Yorkshire Cancer Research

Delivering more clinical research in Yorkshire: *Unlocking regional potential*

REGISTERED CHARITY NUMBER: 516898 (England and Wales)
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Yorkshire Cancer Research

Every *15 minutes*, someone in Yorkshire is told they have cancer

Yorkshire Cancer Research exists so that more people can live longer healthier lives, free of cancer. Thanks to supporters, the charity has been funding research and saving lives since 1925 – in Yorkshire, and beyond.

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Foreword

Yorkshire is one of the regions hardest hit by cancer. Together, we can change this. Yorkshire Cancer Research is dedicated to funding research so you and those you love live longer, healthier lives, free from cancer.

The charity is currently funding 59 research programmes at 11 host organisations, including 26 clinical trials.[i] Thanks to supporters, 182,000 people can take part in cancer research and services funded by the charity. From providing evidence for the national lung screening programme to advancing the treatment of bowel cancer, the research we fund has made a lasting impact both regionally and nationally.

Yorkshire Cancer Research knows how much research matters, how it gives hope for a better future, for living longer and for increased survival. Where research happens also matters. Studies show a link between people receiving treatment in a research active hospital and improved health outcomes. The benefits of clinical research also extend beyond health. Improvements in health outcomes could bring significant economic benefits to Yorkshire, by attracting investment, improving economic productivity and reducing the cost of healthcare.

That is why Yorkshire Cancer Research is calling for change in how and where clinical research is funded and delivered across the UK. Despite the established benefits of clinical research, significant regional inequalities exist. For at least two decades, Yorkshire has received inequitable levels of research funding.

Regions that have received sustained investment are better placed to attract future funding and often have better outcomes for people with cancer. This reinforces a cycle where historically under-invested regions continue to receive lower levels of funding.

The impact of an inequitable funding system may also be contributing to the decline of clinical academics in our region. Clinical academics conduct medical research alongside their clinical role and are critical to research delivery. Evidence shows between 2012 and 2022, the decline in clinical academics was four times greater in Yorkshire than it was nationally. Whilst more recent data shows signs of recovery, much more needs to be done to ensure the long-term sustainability of the workforce.

This report sets out key recommendations that aim to create an environment where the benefits of clinical research are felt by all, in Yorkshire and beyond.

Dr Kathryn Scott
Chief Executive
Yorkshire Cancer Research

Taking part in research is one of the most rewarding and beneficial acts that an individual patient can do during their healthcare journey. As an individual, one benefits from improved outcomes, more time with staff, better resources and access to otherwise inaccessible treatments. As a healthcare provider, enrolling participants in research is also one of the most rewarding things we can do. We keep up to date with rapidly advancing healthcare. We see their impact on our patients, taking time that the NHS rarely has. And most importantly, we help improve patient care, which is the goal we all strive for. So, why do so few patients and staff take part in clinical research?

This timely report highlights the discrepancies in research opportunities that people in Yorkshire and the North face, when compared to elsewhere in England, and paints a worsening picture for the future. To address national inequities, Yorkshire Cancer Research propose a plan to build back a diverse academic community, use clinical research to improve outcomes for our patients and to grow Yorkshire's economy. They call for a fairer allocation of national research resources. This is well received and overdue.

Professor Jim Catto
Professor of Urology
University of Sheffield

[i] As of 31 March 2025.

Introduction

The benefits of increased clinical research activity are wide ranging, for research participants, for addressing health inequalities, and even for the economy. The evidence for this is clear.

However, the distribution of health research funding is regionally inequitable, meaning the benefits it brings are not spread proportionately. This becomes particularly challenging when this pattern of inequitable funding persists over long periods of time.

Yorkshire is one of the regions hardest hit by cancer. In 2022, 35,062 people in Yorkshire were told they have cancer.[1] Yorkshire[ii] has consistently received disproportionately low levels of health research funding relative to the size of its population. The most recent data shows that the region receives 5% of public and charity sector funding[iii] yet represents 8% of the UK population.[2] Regional inequalities in health research funding have had a wide-ranging impact on Yorkshire. For example, between 2012 and 2022, the decline in the number of clinical academics was four times greater in Yorkshire than it was in England.[3] Inequalities in funding may have contributed to this steep decline. While recent data shows there has been a small recovery in the number of clinical academics in Yorkshire, further progress is important to secure the future of the workforce in our region.

It is time for a more regionally equitable clinical research environment, which is not only sustainable but leads to real improvements in the health and economic outcomes in Yorkshire and across the country. To deliver this, Yorkshire Cancer Research is calling for:

- A regional clinical cancer research fellowship scheme
- Protected research time for new clinical oncology training places
- The promotion of decision making based on regional equity
- The next National Centre for Cancer Research to be in Yorkshire
- The impact of charity research funding into universities to be maximised
- An increase in the proportion of health research and development spending
- The adoption of the ROSE model, supported by improved demographic data collection by research funders

These policy recommendations support the creation of a more equitable research system, which would increase capacity for more world-leading research to take place in Yorkshire and beyond.

What is clinical research?

Clinical research is defined by the NHS as research projects which "aim to find out more about an illness, condition, treatment, therapy or care by directly involving people".[4] Clinical research can happen in hospitals and GP settings but can also be in community settings, such as healthcare centres and people's homes.

Clinical research includes clinical trials, which are a type of research project which evaluate the impact of new treatments, and other interventions such as diagnostic or screening approaches on people's health outcomes.

[ii]The term 'Yorkshire' is used to refer to the 'Yorkshire and the Humber' region throughout this report.

[iii]The UK Health Research Analysis 2022 report includes public and charity sector funding only. Due to the lack of publicly available data, private sector funding is not included in this analysis.

Executive summary

The benefits of increased clinical research activity are wide ranging, for research participants, for addressing health inequalities and even for the economy.

Evidence shows that hospitals with higher levels of clinical research activity are linked with improved health outcomes, including for some types of cancer. Hospitals with greater research activity are often faster to adopt innovative treatments, which can provide benefits to a wider group of patients, and conducting clinical research can improve clinicians' job satisfaction, which in turn can increase patient's satisfaction with their treatment.

Clinical research can drive economic growth, improve the productivity of the workforce and attracts public and private investment. Clinical research can also help to address economic inequalities between regions of the UK. Improving health outcomes could help to address the gap in productivity between North and South and generate up to £13.2 billion in gross value added to the UK economy.

Therefore, where research happens matters. Despite the established benefits of clinical research, investment in the UK remains heavily concentrated in a small number of regions. Yorkshire has consistently received disproportionately low levels of health research funding relative to the size of its population, receiving 5% of UK health research funding whilst representing 8% of the population. By comparison, London received 32% of health research funding yet represents 13% of the UK population.[2]

Despite these challenges, Yorkshire's clinical academics continue to deliver high quality, internationally recognised research alongside patient care. Clinical academics are critical to turning scientific discovery into real world improvements in cancer outcomes. However, the inequitable funding system may be contributing to the decline in the number of clinical academics in Yorkshire, with 20.9% fewer clinical academic posts in 2024 compared to 2012. This is far greater than the national decline during the same period.

Without action, these historic funding inequalities will continue to weaken regional research capacity and limit improvements in health outcomes and economic growth.

This report sets out the case for creating a more equitable research system, in which investment enables all regions to fully benefit from clinical research. To achieve this, Yorkshire Cancer Research calls for:

- A new regional clinical cancer research fellowship scheme, established by the NIHR and targeted at Yorkshire and other regions which have experienced historic under-investment. This should aim to increase research workforce capacity across medical, nursing and allied health professions, whilst also providing more opportunities for people from backgrounds which are under-represented in clinical research.
- Protected research time for new clinical oncology training places, ensured by the Department of Health and Social Care and NHS England. This will help deliver a stronger and more sustainable research culture within the NHS.
- The promotion of decision making based on regional equity, through the NIHR making the regional location of the host organisation of research a formal tie breaker where clinical trial funding proposals are of equal quality. The NIHR should also strengthen guidance on the geographical distribution of clinical trial sites in the next Research Inclusion Strategy to support more equitable distribution across regions.
- The next National Centre for Cancer Research in Yorkshire, with the NIHR, MRC, charity sector and Yorkshire's universities establishing a nationally significant cancer research institute in the region. This would deliver a range of benefits for the region and beyond, attracting additional investment, global academic talent and strengthening capacity for world-leading health research.
- The impact of charity research funding into universities to be maximised, by increasing the Charity Research Support Fund to meet 80% of the full economic cost of charity funded research. This would strengthen universities' capacity to deliver charity funded research, support community focussed studies in underserved areas and strengthen regional research capacity.

- An increase in the proportion of health research and development spending, to ensure that investment grows in line with overall public Research and Development (R&D) spending over the remainder of the Parliament.
- The adoption of the ROSE model, which includes the four key principles of Rapid implementation of research in the NHS, Optimise research implementation to address health inequalities, Systematic evaluation of research findings in real-life settings and Equitable funding within the clinical research environment. This model should be recognised and adopted by national health research funders. To help realise a more equitable funding system, NIHR and other research funders should systematically collect research data across a wider range of factors, including ethnicity, sex and socioeconomic status.

Taken together, these measures would help create a more equitable and sustainable clinical research system, improving health outcomes for patients, strengthening the NHS and supporting economic growth across all regions of the UK.

Chapter 1: The *impact* of clinical research

Clinical research aims to improve the prevention, diagnosis and treatment of illness, as well as improving the cost effectiveness of current health interventions. Clinical research can also drive economic growth, helping to reduce regional disparities in productivity and investment.

How can clinical research improve health outcomes?

Prevention

Research identifies the preventable causes of health conditions and evaluates interventions to reduce the prevalence of these factors.

Around 1 in 3 of all cancers are due to preventable risk factors, including tobacco smoking, excess body weight[iv] and alcohol consumption.[5] Advances in our understanding of hereditary cancers and identification of high-risk cancer genes in individuals mean we are entering an era where cancer risk can be significantly reduced through targeted interventions, including risk-reducing surgery and chemopreventative treatments. With cancer incidence increasing both regionally in Yorkshire and nationally, clinical research that enables the evaluation of innovative methods of cancer prevention is vital in reducing the numbers of people who are diagnosed with cancer.

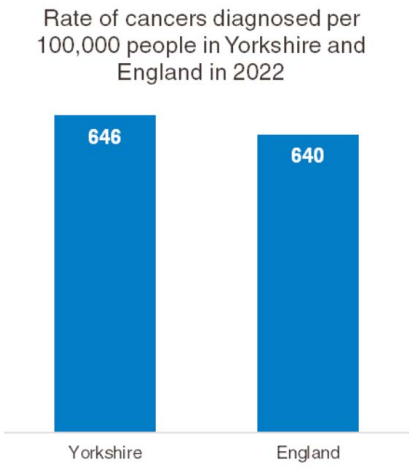


Figure 1: Cancer diagnoses per 100,000 people in Yorkshire and England.

Yorkshire Cancer Research is committed to funding research into cancer prevention and is currently funding clinical trials which aim to reduce the prevalence of smoking, such as the Yorkshire Enhanced Stop Smoking Study, as well as a clinical trial researching whether population-based genetic screening is a feasible way to identify people at high-risk of cancer.

Pioneering new approaches for cancer prevention: PROTECT-C

Yorkshire Cancer Research funds PROTECT-C, which will evaluate the acceptability of population based genetic testing in up to 5,000 women. The study will test for a range of genetic variations in genes including BRCA1 and BRCA2, to determine participants' risk of breast, ovarian, endometrial and bowel cancer.

Participants will be sent a saliva testing kit to their home. They will receive their test results via the PROTECT-C app, email or post. Throughout the study, participants will be offered genetic counselling. Counsellors can answer questions about the risks and benefits of genetic testing, and discuss results following a test.[6]

The study will assess the uptake and acceptability of genetic testing among women. It will also assess the impact upon the quality of life and psychological wellbeing of participants. Health economic analysis will be conducted to evaluate if this approach is cost-effective for the NHS.

In November 2024, PROTECT-C was selected as one of three clinical trials to be supported by NHS DigiTrials, an innovative service which will support the recruitment of thousands of participants to the trial by helping to identify eligible participants.[7]

[iv]Excess body weight is defined as when a person's Body Mass Index is overweight and above. When excess body weight is used in this policy report, it refers to both overweight and obesity.

