



Health Innovation
Yorkshire & Humber

Transforming Lives Through Innovation

Impact Report 2023-24



Introduction

Last year marked an important milestone for our network as all 15 organisations across England were relicensed by the government and NHS England for another five years. This third licence period also coincided with our transition from Academic Health Science Networks (AHSNs) to health innovation networks, a name change that better reflects the important role we play in supporting the development and spread of innovation across health systems.

What started off as 15 local, unlinked functions has evolved into a collaborative, national network. This network is now an integral part of England's NHS infrastructure, and within our regions, we serve as trusted partners, deeply integrated with frontline healthcare systems.

The adoption and spread of healthcare innovation in the NHS is complex and challenging. The NHS requires ongoing support to accelerate the implementation of proven solutions that enhance patient care, and we play a crucial role in this process. In Yorkshire and the Humber, building strong partnerships with our Integrated Care Systems (ICSs) has remained our top priority. We have developed a unique approach to this via our Innovation Hub model, aiming to enhance collaboration and drive innovation. Our West Yorkshire and South Yorkshire Hubs play a pivotal role within each Integrated Care Board (ICB) by bringing together different organisations across the system to accelerate the widespread adoption of cutting-edge health and care innovations. This embedded, partnership approach enables the development of a deep understanding of priorities and unmet needs and co-production of the best solutions.

We continuously evolve and adapt our approaches to effectively meet the needs of our three ICSs, and support them



in their ambition to drive and scale innovations that help address local priority areas and improve outcomes for local people.

We know that cardiovascular disease is still a major cause of death in England putting immense pressure on the NHS. Over the past year, we have achieved significant success in our cardiovascular work with the implementation of national programmes and initiatives aimed at improving outcomes and enhancing patient care. You will find more information on [page 8](#).

Introduction

Our work to implement national initiatives such as the polypharmacy and wound care programmes have contributed to develop new ways of working that benefitted both workforce and patients across our region. Find out more on [page 20](#).

Efforts to enhance productivity in health and care have led us to launch strategic initiatives like the Workforce Challenge Hub in collaboration with NHS England North East and Yorkshire, addressing critical workforce shortages while ensuring sustainable staffing practices and improved patient care. We recognise that workforce shortages continue to represent a huge challenge for the NHS, and it is paramount to find effective ways to support frontline staff. The collaborative staff bank initiative has supported the movement of workforce between mental health trusts within the West Yorkshire Health and Care Partnership, whilst ensuring best delivery of services and outcomes for all users ([page 32](#)).

Health inequalities remains a central focus and a cross-cutting theme in all our work with initiatives ranging from community-focused projects to programmes aimed at improving diagnostic services for underserved populations. Working collaboratively with all our ICSs, the Innovation for Healthcare Inequalities Programme (InHIP), which secured nearly £300,000 in funding from NHS England, is improving the diagnosis of cardiovascular disease and uncontrolled asthma in our most deprived communities ([page 24](#)).

By working in partnership across organisations and sectors we bolster the reputation of our region as a global leader in health and care innovation. Our international work continues through our partnerships with the Department for Business and Trade

(DBT) and the Association of British HealthTech Industries (ABHI). Together, we work with UK innovators to export their products into the global arena. We also work with international companies to import their innovations into Yorkshire. Both these activities contribute to the region's economy and ensure our patients benefit from new innovations first.

Programmes like our digital health accelerator, Propel@YH, and its associated international Boot Camps help to bring the best ideas into our region, ensuring that Yorkshire and the Humber continues to grow its reputation as a hub for pioneering health and care innovations which benefit our diverse communities. Find out more on [page 42](#).

Over the past year our close collaboration with our partners has resulted in a series of successful bids further stimulating economic growth, such as the £7.5m of funding secured for West Yorkshire to grow its HealthTech and life sciences sector as you can read about on [page 41](#).

In line with our commitment to address health and economic disparities, we have recently published a white paper - 'Empowering local places for health and prosperity: new perspectives from Yorkshire and the Humber' - which builds on our 'YHealth for Growth' campaign in partnership with NHS Confederation and Yorkshire Universities, and addresses the health and economic inequalities of our region. The report outlines key recommendations for national and regional leaders and responds to the urgent need for action to tackle widening health and economic inequalities across our region. You can read more about this on [page 55](#).

