processes to ensure there is a conversation regarding reimbursement of time and this is included in the relevant study contracts.

10 non-commercial contracts to have participants costs included in the contracts thus removing a barrier to taking part in research

All commercial studies to fully reimburse patients travel and time costs

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