Diagnosis

Clinical research drives the development of innovative diagnostic methods that enable the earlier detection of illnesses, including cancer. Screening programmes help diagnose cancer earlier or identify people's risk of cancer.[8]

An early cancer diagnosis can mean less invasive treatment is required, reducing the likelihood of the most serious illness. By contrast, a late cancer diagnosis can narrow the available treatment options, resulting in poorer survival outcomes. In Yorkshire and England, approximately half of all staged cancers are diagnosed at a late stage.

Clinical research can demonstrate if new diagnostic approaches are reliable, accurate and cost effective.[9]

Shaping national cancer screening policy: The Yorkshire Lung Screening Trial

Yorkshire Cancer Research funded the Yorkshire Lung Screening Trial, a randomised controlled trial of mobile lung screening at 11 community locations across Leeds. The study was run by the University of Leeds and Leeds Teaching Hospitals NHS Trust.

When the trial began recruiting in 2018, the UK National Screening Committee had yet to approve a national screening programme for lung cancer. Further evidence was needed on the benefits of inviting people who currently or formerly smoked and the risk of overdiagnosis as a result of screening.[10]

The Yorkshire Lung Screening Trial aimed to demonstrate that lung screening reduces the number of cancers diagnosed at a late stage. The study involved people in Leeds aged between 55 and 80 who currently or formerly smoked.

Since the trial began, at least 409 people have been diagnosed with cancer at Stage 1 or 2.

Evidence from the Yorkshire Lung Screening Trial contributed to the UK National Screening Committee's recommendation for a lung screening programme in June 2022.[11] The following year, the Government announced the establishment of a national lung screening programme, now known as the NHS Lung Cancer Screening Programme. As of the end of January 2025, more than 1 million people across England had taken up their invitation to a lung health check and screening had diagnosed more than 5,500 people with lung cancer.[12]

Treatment

Increased clinical research activity is consistently linked with an improved quality of treatment in primary and secondary healthcare settings.[13, 14]

Studies show that increased clinical research activity is associated with higher performance in NHS Trusts. A 2017 study evaluated the relationship between 129 English NHS Trusts' clinical research activity (as measured by number of studies and participants recruited) and their Care Quality Commission (CQC) ratings.[14] The study found that NHS Trusts with greater numbers of participants relative to their size were significantly associated with better CQC ratings.

There are a number of potential explanations as to why clinical research is associated with an improved quality of treatment.[14, 15] Firstly, participants of clinical research may directly access improved treatments or receive treatment which is aligned with the most recent clinical guidelines. This is demonstrated in practice by the Yorkshire Cancer Research funded FOxTROT 2 and 3 trials.

Increasing access to innovative treatments: FOxTROT 2 and 3

Yorkshire Cancer Research funds FOxTROT 2 and FOxTROT 3, world-leading clinical trials which test the effectiveness of chemotherapy before surgery for bowel cancer.

The previous FOxTROT 1 trial successfully demonstrated that neoadjuvant chemotherapy (chemotherapy before cancer surgery) was associated with a 28% reduction in bowel cancer recurrence, compared to chemotherapy after cancer surgery. The study had a global impact, with neoadjuvant chemotherapy now a standard treatment approach for some people with bowel cancer.

FOxTROT 2 and 3 build upon this successful, evidence-based approach to bowel cancer treatment. The trials refine this treatment approach for specific populations. FOxTROT 2 tests if gentler neoadjuvant chemotherapy is more effective in frailer adults. FOxTROT 3 evaluates if more intensive treatment is more effective in fitter adults.

By taking part in research, FOxTROT 2 and 3 participants are able to access this potentially innovative approach to treatment before it is made available more widely on the NHS should the trial prove successful.

Furthermore, people treated in research active hospitals may have greater access to more effective treatments, regardless of whether they are trial participants. Studies show that hospitals with greater research activity are often faster to adopt innovative treatments.[16, 17]

Conducting clinical research has also been shown to improve clinicians' job satisfaction, which in turn can increase patients' satisfaction with their treatment. The impact of job satisfaction on patients' experience of treatment reflects the importance of providing more opportunities to conduct research to clinicians.[18, 19]

"Being a participant in a clinical trial benefits patients in several ways. Patients benefit from close follow-up and surveillance but if the trial is correctly set-up and closely monitored the outcome, positive or negative, will benefit not just trial participants but those who come afterwards."

Janet Hale

Patient and Public Involvement and Engagament Community

Cancer outcomes

Healthcare settings with higher levels of clinical research activity are associated with improved health outcomes, including for some types of cancer. Research has evaluated the relationship between levels of research activity and survival outcomes for acute admissions to NHS Trusts.[20] NHS Trusts with greater clinical research activity had a small but statistically significant improvement in survival outcomes compared to less research active Trusts.

Studies have also examined the impact of clinical research activity on cancer outcomes. For example, a study tested if high levels of participation in interventional clinical trials in an NHS Trust improved outcomes for all patients with colorectal cancer treated at the Trust.[21] The study found that patients treated in an NHS Trust with high clinical research participation over a longer period had improved survival outcomes.[21] There was an estimated 3.8% improvement in survival for patients with colorectal cancer treated in an NHS Trust with high clinical research participation that was sustained for four years or more. This finding was applicable to all colorectal cancer patients treated in hospitals with high research participation, not only those on clinical trials.[21]

Bill's perspective on the value of research

In December 2023, Bill Hall was taking a bath when he first noticed "a squelchy sensation" in his abdomen. He knew from his previous medical experience as a GP that the feeling was unusual, so booked an appointment with his GP the following day.

"I started my medical career working for a general surgeon and would often feel people's abdomens to assess whether it was safe for people to undergo surgery. I knew the alarm bells to look out for, and the sensation I felt didn't feel good at all.

Bill Hall had no other symptoms for bowel cancer but insisted he got referred for a scan and blood tests. A CT scan found a tumour in the right side of his colon, and he was diagnosed with stage 3 bowel cancer at the end of January. He said:

"I was given two options – standard or research-based cancer treatment. I was always going to choose the research. By participating in clinical trials, you are helping people with cancer who come after you.

I participated in the FOxTROT 3 trial, funded by Yorkshire Cancer Research. The chemotherapy before my surgery made the tumour much smaller and the surrounding tissue easier to remove. As a result, the procedure was done through keyhole surgery, assisted by a robot, leaving minimal damage and no complications. The developments in surgical technique and chemotherapy since I started my career have been quite extraordinary.

Research can improve outcomes for not only those involved in a clinical trial, but for all of those treated in hospitals where there is greater research activity. The more research happening in the medical community, the better the medical services will be for people with cancer. It's been a real privilege being a GP in Yorkshire. I have seen huge developments in cancer research since I started my career. There is far better integration now between surgeons, oncologists and nurses, meaning better collaboration in clinical trials and hospital care, and therefore, better outcomes for people with cancer. I feel very positive about the future of cancer research."

Bill Hall

FOxTROT 3 participant

How can clinical research drive economic growth?

Clinical research can reduce the impact of long-term sickness on the economy and support sustainable economic development. Crucially, research can help to address regional economic disparities, with small improvements in health outcomes shown to have a significant economic impact for the North of England.

Addressing regional economic inequality

Clinical research can help to address economic inequalities between regions of the UK. The Northern Health Science Alliance's *Health for Wealth* report describes the regional differences in economic productivity and explains how small improvements in health outcomes can bring significant economic benefits to the North (Yorkshire, the North West and the North East).[22]

The report found that people in the North are more likely to leave the labour market when they develop a long-term health condition; having a long-term limiting condition or worse self-reported health reduced the probability of remaining in work by 4.9% in the North, compared to 3.5% in the rest of England.[22]

Improving health outcomes can help to address the productivity gap between the North and the South and generate up to £13.2 billion in gross value added to the UK economy. The Northern Health Science Alliance estimated that decreasing rates of ill health by 0.7% and reducing mortality rates by 1.2% would reduce the gap in productivity between the North and the rest of England by 10%.[22]

Increased investment in clinical research therefore has the potential to unlock significant economic growth across the regions of the UK, including Yorkshire, by driving improvements in productivity. However, despite its potential to drive economic growth in Yorkshire and beyond, research funding remains concentrated in areas with strong existing capacity, such as London and the South East.

The economic cost of cancer

Cancer and its preventable risk factors have a significant impact on the regional and national economy.

The economic cost of cancer in Yorkshire is substantial. Yorkshire Cancer Research estimates[v] that there were more than 31,000 productive life years lost in Yorkshire due to cancer mortality occurring in 2024, leading to an estimated £928 million in lost productivity.[24] This is based on the economic contribution that individuals are expected to have made through work if their lives had not been cut short due to cancer.

The estimated societal costs of preventable risk factors for cancer:

Smoking in England: £43.7 billion per year.[25]

Smoking in Yorkshire: £4.5 billion per year.[25]

Obesity in England: £74.3 billion per year.[26]

Obesity in Yorkshire: £6.3 billion per year.[26]

Alcohol harm in England: £27.4 billion per year.[27]

Alcohol harm in Yorkshire: £2.9 billion per year.[27]

In Yorkshire, it is estimated that smoking costs the region £4.1 billion a year in healthcare, lost productivity and social care.[25] The cost of obesity alone in Yorkshire is estimated at £6.6 billion annually.[26, 28, 29] It is estimated that the cost of alcohol harm in Yorkshire is £2.87 billion annually.

Collectively, these costs demonstrate that cancer and its preventable risk factors significantly impact Yorkshire's potential for economic growth.

Driving economic growth

Increasing the research capacity of Yorkshire can drive economic growth in the region, with research consistently demonstrating its significant benefits to the wider economy. Research has estimated the return from public and charitable sector research is approximately 10%.[30]

Studies also show the positive relationship between public, charity and private sector investment in health research. A 2016 study found that health research spending by the public and charity sectors acted as a catalyst for further private sector investment.[31] The study estimates that the total return on investment of medical research (including cancer research) is 24% to 28%.[31] Therefore, every £1 invested in medical research returns around 25p to the UK economy every year.

A recent report by Frontier Economics for the AMRC and the Wellcome Trust reflects the significant contribution non-commercial clinical research makes to the economy. The report found that between 2014 and 2024, non-commercial clinical research contributed £72.7 billion to the UK economy.[32]

These findings underline how expanding Yorkshire's research capacity presents a significant opportunity to drive regional economic growth, attract new investment and secure a greater share of the national returns generated by research.

[v]Estimate made on the basis of Cancer Research UK's Economic losses due to cancer mortality briefing document.[23]

Improving the productivity of the workforce

Improving workforce productivity represents a significant challenge for Yorkshire. Economic inactivity due to long-term sickness has risen significantly in recent years, particularly following the COVID-19 pandemic. Yorkshire's rates of economic inactivity due to long-term sickness are consistently above the national average.

Figure 2 (see bottom of page) illustrates the overall level of economic inactivity in Yorkshire and England, and the proportion of people aged 16 to 64 who were economically inactive because of long-term sickness. In Yorkshire, 7.0% of the population aged 16 to 64 were economically inactive because of long-term sickness, which is approximately 239,600 people in the region.

Sickness absences also impact the national and regional economy. The sickness absence rate of Yorkshire was above the national average. In Yorkshire, the percentage of working hours lost because of sickness or injury was 2.2% in 2024, compared to 2.0% in England.[34]

Clinical research has an important role in improving the prevention of illness, by identifying the preventable causes of health conditions and evaluating interventions to address these causes. Yorkshire Cancer Research estimates[vi] that 3.3 million sick days were prevented in 2024/25 in the UK because of non-industry clinical trials, equivalent to 2% of the total number of sick days taken in the UK.[35]

In the long term, increased investment in clinical research could further improve the prevention of illness and reduce absences, helping the region to address the health and economic inequalities that impact on workforce productivity.

Reducing the cost of delivering healthcare

Although conducting research and introducing new treatments into standard care can be costly, clinical research can also contribute to reducing the cost of delivering healthcare by identifying new, cost-effective interventions for the prevention, diagnosis and treatment of illness. Cost effectiveness analysis compares the relative economic value of interventions, often using the quality adjusted life year (QALY) as a measure. This accounts for how a treatment affects the recipient's quantity and quality of life. One QALY is the equivalent of 1 year of life in perfect health. To calculate the cost per QALY, the difference in cost between the new and existing treatment is divided by the number of QALYs gained from the new treatment. While not every innovation will directly reduce overall healthcare spending, cost-effective interventions can help to ensure that additional investment delivers comparable health benefits.

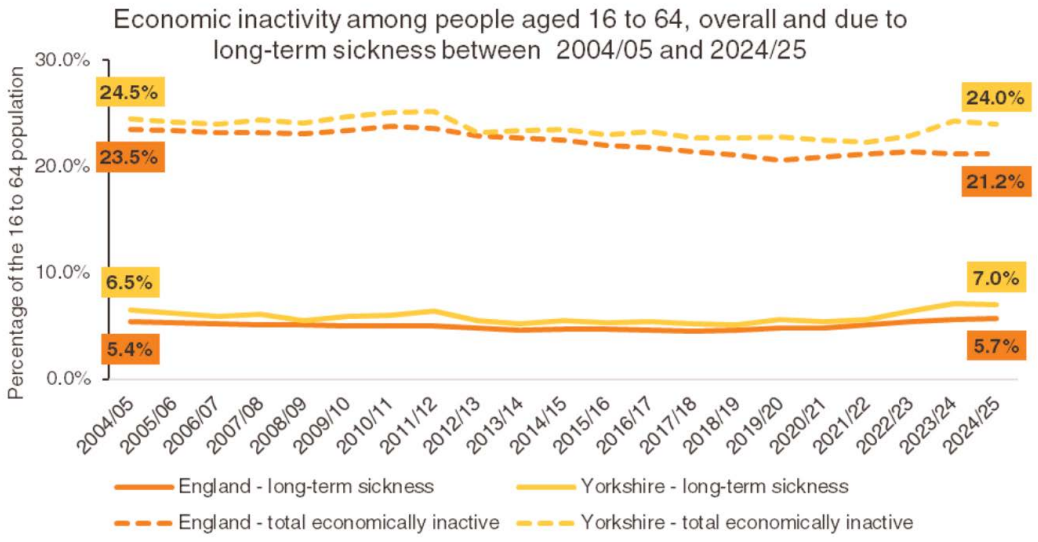


Figure 2: Percentage of the population aged 16 to 64 that were economically inactive and the percentage of the population that were economically inactive due to long-term sickness between 2004/05 and 2024/25.[33]

[vi]This estimate applies Frontier Economics' methodology to non-industry clinical trial activity in 2024-25.

Chapter 2: How is clinical research *funded and delivered?*

Clinical research is funded through a range of sources across the public, private and charity sectors. Research funders also invest in clinical research infrastructure, which consists of the equipment, facilities and services required to successfully deliver research.[36]

Public sector

The key sources of public funding for clinical research in England are the National Institute for Health and Care Research (NIHR) and UK Research and Innovation (UKRI).

- The NIHR funds and delivers clinical and applied research in health and care systems and community settings. The NIHR's purpose is to improve the nation's health and deliver economic growth. The organisation supports a wide range of funding schemes, including grants for clinical trials, applied research projects and evaluative research programmes to improve the delivery of health and care services. The majority of public sector funding for clinical research is allocated to, and spent by, the NIHR. The NIHR also manages clinical research infrastructure. This includes the NIHR Research Delivery Network (RDN), which supports clinical research delivery and aims to increase research capacity.[vii]
- UKRI also funds clinical research. UKRI is a national public funding agency for scientific research in the UK. It was established to provide research grants and invest in the wider infrastructure needed to deliver high-quality research.
    - The Medical Research Council (MRC) is one of the seven research councils[viii] within UKRI. The MRC has a different scope to the NIHR, primarily funding discovery, translation and early stage clinical research.
    - The MRC also funds research infrastructure, including Research Institutes, Units and Centres. Each of these programmes support innovative research and the development of research capacity. For example, the MRC is one of the funders of the Francis Crick Institute. This Institute conducts world-leading discovery research and now hosts over 100 research groups across a range of scientific disciplines.

Spending for NIHR, UKRI and MRC in the 2024/2025 financial year:

- NIHR: £1.8 billion.[37]
- UKRI: £9.9 billion.[38]
- MRC (of UKRI total spending): £1.0 billion.[38]

Charity sector

The charity sector plays a pivotal role in the funding of clinical research, funding a wide range of research projects, programmes and career development schemes.

The Association of Medical Research Charities (AMRC) represents 150 medical research charities from across the UK, including Yorkshire Cancer Research. In 2024/25, 148 AMRC members spent a total of £1.6 billion on medical research.[39] Medical research includes clinical, non-clinical and pre-clinical research and therefore covers the scope of both the NIHR and MRC. This total also includes research infrastructure spending. In the same year, 97 AMRC members funded clinical research, with a total of 1,212 clinical trials funded.[39] During the same period, 180,712 people in the UK were recruited to take part in studies funded by AMRC members.[39]

Yorkshire Cancer Research funds clinical research across the prevention, diagnosis and treatment of cancer, so that people can live longer healthier lives, free from cancer. As of 31 March 2025, the charity funds £61.2 million of research across 48 programmes, of which 26 are clinical trials.

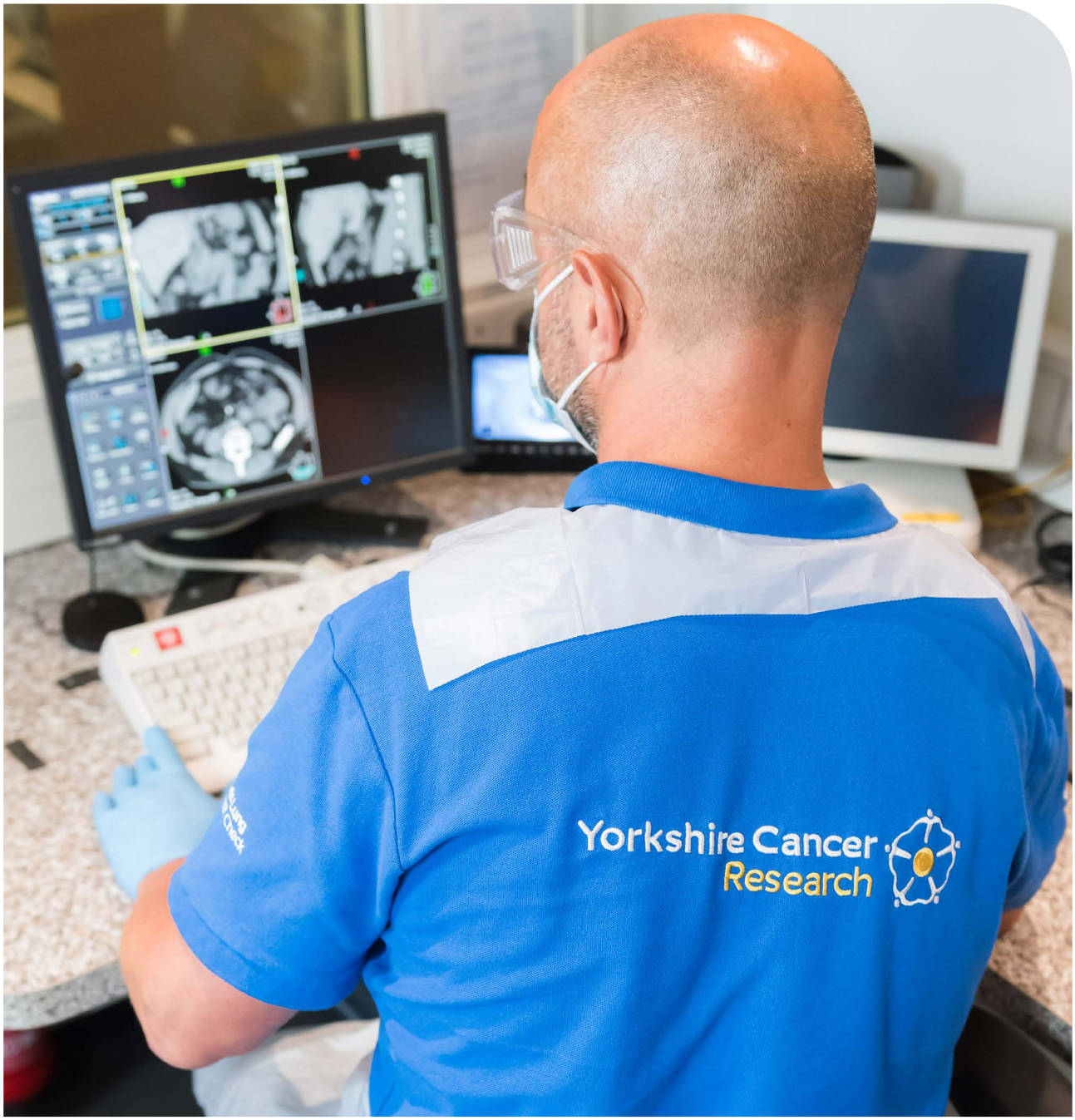
[vii] NIHR infrastructure schemes which have centres in Yorkshire include Clinical Research Facilities (CRFs) Biomedical Research Centres (BRCs) Applied Research Collaborations (ARCs), Commercial Delivery Centres (CRDCs) and Experimental Cancer Medicine Centres (ECMCs) which are co-funded in England by the NIHR, Cancer Research UK and the Little Princess Trust.

[viii] The seven research councils are: Arts and Humanities Research Council (AHRC), the Biotechnology and Biological Sciences Research Council (BBSRC), the Economic and Social Research Council (ESRC), the Engineering and Physical Sciences Research Council (EPSRC), the Medical Research Council (MRC), the Natural Environment Research Council (NERC) and the Science and Technology Facilities Council (STFC).

Private sector

Private sector companies also fund clinical trials. A report by the Association of the British Pharmaceutical Industry (ABPI) found that in 2024, 578 industry clinical trials were initiated in the UK.[40] A total of 19,092 patients were recruited into industry clinical trials in the 2024/25 financial year.[40]

The private sector also has a role in the development of clinical research infrastructure in the UK. For example, the Voluntary Scheme for Branded Medicine Pricing, Access and Growth (VPAG) Investment Programme is a public-private investment programme which will develop new infrastructure for industry clinical trials in the UK. Since April 2025, this has included the nationwide network of 20 NIHR Commercial Research Delivery Centres (CRDCs). The programme establishes two CRDCs in Yorkshire, the Sheffield Children's NHS Foundation Trust NIHR CRDC and the Bradford and West Yorkshire NIHR CRDC. In October 2025, it was announced that 14 new NIHR Primary Care Commercial Research Delivery Centres would be established but however, none are based in Yorkshire.[41]



Chapter 3: The regional distribution of research *funding and activity*

Research activity varies significantly across the regions of the UK. There is also variation for health research and infrastructure funding.

Data on the number of studies which are either funded or supported in their delivery by the NIHR, including collaborative, commercial and non-commercial research studies, shows that in 2024/25, a total of 4,670 NIHR supported studies were recruiting participants.[42] North London was the NIHR Regional Research Delivery Network (RRDN) region with the highest number of studies recruiting participants, with 1,726 studies.[42]

The South East had the lowest number of recruiting studies at 478.[42] Yorkshire had 1,065 recruiting studies, the fifth highest of the 12 RRDN regions of England.[42]

In 2024/25, 1.2 million people across the country were recruited to NIHR supported studies, with a rate of 1,897 people recruited per 100,000 people in the population. In Yorkshire, 110,000 people were recruited, with a slightly lower rate of 1,876 per 100,000 people. The South West region had the highest recruitment rate, with a rate of 3,287 people per 100,000 people.

In Yorkshire, there were 1,485 recruiting studies across all Integrated Care Boards (ICBs) in 2024/25, as shown in Figure 4.

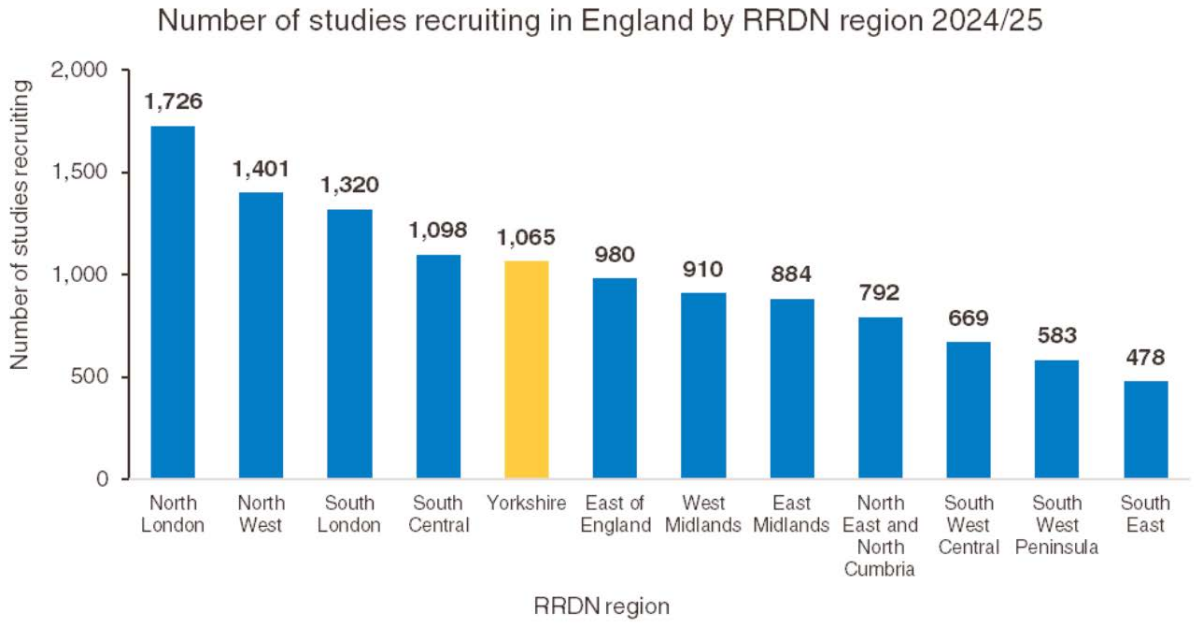


Figure 3: Number of studies recruiting in each Regional Research Delivery Network of England in 2024/25.[ix]

[ix]Data accessed on 07/08/2025.

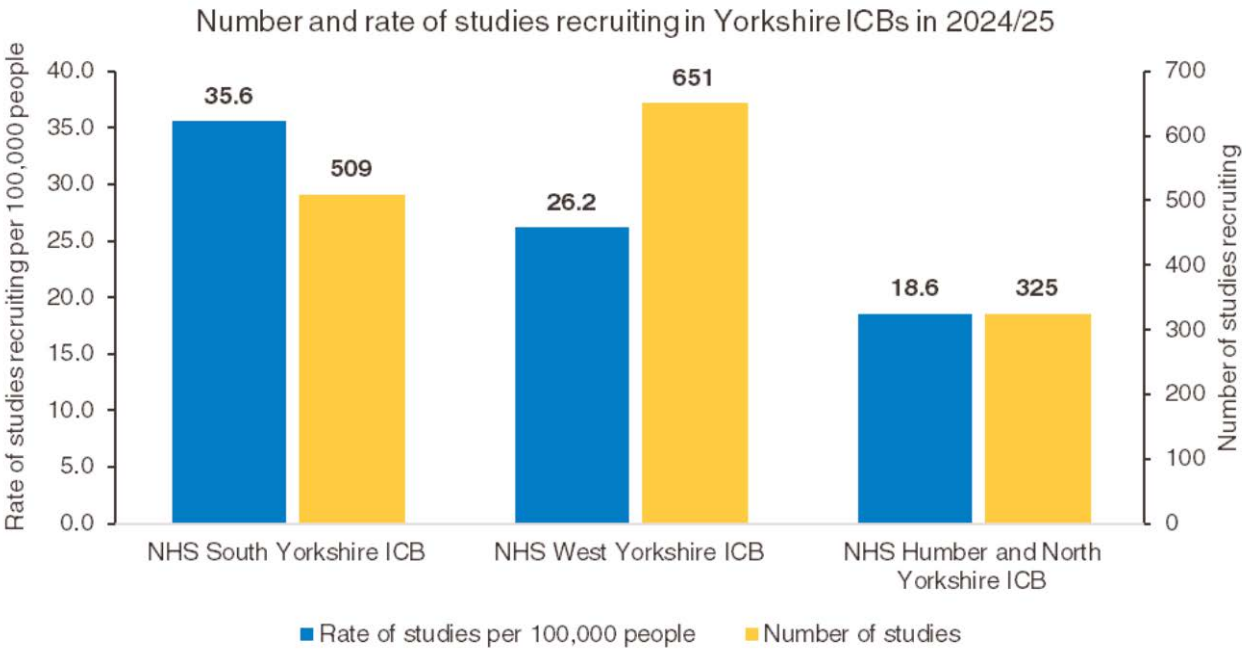


Figure 4: Number and rate of studies recruiting by Yorkshire ICBs in 2024/25.[45]

Clinical research activity in Yorkshire has changed over time. Figure 5 shows that the Covid-19 pandemic significantly impacted clinical research activity in Yorkshire and that research recovery remains an ongoing challenge. Between 2019/20 and 2020/21, the number of recruiting studies fell from 1,187 to 718.[42]

The number of studies recruiting participants has not yet returned to pre-pandemic levels in Yorkshire, which may also reflect the record demands on the NHS, which continues to place significant pressure on the capacity for research within the health service.[43]

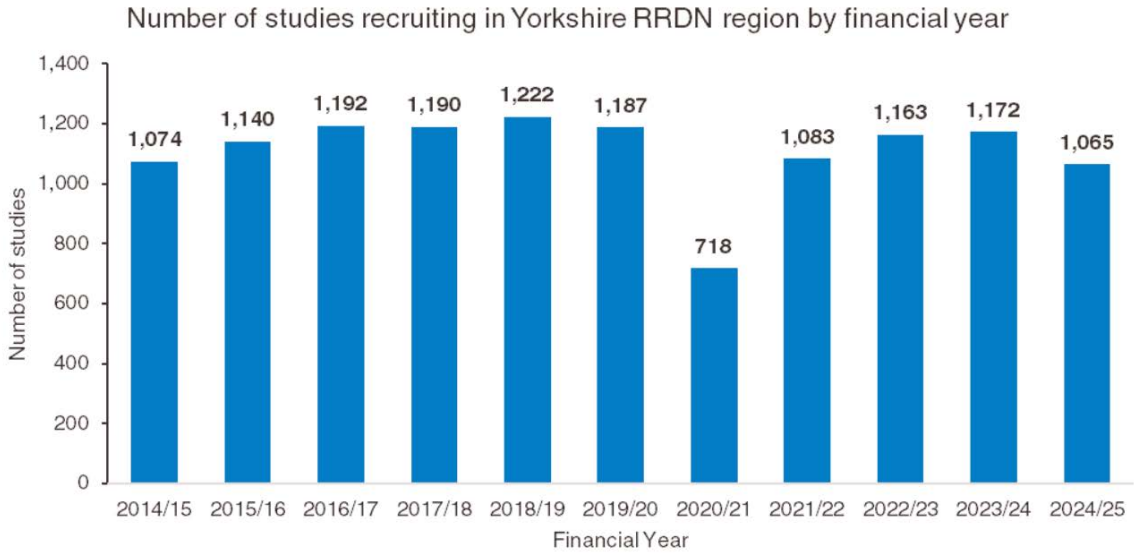


Figure 5: Number of research studies recruiting participants in Yorkshire between 2014/15 and 2024/25.[42]

Demographic data collection in NIHR studies

Collecting high quality demographic data is critical to ensuring that clinical research activity is reflective of the populations most impacted by illness. This matters because the incidence and outcome of diseases including cancer vary significantly by ethnicity, sex, socioeconomic status and other characteristics

Although previous recommendations have been made on the consistent and widespread collection of demographic data, for example the APPG on Medical Research's 2023 report, the NIHR does not currently systematically collect data on the sex, gender identity, sexual orientation, ethnicity and socioeconomic status of participants of NIHR supported studies.[44]

However, it does collect data on the age of participants which have been recruited into NIHR portfolio studies. Data collection has been implemented across NHS Trusts during the last five years and continues to be rolled out. Currently, the NIHR holds age data for approximately 74,500 participants recruited to 1,208 cancer studies. This represents around 40% of total cancer study participants with data collected from over 80% of recruiting cancer studies.

The regional distribution of health research funding

Whilst the benefits of health research are well established, there are significant regional disparities in the distribution of health research funding in the UK. A 2023 report by the Medical Research Council analysed public and charity sector funded research at an institutional level.[2] The UK distribution of health research funding in 2022 is shown in Figure 6. In 2022, Yorkshire received 4.9% of health research funding despite representing 8.2% of the UK population.[2] By contrast, London received 32.3% of health research funding yet represents 13.1% of the UK population.[2]

Table 1: Participants recruited to cancer studies across England, 2021/22 to 2023/24.[x]

Age range	Participants recruited to cancer studies across England, 2021/22 to 2023/24	Participants recruited to cancer studies across Yorkshire, 2021/22 to 2023/24
0-15	1,811	311
16-24	486	57
25-34	1,545	107
35-44	3,636	322
45-54	11,291	2,098
55-64	23,101	4,457
65-74	21,382	3,173
75-84	9,915	1,193
85+	1,333	148
Total	**74,500**	**11,186**

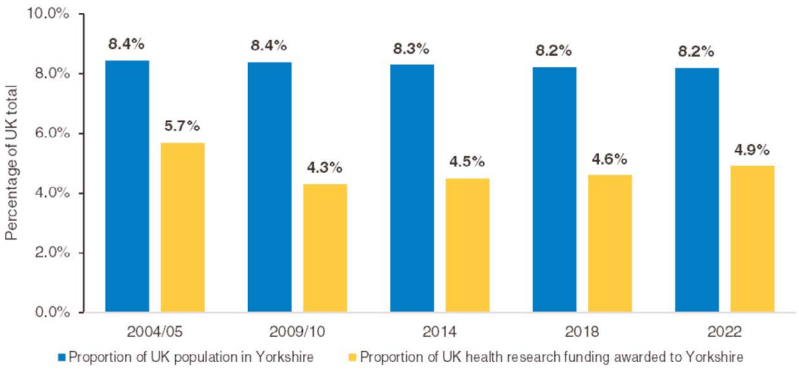


Figure 6: Proportion of the UK population residing in Yorkshire compared to the percentage of awarded UK health research funding over time.[2]

[x]Data provided by NIHR on 9 July 2025.

Analysis shows that this funding inequity has persisted for at least the last two decades.

Sustained under-investment in health research may worsen Yorkshire's existing health and economic inequalities and limit the region's ability to attract more funding in future.

Areas with strong existing levels of academic expertise and research infrastructure attract significant levels of health research funding. For example, as shown in Figure 7, the cities of Oxford and Cambridge each receive 10.8% of public and charity health research funding, equivalent to over a fifth of the total UK spend on health research (21.6%) and totalling £602.4 million.[2]

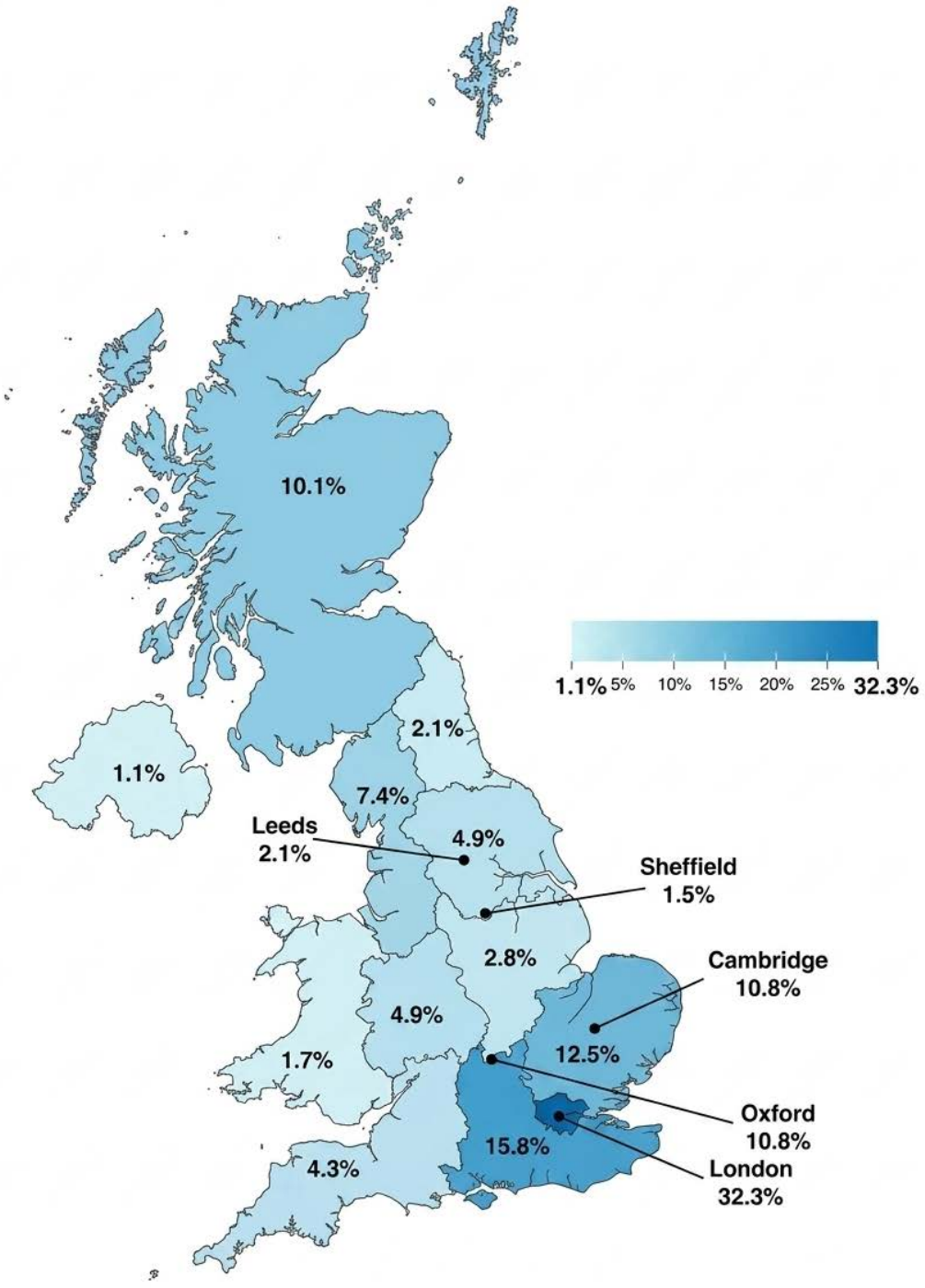


Figure 7: The geographic distribution of health research funding in the UK in 2022.[2]

Other areas of the UK also receive disproportionately low levels of health research funding. For example, the North East of England received 2.1% of health research funding in 2022, despite representing 4.0% of the UK population.[2, 45] This illustrates that regional inequalities in health research funding extend beyond Yorkshire and this policy issue needs to be addressed at a national level.

Table 2: Health research spend per person in the population by region in England in 2022.[2]

Region	Spend per head of population
London	£102
East of England	£54
South East	£47
North West	£28
Yorkshire	£25
West Midlands	£23
North East	£22
South West	£21
East Midlands	£16

Analysing research spend by the number of people further highlights this regional inequity.[2] While there is the equivalent of £102 spent on each person in London on health research, this amount is drastically different across the regions, with Yorkshire receiving just a quarter of London's spend per head (£25). The East Midlands sees equivalent to less than a sixth of the London spend per head, at just £16 per person in the region.

This data only refers to funding from the public sector and charities, meaning that a significant portion of private sector funding is not captured, as well as funding from devolved NHS budgets, international funding and funding from local authorities. However, there are still likely to be inequalities in private sector health research spending. In 2022, the UK's total spend on R&D by businesses was £49.9 billion, but just 4.0% of the total spend in England was within Yorkshire.[46] These total figures include spend on R&D in pharmaceuticals but data on this is not available by region.

The regional distribution of research infrastructure funding

Research infrastructure is critical to the delivery of clinical research. It includes the facilities and research support staff necessary to conduct clinical trials at scale. The Northern Health Science Alliance conducted an analysis of research infrastructure funding awarded to select Combined Authorities in 2022 (with a focus on the North of England, plus areas with historically high levels of research).[47] Their analysis found significant inequalities in the distribution of research infrastructure funding across the UK.

Table 3: Research infrastructure funding awarded in 2022, ordered by funding per person.[47]

Combined authority	Infrastructure funding awarded	Per person
Cambridgeshire and Peterborough Combined Authority	£143,872,764	£160.84
Greater London Authority	£302,925,217	£34.42
North East Combined Authority	£11,256,945	£5.71
Liverpool City Region	£8,404,005	£5.42
South Yorkshire Mayoral Combined Authority	£6,196,174	£4.51
York and North Yorkshire Combined Authority	£3,106,605	£3.80
West Yorkshire Combined Authority	£6,299,185	£2.68
Tees Valley Combined Authority	£0	£0

Table 3 shows that all the Combined Authorities in the North included in the analysis received levels of research infrastructure funding significantly below those in London and in the South East. Three of the four selected Combined Authorities which received the lowest levels of research infrastructure funding per person were in Yorkshire. The total research infrastructure funding awarded to the three Yorkshire Combined Authorities[xi] was £15.6 million, compared to £302.9 million awarded to the Greater London Authority. The West Yorkshire Combined Authority received just £2.68 per person in infrastructure funding, compared to £160.84 in Cambridgeshire and Peterborough Combined Authority. This is despite one of the largest cancer centres in Europe at St James's University Hospital in Leeds being within West Yorkshire. This reflects the structural advantage held by regions with the most established research institutions, which are better positioned to attract infrastructure funding, thereby reinforcing a cycle where historically under-invested regions remain inequitably funded.

Yorkshire's clinical research infrastructure

Although Yorkshire hosts some nationally significant research infrastructure, with a total of 11 NIHR facilities or units currently hosted in Yorkshire, with the necessary funding support, there is potential to further develop Yorkshire's existing research infrastructure and deliver more world-leading research in the region.

The University of Leeds and the Leeds Teaching Hospitals Trust host the NIHR Leeds BRC, an investment of approximately £19.8 million, which includes a research theme on blood-related cancers. A total of 80% of Leeds Teaching Hospital or University of Leeds research collaborations are rated 'world leading' or 'internationally excellent'. From 2015/16 to 2024/25, West Yorkshire ICB had the fourth highest rate of recruitment to NIHR funded or supported studies in the country with 193 people per 1,000 people in the population recruited to research based in Trusts and related Trust sites (e.g. hospitals).[xii] The majority of people recruited over the 10 year period

[xi] At the time of publication of the Northern Health Science Alliance report, there were three Combined Authorities in Yorkshire. As of May 2026, there are four Combined Authorities in the region.
[xii] Data accessed on 04/09/2025.

were recruited by Leeds Teaching Hospitals and Bradford Teaching Hospitals NHS Trusts, recruiting 188,000 and 145,000 people respectively of the total 506,000.[42]

The Bradford Teaching Hospitals NHS Foundation Trust hosts infrastructure, including the NIHR Bradford and West Yorkshire CRDC. This supports the delivery of commercial trials on disease areas most relevant to West Yorkshire communities.

The University of Sheffield also hosts significant clinical research infrastructure. For example, the Sheffield CRF was awarded £7.9 million in funding from 2022 to 2027, to support the development and evaluation of novel therapies and treatment approaches. The South Yorkshire ICB ranked 15th of 42 ICBs in the country for the rate of people recruited to NIHR funded and supported studies between 2015/16 and 2024/25, recruiting at a rate of 110 people per 1,000 in the population.[42] This was equivalent to 164,000 people being recruited in this region over the 10-year period. Sheffield Teaching Hospitals NHS Foundation Trust were responsible for the majority of recruitment, recruiting over 92,000 people.[42]

Other notable areas of high research capacity within Yorkshire include Hull University Teaching Hospitals Trust, based in the Humber and North Yorkshire ICB. The ICB was ranked 18th of the 42 ICBs in the country for their recruitment rate of 88 people per 1,000 in the population between 2015/16 and 2024/25, equivalent to nearly 149,000 people recruited to research based in Trusts and Trust sites.[42] The majority of recruitment was divided between Hull University Teaching Hospitals NHS Trust and York and Scarborough Teaching Hospitals NHS Foundation Trust, recruiting 60,000 and 42,000 people respectively. Hull York Medical School is the joint medical school of the Universities of Hull and York, delivering research across the prevention, diagnosis and treatment of illnesses including cancer.[42] It hosts a range of research infrastructure, including the Hull Health Trials Unit and the Hull Molecular Imaging Centres.

Cancer research funding in Yorkshire and the UK

Similarly to the distribution of health research funding, there are significant inequalities in the regional distribution of cancer research funding in England, with some of the regions hit hardest by cancer receiving disproportionately lower levels of spending.

Table 4 presents the estimated amount spent on cancer research in each region of England in 2022 by public sector and charities. Across the described metrics, there are significant disparities in funding between regions.[2]

Table 4: The total cancer research spend by public bodies and charities by region in England in 2022. Spend has also been presented per person living with or beyond cancer, per person diagnosed with cancer in a single year and per person in the population.[2, 48-50]

Region	Cancer research estimated spend (2022)	Percentage of total England spend	Spend per person living with or beyond cancer (2022)	Spend per person diagnosed with cancer in a year (2022)	Spend per person in the population (2022)
London	£187.6M	46%	£613	£4,761	£21.15
East of England	£62.5M	15%	£211	£1,582	£9.76
South East	£49.9M	12%	£119	£829	£5.32
North West	£33.6M	8%	£110	£714	£4.47
Yorkshire	£24.3M	6%	£103	£692	£4.38
West Midlands	£22.8M	6%	£91	£634	£3.79
North East	£9.3M	2%	£69	£499	£3.47
South West	£8.6M	2%	£30	£215	£1.49
East Midlands	£6.0M	1%	£29	£199	£1.22
England	**£404.6M**	_	**£165**	**£1,169**	**£6.90**

Yorkshire received a sixth of what was spent on people living with or beyond cancer in London and has the 3rd highest incidence and mortality rates in the country.[48, 51]

If the total cancer research funding value in 2022 was distributed according to the number of people living with or beyond cancer, by cancer diagnoses in a single year or by total population, this would mean that Yorkshire would have seen between £14.8 million and £16.7 million extra investment in cancer research in the region.

To deliver more equitable cancer research funding across regions in England, it is important that cancer research funding is more equitably distributed at an institutional level. This in turn will support participation in cancer research from those areas that have the worst outcomes and ensure the people that need it most can benefit from innovations in prevention, diagnosis and treatment.

Chapter 4: The clinical *academic workforce*

Clinical academics are trained in science and medicine and work in clinical practice alongside having a research career.[52] They work in a wide range of clinical professions, including as doctors, nurses and other allied health professions. Progression through clinical academic posts typically involves moving from a lecturer to a senior lecturer and ultimately a professor.[53]

Worryingly, clinical research has been described as "under threat" by the Medical Research Council, with their 2025 report showing a significant decline in the clinical academic workforce.[54] [xiii] By comparing changes in the clinical academic workforce in Yorkshire and England over the same time period, we can see that Yorkshire has faced a significantly greater decline in the clinical academic workforce.[xiv]

Between 2012 to 2022 there was a stark reduction in the number of clinical academics in Yorkshire, with a decline of 25.6% Full Time Equivalent (FTE) clinical academic posts (the highest of any region in England) compared to the average decline for England of 6.5%.

Whilst the number of clinical academic posts across the UK and England did see some recovery in 2024, there has been a slower recovery in the number of posts in Yorkshire. England had just 1.6% fewer clinical academic posts in 2024 compared to 2012, with 2,515 full-time equivalent posts (compared to 2,390 in 2022 and 2,555 in 2012). However, in Yorkshire, there were 20.9% fewer clinical academic posts in 2024 compared to 2012, meaning only 170 FTE posts (compared to 160 in 2022 and 215 in 2012). Even with some recovery in 2024, this was by far the largest decrease seen across any region in England. Yorkshire was one of just two regions in England to still have a lower number of posts in 2024 compared to 2012.[3]

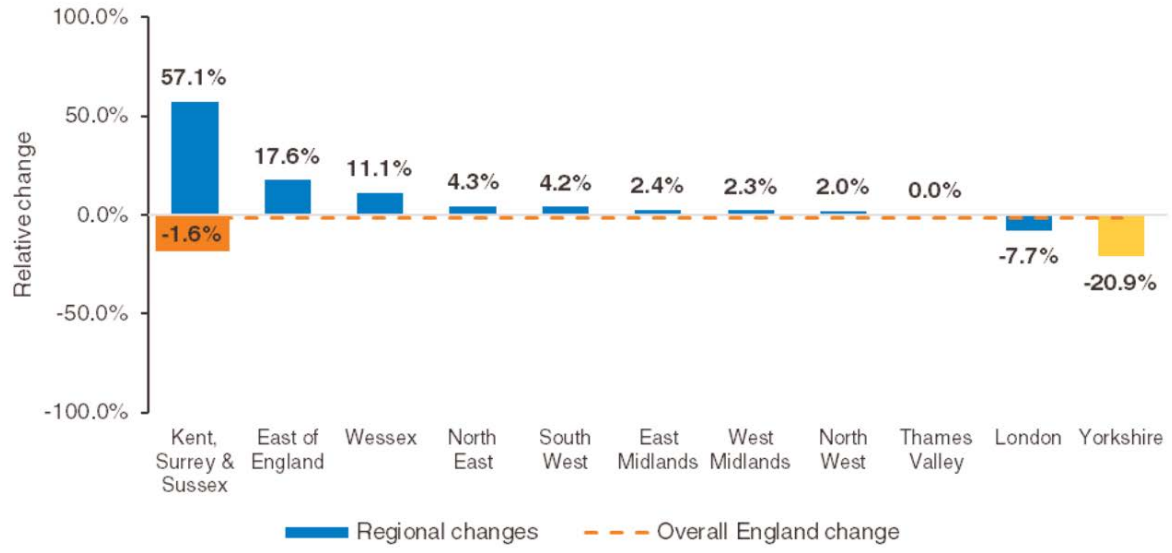


Figure 8: Relative change in the number of FTE clinical academic posts by region between 2012 and 2024.[3]

[xiii] Report published in June 2025

[xiv] This analysis uses data on clinical academic doctors from the Clinical Academic Workforce Survey, collected by the Medical Schools Council. It is important to note that there has been no equivalent data collection for nursing, midwifery and allied health professions.[55]

Demographic disparities in the clinical academic workforce

In addition to the overall decline in the clinical academic workforce in Yorkshire, specific disparities in the workforce exist in terms of age, gender and ethnicity. These disparities illustrate the need for long-term Government action to ensure a more equitable and sustainable clinical research workforce, as recommended in Chapter 6.

"In Yorkshire, more funding and more highly experienced researchers are needed as a priority."

Fiona Lovell
Yorkshire Cancer Research Influencer Patient and Public Involvement Community
Harome, North Yorkshire

Age of clinical academics

In 2022, for the first time, the number of people with FTE clinical academic posts who were below the age of 36 was lower than the number belonging to people above the age of 66.[3] The percentage of clinical academic posts in Yorkshire held by those aged under 36 is lower than the national average, decreasing from 4.7% in 2012 to 2.9% in 2024.

Across England, the percentage of posts held by those below the age of 36 fell from 6.1% in 2012 to 3.8% in 2024.

The decrease in the number of younger clinical academics in Yorkshire raises concerns about the region's long-term research capacity. Without targeted support to develop more clinical academics in the region, it may become increasingly challenging to sustain research activity that improves health outcomes and drives economic growth. The establishment of a new regional clinical cancer research fellowship scheme, as set out in Chapter 6 of this report, would help address this challenge within Yorkshire and other regions which have experienced historic under-investment.

Gender of clinical academics

There is a disparity between the number of men and women in clinical academia, which is more significant in Yorkshire than it is nationally.

In England, the percentage of posts held by women increased by 6.8% between 2012 to 2022 (shown in Figure 9). In 2024, the largest ever proportion of clinical academic posts were held by women, making up over a third of clinical academic posts in England (34.8%).

In Yorkshire between 2012 to 2022, the percentage of posts held by women increased by just 1.7%. In 2024, just over a quarter of posts were held by women (26.5%).

The proportion of women holding clinical academic posts declines with increasing seniority. In Yorkshire in 2022, 37.5% of clinical lecturers, 25.0% of senior lecturers and 20.0% of professors were women. The gap is more significant in Yorkshire than nationally.[3]

This highlights the necessity of providing more clinical academic opportunities for women in Yorkshire, which could effectively be delivered through the new regional clinical cancer research fellowship scheme.

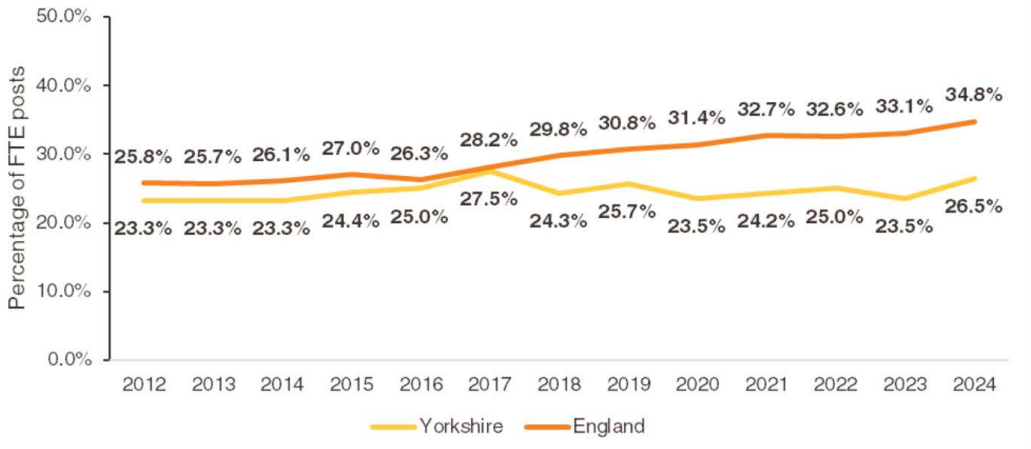


Figure 9: Percentage of FTE clinical academic posts held by women in Yorkshire and England from 2012 to 2022.[3]

Ethnicity of clinical academics

Figure 10 shows the ethnicity of clinical academics in England and in Yorkshire.[xv]

Clinical academics in Yorkshire are for the most part representative of the general population make up. Ensuring ethnic diversity in the clinical academic workforce is important for the design and delivery of trials, to help encourage more people from under-represented groups to take part in research.

However, disparities between the proportion of people from different ethnic groups increases with seniority. The proportion of professorships was lower compared to lectureships in every ethnic group, apart from the White ethnic group. A new regional clinical cancer research fellowship scheme would support talented individuals from under-represented groups to develop and progress within clinical academic careers.

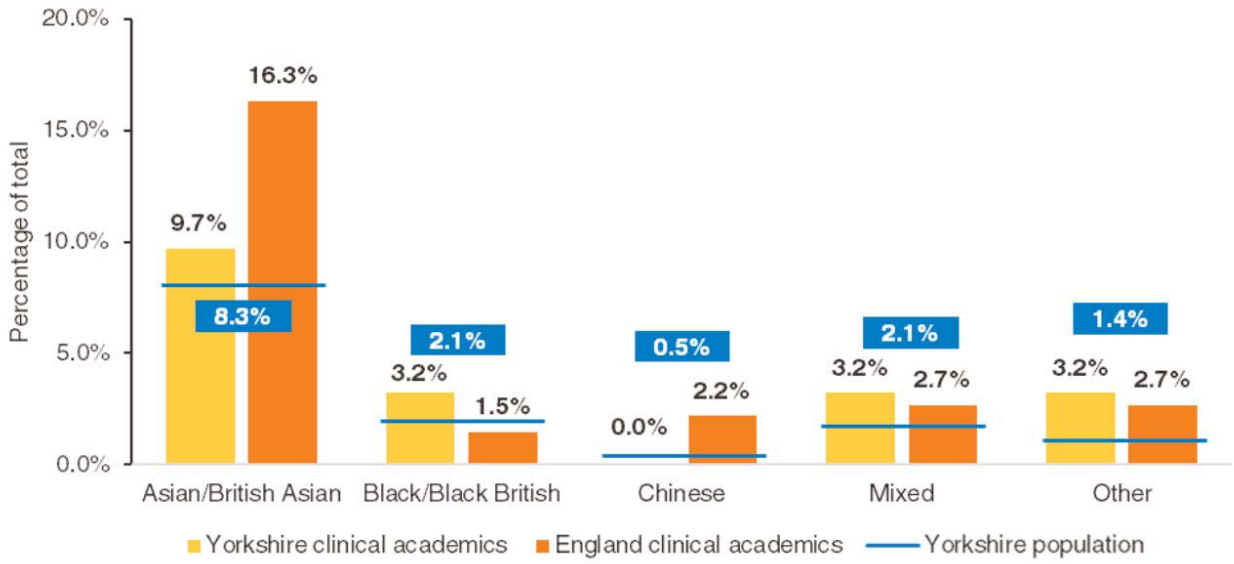


Figure 10: The percentage of FTE clinical academic roles by aggregated ethnic group (excluding those not known) in Yorkshire and England in 2024. The blue lines and data labels represent the population by aggregated ethnic group in Yorkshire in 2021. Please note the White ethnic group is not reported on the graph to improve the readability of smaller bars.[xvi]

[xv]Please note that the analysis excludes counts of clinical academics with their ethnic group category recorded as 'Not known'. Clinical academics of unknown ethnicity made up 6.4% of the total number of clinical academics in 2012 and 15.7% in 2022.

[xvi]Figures for the White ethnic group are as follows: 83.3% of clinical academics in Yorkshire are White; 74.7% of clinical academics in England are White; 85.4% of the Yorkshire population are White.[3] Please note that clinical academics with their ethnic group category recorded as 'Not known' have not been included in these calculations.

Chapter 5: *Policy landscape*

Clinical research policy in England has focussed on strengthening research delivery, improving participation and increasing the adoption of innovation within the NHS. However, there remains significant policy challenges in areas including research workforce capacity and the equitable distribution of research activity.

The Lord O'Shaughnessy review

A key milestone in clinical research policy is the *Lord O'Shaughnessy review*, which identified a series of key challenges facing the delivery of commercial clinical trials in the UK.

In February 2023, the Government commissioned an independent review led by Lord O'Shaughnessy on how to improve the delivery of commercial clinical trials in the UK.[56] The review was launched following a significant decline in the number of commercial clinical trials delivered, with the UK's global ranking in commercial phase 3 trials falling from fourth in 2017 to tenth in 2021.

Whilst its focus was on improving commercial trial delivery, many of the challenges and recommendations established by the review are relevant to non-commercial trials. The review featured eight key challenges to trial delivery and 27 individual recommendations to address these challenges.

Key challenges identified included:

- The time it takes to set up and approve clinical trials
- Research not being systematically prioritised in the NHS
- A lack of conversations between clinicians and patients to take part in clinical research, particularly for under-represented groups

Following the conclusion of the taskforce's work, new clinical trials regulations, which cover the approvals process for clinical trials, greater research transparency and simplified consent arrangements for clinical trials using authorised medicines, have been established and will be enforced from 28 April 2026.[57, 58] To raise awareness of research opportunities, a public communications campaign was launched to encourage people to sign up to the NIHR's clinical trial gateway *Be Part of Research* in June 2025.

To support the prioritisation of research in the NHS, the NIHR has committed to publishing research and delivery data at site, regional and national level by research topic. As of February 2026, UK Clinical Research Delivery data is published for commercial interventional clinical trials, with data for non-commercial and observational trials expected to be published in future.[59]

The latest National Cancer Patient Experience Survey shows that fewer than one in three cancer patients in England had research opportunities discussed with them (30.5%), which was the highest rate recorded to date.[60] While some groups, including younger patients, people from minority ethnic backgrounds and those in more deprived areas, were more likely than average to have research discussed, these groups represent a very small proportion of all cancer diagnoses, limiting the representativeness of research participation.[61] Willingness and eligibility further reduce potential sample sizes, with around a third of patients who were not offered research opportunities saying they did not want them discussed, a pattern most pronounced among those living in the most deprived areas. Together, these findings highlight persistent and compounding barriers to achieving representative participation in cancer research.

Labour administration 2024-2029

The Labour Government has published a series of strategy documents which detail plans for clinical and cancer research in the NHS.

The UK's Modern Industrial Strategy

The Government published *The UK's Modern Industrial Strategy* in June 2025.[62] In the Strategy, the life sciences sector is identified as one of eight economic sectors with the highest potential for growth. The strategy aims for the UK to have the leading life sciences sector in Europe and the third largest sector globally by 2030.

The Life Sciences Sector Plan

The Life Sciences Sector Plan explains in detail how the Government intends to deliver upon the ambitions outlined in the Industrial Strategy.[63]

The Plan emphasises the potential of health research to drive economic growth. It commits to updating the NIHR's governance model, requiring the NIHR to work with a dual focus of delivering research which maximises economic growth whilst also improving health outcomes. The Plan commits to shifting Government funding in health research to have a greater focus on the prevention of illness.

The Plan also includes measures to ensure that new treatments and technologies are accessed by all patients, such as the establishment of Regional Health Innovation Zones. These will devolve more powers to regions, which will be able to innovate new methods of scaling treatments and technologies.

10 Year Health Plan for England

Published in July 2025, the *10 Year Health Plan for England* establishes the Government's targets for the NHS for the next decade.[64] This aims to make the NHS into a "research and innovation powerhouse" where research is a core element of clinical work.[64]

The 10 Year Health Plan commits to reversing the decline in clinical academic positions, through a new collaborative programme between Government and charity funders. This programme will aim to deliver a year-on-year increase in the number of clinical academics over the next five years.

To increase clinical research participation, the NIHR's clinical trial gateway *Be Part of Research* will be fully integrated into the NHS App, with the eventual goal of notifying people of relevant clinical trials.

Transforming the UK Clinical Research System

In August 2025, the Government published an update to *Transforming the UK Clinical Research System*.[65] This explains the Government's work to reform the clinical research system, alongside plans to deliver the Lord O'Shaughnessy review recommendations. The "right research, right setting" initiative will aim to ensure that research studies are delivered in the most appropriate environment, such as primary or community care.

The National Cancer Plan

The National Cancer Plan was published in February 2026. This set out the Government's ambition for 3 in 4 people to be cancer free or living well with cancer, five years after their diagnosis by 2035.

The Plan establishes six national priorities for cancer research in the next three years: early detection, personalised treatments, cancer prevention, rare cancers, children and young people's cancers and living beyond cancer.

Inequalities in research participation are recognised in the Plan, particularly for people in deprived, rural and coastal areas and for minority ethnic groups.
The Plan aims to strengthen the UK's clinical research ecosystem by establishing a Cancer Trials Accelerator Programme to speed up the set up and delivery of clinical trials. This Programme aims improve the local identification and referral of patients into clinical trial sites.

The Plan aims to develop a clear pathway for research innovation to be implemented in the NHS, with commitments to investing in the adoption of innovation and more implementation research.

10 Year Workforce Plan

The Government has stated that the *10 Year Workforce Plan* will be published in Spring 2026.[65] It is not clear if this will include further detail about increasing the capacity of the clinical research workforce.

Health research spending

Alongside its plans for clinical research, the Government has also outlined its spending commitments during this Parliament. At the 2025 Spending Review, the Government announced a plan to increase total spending on research and development from £20.4 billion in 2025/26 to £22.6 billion by 2029/30.[66] However, the research and development budget for DHSC will remain largely static at £2 billion over the next five years, decreasing slightly in 2027/28 and 2028/29.

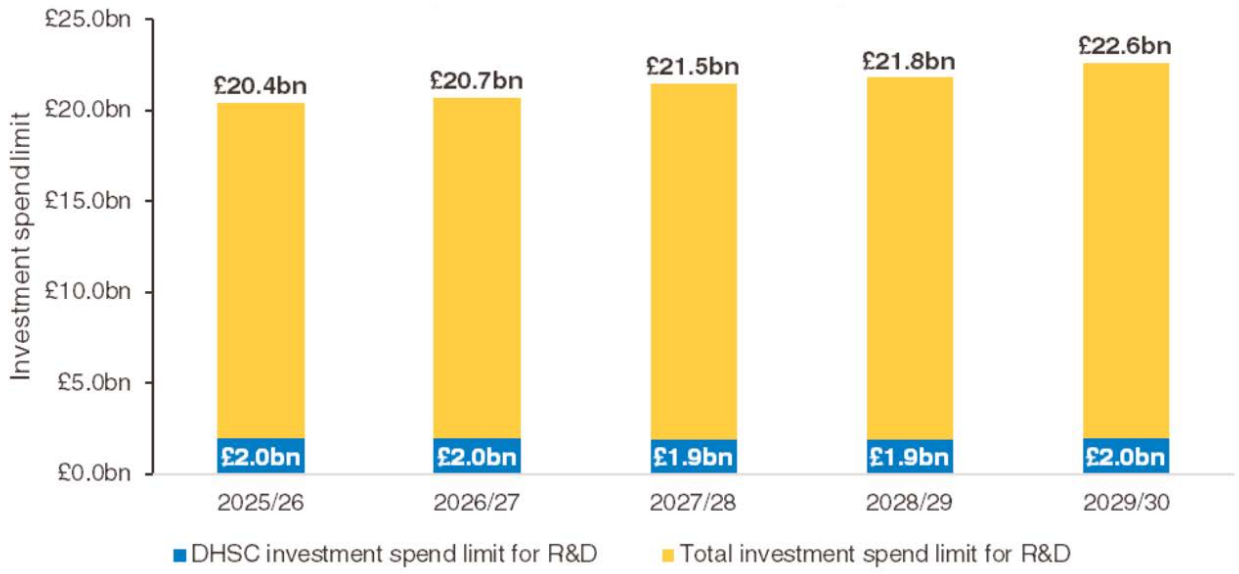


Figure 11: The amount of Department of Health and Social Care investment spend limit for R&D compared to the total investment spend limit for R&D across all government departments up to 2029/30.[66]

Though remaining fairly constant in value, there appears to be a decrease in the percentage of total investment in research and development allocated to DHSC between 2025/26 and 2029/30, from 9.8% of the total value in 2025/26 to 8.8% of the total value in 2029/30.

Chapter 6: Bringing more clinical cancer research to Yorkshire: *what needs to happen next*

This report has shown the value and impact clinical research can have on improving cancer outcomes, addressing inequalities and driving economic growth. For these benefits to be more equitably distributed to Yorkshire and other regions of the UK, the current concentration of health research funding in areas with historically high levels of funding and infrastructures needs to be reviewed.

Yorkshire has consistently received inequitable levels of research funding. Regional inequalities in funding have a lasting impact on our region. For example, the decline in clinical academics in Yorkshire is significantly higher than it is nationally.

Yorkshire Cancer Research is therefore calling for the following changes to support a more equitable and sustainable clinical research environment to be realised.

1. A new regional clinical cancer research fellowship scheme

A new regional clinical cancer research fellowship scheme, targeted at Yorkshire and other regions that have experienced historic under-investment, could enable more equitable economic growth across the country, supporting the Government's central mission of driving economic growth in every region.

In 2024, there were 170 full-time equivalent clinical academic posts in Yorkshire. Whilst this has increased from 160 in 2022, it remains below the 215 clinical academic posts in 2012.[3] The small recovery of clinical academic posts across the Yorkshire region demonstrates that further action is needed to restore capacity and ensure a sustainable clinical academic workforce. This requires long term, Government-led action to address structural barriers in under-invested regions such as Yorkshire.

Yorkshire Cancer Research has demonstrated how a targeted fellowship scheme can attract and develop outstanding academic talent that delivers pioneering research across cancer prevention, diagnosis and treatment. The programme has delivered a substantial return on investment. The Yorkshire Cancer Research Fellowship Platform delivered in partnership with the University of Leeds has generated £88 million in additional research funding to date. Based on the combined £5.5 million investment by Yorkshire Cancer Research and the University of Leeds, every £1 spent has generated £16.03 in additional research funding.

The Fellowship programme has also helped to drive improved health outcomes by facilitating the delivery of high impact research. The University of Leeds Research Fellows have influenced both regional and international practice, with over 500 academic publications to date collectively. Six of the University of Leeds Fellows have led on Yorkshire Cancer Research funded programmes, including the world-leading FOxTROT 2 and 3 trials. This reflects how strategic investment can both strengthen the clinical academic workforce and advance research innovation across cancer prevention, diagnosis and treatment in Yorkshire and beyond.

This targeted initiative has demonstrated this model of investment can lead to significant growth, both in terms of research outcomes and bringing economic benefit to a region. Now, structured, long term Government action is needed to embed and sustain pockets of excellence across under-invested areas, in Yorkshire and beyond.

The NIHR should support a new regional clinical cancer research fellowship scheme to strengthen the clinical academic workforce in Yorkshire and other areas of historic under-investment and greater population need. This should aim to increase research workforce capacity across medical, nursing and allied

health professions, whilst also providing opportunities for people from backgrounds which are under-represented in clinical research.

Recommendation: The NIHR should establish a new regional clinical cancer research fellowship scheme, modelled on Yorkshire Cancer Research's highly successful fellowship programme.

2. Protected research time for new clinical oncology training places

The National Cancer Plan explains how some areas of the country, including more deprived areas along with rural or coastal areas, face higher vacancy rates in clinical and medical oncology.[67] *This can result in a "postcode lottery" where people in these areas have to wait longer to access specialist care.*[68] *DHSC and NHS England are committed to creating more training places in areas with higher vacancies and lower performance.*[67]

Embedding protected research time within these new clinical oncology training places could help deliver upon the Government's ambitions for the NHS to be a "research powerhouse" where research is delivered as "a core part of everyday clinical work".[4]

The protected training time would allow trainees to build towards submitting an application for a PhD or indeed being supported to undertake Out-Of-Programme Research to complete a PhD during their medical training. If trainees were successful in obtaining external funding for the research elements of their role (for example, to support 25% protected research time), this could reduce the within-year costs to the NHS of their medical training. In turn, this could enable additional trainees to be appointed within the same funding envelope. Rather than reducing clinical activity, this approach could unlock additional posts and accelerate workforce growth. Protected research time could also support DHSC and NHS England to attract and retain clinicians in areas with high vacancy rates, by offering trainees the opportunity to develop their research skills and build clinical academic careers.[69] This can in turn support the Government to deliver on its commitment to ending the "postcode lottery" for cancer care.[68]

Flexible delivery models should support Trusts with high vacancy rates to take up the offer of training places and then to embed protected research time for trainees. This should include agreements with neighbouring Trusts with greater clinical and research capacity to provide seconded supervision. This should also include universities providing academic supervision to areas which do not have teaching hospitals, which is often the case in coastal and rural areas. National funding for new clinical oncology training places should cover these supervision costs to ensure that these areas are not excluded due to constraints on capacity.

These models would enable protected research time to act as an incentive for clinicians to train in these areas, whilst also ensuring that Trusts have the capacity to participate.

Recommendation: The Department of Health and Social Care and NHS England should establish protected research time within new clinical oncology training places in areas of greater need such as deprived, rural and coastal areas, to support the development of research capacity and leadership across all regions. This should be enabled through flexible delivery models, with dedicated national funding to ensure that the take up of protected research time is not impacted by the capacity of NHS Trusts and universities to supervise trainees.

3. The promotion of decision making based on regional equity

A more equitable funding system can address entrenched inequalities and improve health and economic outcomes in Yorkshire and all UK regions.

The quality of research conducted in Yorkshire is in part illustrated by the success rate of Yorkshire-based research applications to UKRI. In 2023/24, 24% of applications were successful compared to 18% in London.[70] However, the value of Yorkshire-based applications in 2023/24 was £320 million, compared with over £1 billion in London.[71]

There are practical steps which could be taken by cancer research funders to create a more equitable funding system.

The MRC recently launched the Place Framework, which aims to spread health research investment across the UK.[5] Under the Place Framework, where two research proposals receive the same score and have equal scientific merit, the location of the host organisation is considered as a tie-breaker alongside factors including their alignment with funding calls. As of April 2026, the NIHR does not use the regional location of research as a formal tie-breaker in assessment of funding decisions.[72]

The NIHR should make the location of the host organisation a tie-breaker for funding decisions for cancer clinical trials. This would help ensure that a greater number of studies are undertaken in areas of historic under investment. These areas often experience higher levels of deprivation and lower levels of research activity. Prioritising historically under-invested regions would help ensure that more cancer research is conducted in areas with greater population need.

The introduction of location as a tie-breaker could encourage more funding into research which addresses inequalities in under invested regions such as Yorkshire. This tie-breaker is therefore closely aligned with the strategic approach of the NIHR's *Research Inclusion Strategy*, which aims to widen access and participation in health and social care research.

In addition, the NIHR should strengthen guidance on the geographical distribution of clinical trial sites. The NIHR's current *Research Inclusion Strategy* covers the period from 2022 to 2027. The Strategy states that the NIHR will focus on addressing inequalities related to geographic location. However, the Strategy could go further to establish clear expectations for how clinical trial sites should be distributed, which could help promote research activity in historically under-invested regions. A strengthened commitment to the more equitable distribution of clinical trial sites would complement the proposed use of the host research organisation as a tie-breaker, ensuring a more equitable research ecosystem.

Funding programmes to attract leading international researchers to the UK should be inclusive of Yorkshire and the North. The Global Talent Fund is a UKRI funding programme worth £54 million, which will award grants to 12 UK universities and research organisations.[6] None of the selected research organisations are located in the North of England. In its response to the Science, Innovation and Technology Committee, the Government stated that universities in the North did not meet its selection criteria.[7] This decision could risk consolidating academic expertise in regions of existing strength and further exacerbating regional inequalities.

Recommendation: When making funding decisions for cancer clinical trials, the NIHR should use the location of the host organisation of research as a formal tie-breaker where proposals are of equal quality.

Recommendation: The NIHR should strengthen guidance on the geographical distribution of clinical trial sites in the next Research Inclusion Strategy to support more equitable distribution across regions.

Recommendation: National research funders, including the NIHR and UKRI, should ensure that current and future funding programmes are inclusive of Yorkshire and the North, with explicit measures to address regional disparities.

4. The next National Centre for Cancer Research to be in Yorkshire

A new cancer research institute in Yorkshire would help meet population need in a region with the third highest cancer incidence and mortality rates in the country, whilst building upon the region's proven ability to deliver high quality research.

The Yorkshire Cancer Research Centre for Early Phase Clinical Trials demonstrates the impact that targeted investment in the region can achieve. Established in 2014, the Centre advanced early phase clinical trials by bringing together clinicians, scientists and clinical trial professionals from across the region. The Centre provided the necessary research infrastructure to develop and manage of a portfolio of clinical trials, across cancers including brain, breast and renal cancer. Following the conclusion of the charity's funding, early phase clinical cancer trials continue to be delivered through the Leeds Clinical Trials Research Unit, a reflection of when specialised infrastructure is established in Yorkshire, the region can lead nationally significant research, deliver complex trials and widen access to pioneering treatments.[73]

When the next national centre for cancer research is required, it should be hosted by a partnership of Yorkshire's leading universities. A new national cancer research centre would build upon Yorkshire's existing research strengths, bringing together the expertise all of Yorkshire's universities.

A new national centre would attract both expertise and external investment into the region. National institutes demonstrate how strategically placed infrastructure can drive investment at scale. For example, the Francis Crick Institute was established in 2016 through a partnership between the public, charity and university sectors and now hosts over 100 research groups. The total investment made by

the partner organisations was approximately £650 million.[74] In 2022, the Institute was awarded £71.2 million in health research infrastructure funding.[8] This was significantly more than the total infrastructure funding awarded to Yorkshire's Combined Authorities in the same year (£15.6 million).[8]

Establishing the next nationally significant cancer research institute in Yorkshire would help deliver a range of benefits for the region and beyond. These include attracting additional investment and global academic talent and strengthening capacity for world-leading health research. This strategic investment would be closely aligned with the Government's Industrial Strategy, which recognises how regional growth is essential to the resilience and competitiveness of the national economy.

Recommendation: NIHR and the MRC should form a partnership with the charity sector and Yorkshire's universities, to establish the next nationally significant cancer research institute in Yorkshire.

5. The impact of charity research funding into universities to be maximised

The Charity Research Support Fund (CRSF) should increase so that it meets 80% of the full economic cost of charity funded research. This can increase the capacity of universities to deliver charity funded research, including those located in more deprived areas. Universities in these areas often operate with greater financial constraints and therefore may have less capacity to undertake community focussed research which is often supported by the charity sector.

The CRSF was established by the Government in 2006. This fund is provided to universities to help cover the costs of research which charities don't normally cover, such as estate and IT costs.[9] These additional costs can make it more challenging for universities to accept charity funding, in comparison to public or industry funding.

The charity sector makes a significant impact on research in Yorkshire and across the United Kingdom. There are a range of benefits to charity funded research compared to research funded by other sources. Charity funded research reflects the priorities of the public, with all AMRC member charities acknowledging the importance of public involvement in their research. It addresses research priorities which are not typically supported by public or private sector funding, including projects targeting underserved populations.

Charity funded research also undergoes a rigorous peer review process. All AMRC members must abide by the AMRC's principles of expert review, which include that charities use independent and impartial reviewers from a diverse range of backgrounds.

However, in recent years the CRSF has not risen enough to support the rising costs of conducting research or in recognition of the challenging financial situation facing the university sector. The AMRC estimates that, on average, universities recover an average of 58.7% of the full economic cost of charity funded research. When accounting for the CRSF, universities recover 68.7% of the full economic cost.[10]

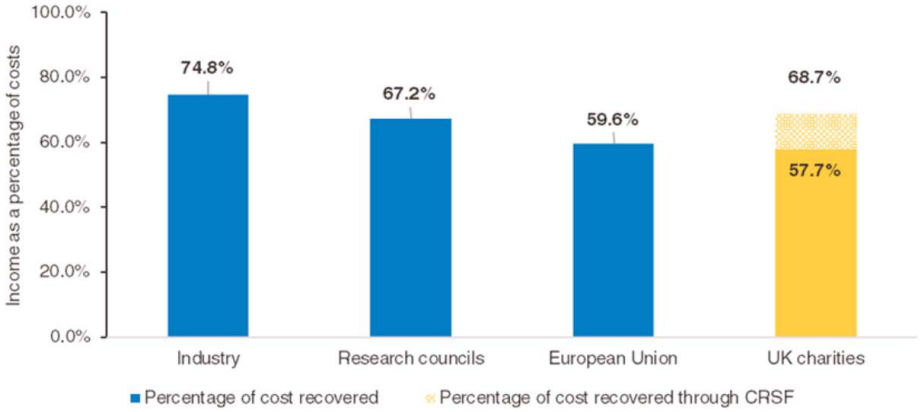


Figure 12: Full economic costing recovery (income shown as a percentage of costs) to universities by funder type in 2022/23.[10]

The real terms decline in the CRSF could impact universities in Yorkshire, with this potentially creating further bureaucracy and making charity funded research less competitive compared to other funding sources, reducing opportunities for the delivery of innovative research in the region. These challenges could also drive talented researchers to relocate to regions with fewer administrative barriers, worsening the existing regional imbalance in research capacity across the UK.

The stagnation of the CRSF therefore risks limiting research activity in areas with greater population need, potentially reinforcing existing health inequalities.

Increasing the CRSF to 80% would remove the need for the additional approval processes described by universities in the region, with charity funded projects meeting this requirement by default. This could reduce internal bureaucracy and shorten approval times for charity funded research.

Addressing barriers to research through an increase in the CRSF could therefore expand the amount of impactful research funded by charities that is delivered in areas with higher levels of population need. For example, the Yorkshire Cancer Research funded Muslim Families Screening for Life project.[11] In Bradford District and Craven, there are 104,000 overdue cancer screenings.[11] A total of 67% of people are up to date with screening in the area, which is below the regional average of 72%.[11]

Led by the University of Bradford, Muslim Families Screening for Life aimed to increase the number of South Asian women being screened for cancer. The study delivered 58 workshops in community locations including mosques and sports centres.[11] Workshops helped to build local understanding of breast, bowel and cervical cancer screening.

Increasing the CRSF would also account for the rising costs of delivering research, along with the growing financial challenges facing the university sector. This can ultimately ensure that charity funding is competitive when compared to other funding sources.

Recommendation: The Department for Science, Innovation and Technology should increase the Charity Research Support Fund so that universities can recover 80% of the full economic cost of research funded by charities.

6. An increase in the proportion of health research and development spending

Investment in research delivers benefits for patients, the NHS and the economy. Patients treated in research active hospitals often experience better outcomes and benefit from earlier access to innovation. Health research can also play a critical role in driving regional economic growth.

Whilst the evidence is clear, the research and development budget for DHSC will remain largely static at £2 billion over the next five years, decreasing slightly in 2027/28 and 2028/29. Though remaining fairly constant in value, there appears to be a decrease in the percentage of total investment in research and development given to DHSC between 2025/26 and 2029/30, from 9.8% of the total value in 2025/26 to 8.8% of the total value in 2029/30. This trend risks limiting the clinical research ecosystem, at a time when the Government has set ambitious objectives for the NHS to become a "research and innovation powerhouse".[64] Without increased investment, there is a risk that critical efforts to expand research capacity will stall.

Recommendation: HM Treasury should ensure that the Department of Health and Social Care's allocation of research and development funding increases in line with total public R&D spending over the remainder of the Parliament.

7. The adoption of the ROSE model

Yorkshire Cancer Research has consistently advocated for the adoption of the ROSE model for research funding, first set out in the charity's White Rose Cancer Report. This model provides a comprehensive framework for allocating research funding in a way that maximises the impact of health research and reduces health inequalities.

The ROSE model establishes four key principles that national health research funders should embed in their funding processes. Together, these principles describe a research system that supports timely implementation, addresses health inequalities, enables learning in real-world settings and distributes funding fairly across regions. While all four principles are essential to maximising the impact of health research, this report is primarily concerned with the final principle: **Equitable funding within the clinical research environment.**

A more equitable funding system can help more people to participate in clinical research and benefit from the innovations that it generates. For too long health research funding has been concentrated in certain areas, reinforcing existing capacity rather than addressing areas of unmet need. This report has demonstrated how a more equitable research funding system would improve health outcomes, drive economic growth and strengthen research capacity. Without a more equitable approach to health research funding, regional disparities are likely to persist or widen.

Achieving a more equitable clinical research funding system is also dependent on who participates in clinical trials and the innovation driven by research. Currently, variation in the way participant demographic information is collected and used means that it is harder to build a consistent picture of how representative clinical research participation is across different populations. Improving the systematic collection and use of demographic data can therefore help enable more equitable funding decisions.

Recommendation: National health research funders, including the NIHR, UKRI, MRC and the Department of Health and Social Care, should recognise and commit to adopting the ROSE model for the allocation of health research funding.

Recommendation: To help realise a more equitable clinical research funding system, NIHR and other research funders should systematically collect data across a wider range of factors, including age, sex, ethnicity and socioeconomic status.

R **Rapid implementation** of research in the NHS

O **Optimise research** implementation to address health inequalities

S **Systematic evaluation** of research findings in real-life settings

E **Equitable funding** within the clinical research environment.

Conclusion

Clinical research can improve health outcomes, drive economic growth and help reduce health inequalities, in Yorkshire and beyond. If sustained inequities in funding remain unaddressed, they risk limiting the ability of regions like Yorkshire to fully realise the benefits clinical research can deliver.

Yorkshire is one of the regions hardest hit by cancer. People in Yorkshire are more likely to have their lives cut short by cancer than almost anywhere else in England. More broadly, health outcomes are worse in the North of England than they are in the South. Poor health outcomes have a disproportionate economic impact on the North compared to the rest of England, entrenching existing regional inequalities. However, small improvements in health outcomes could have a significant impact on the region's health and economy. Decreasing rates of ill health by 0.7% and reducing mortality rates by 1.2% could reduce the gap in productivity between the North and the rest of England by 10%.

The report has highlighted that increased levels of clinical research activity can improve health outcomes. For example, research has found an estimated 3.8% improvement in survival for colorectal cancer patients treated in an NHS Trust with high clinical research participation for four years or more.

Yorkshire has consistently received inequitable levels of UK health research funding. In 2022, Yorkshire received 5% of funding but the region represents 8% of the UK population. There are also inequalities in health research infrastructure funding; in 2022, an individual research institute in London received more of this type of funding than all of Yorkshire's Combined Authorities put together.

To create a more equitable research funding system, which helps improve health outcomes and drive economic growth across Yorkshire and beyond, the charity supports measures including:

- A regional clinical cancer research fellowship scheme
- Protected research time for new clinical oncology training places
- The promotion of decision making based on regional equity
- The next National Centre for Cancer Research to be in Yorkshire
- The impact of charity research funding into universities to be maximised
- An increase in the proportion of health research and development spending
- The adoption of the ROSE model, supported by improved demographic data collection by research funders

These measures can help support a more equitable and sustainable clinical research environment and increase the capacity for world-leading cancer research in Yorkshire and beyond.

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To the best of our knowledge, all information was correct at the time of publication.