Introduction

We recognise the crucial role of patient engagement in driving the successful adoption of any innovation as evidenced by our collaboration with organisations like the NHS Accelerated Access Collaborative to develop a practical framework to routinely collect patient insights as part of adoption and spread planning.

Furthermore, our pledge to support the NHS in its efforts to reduce its carbon footprint and promote net zero practices is evident through initiatives like the Sheep Shed Green Award programme commissioned by Humber and North Yorkshire Health and Care Partnership ([page 37](#)).

We know that our achievements are only possible by working together. We look forward to collaborating with you as we continue to work together and support our ICSs in their ambition to create a healthy, equitable, safe and sustainable society. Finally, we would like to say a huge thank you to all our partners and stakeholders for their continued support and to our staff for their hard work, resilience, and enthusiasm.



Richard Stubbs
Chief Executive of Health Innovation
Yorkshire & Humber and Chair of the
Health Innovation Network



Professor William Pope
Chair of Health Innovation
Yorkshire & Humber



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Supporting innovators and driving economic growth

Over the following pages we'll give you an insight into some of the work we've done to transform lives through innovation in the Yorkshire and Humber region over the last year. As well as helping the NHS to find, adopt and spread innovations that benefit patients and save the health system money, our work supports both our regional and national economies by attracting inward investment and creating or safeguarding jobs.

The collective efforts of the 15 health innovation networks in England are making a significant contribution to UK PLC. In 2023-24 the combined economic growth impacts of the Health Innovation Network were:



£475m
funding

leveraged
by supported
companies

755
jobs
safeguarded



554
jobs
created

Every year we ask companies we have worked with to help us assess the impact of our support. These contribute to the overall national impact statistics.

How we support innovators in our region

In the last 12 months we spent over **4,100 hours** providing support services to **387 companies** in our region. Our support focuses on providing advice and expertise, from discovery to deployment at scale. You can see some of the positive

feedback we received from innovators this year and find out more about how we support economic growth in our region throughout this report, including:

- national programmes of adoption and spread such as the MedTech Funding Mandate ([page 14](#))
- structured support that we are commissioned to provide such as real-world evidence projects ([page 18](#)) and horizon scanning for new solutions ([page 51](#))
- home-grown initiatives that we have developed for our region such as our Propel@YH digital health accelerator ([page 42](#)), international Boot Camps ([page 47](#)) and our Digital North accelerator, which we deliver in partnership with the other three health innovation networks in the North ([page 10](#))
- providing input and support for a broad range of funding bids to local and national bodies ([page 41](#))



Improving Health Outcomes

We bring together experts from different geographical areas and across different sectors to share best practice, support new ways of working and find innovative solutions to common challenges. Our work with NHS partners, HealthTech innovators and life sciences companies has supported programmes and initiatives that help improve patient care outcomes and increase efficiency in healthcare delivery.



Preventing cardiovascular disease

Cardiovascular disease (CVD) is the biggest cause of death and disability in England resulting in one death every four minutes, but often it can be prevented. To tackle this, we have engaged 40 Primary Care Networks (PCNs) across the region to run an education and training programme around CVD prevention for 620 participants and have held 8 public and patient events for over 400 attendees.

Managing patient lipid levels to reduce CVD

We were one of 11 health innovation networks that were successful in a bid process for the Collaborative Lipids Funding initiative, born out of a partnership between NHS England and Novartis. The programme's focus was on enhancing lipid management and addressing health disparities in Humber, North Yorkshire and South Yorkshire.

The year-long programme emphasised a cooperative strategy to refine lipid management pathways, benefitting both patients and healthcare professionals. We ran a series of education events and webinars to support understanding, competence, and confidence in treatment options. This has helped to upskill the workforce, giving staff increased knowledge and the confidence to provide patients with better information to guide self-care and make better





lifestyle choices, improving outcomes in population health as a result.

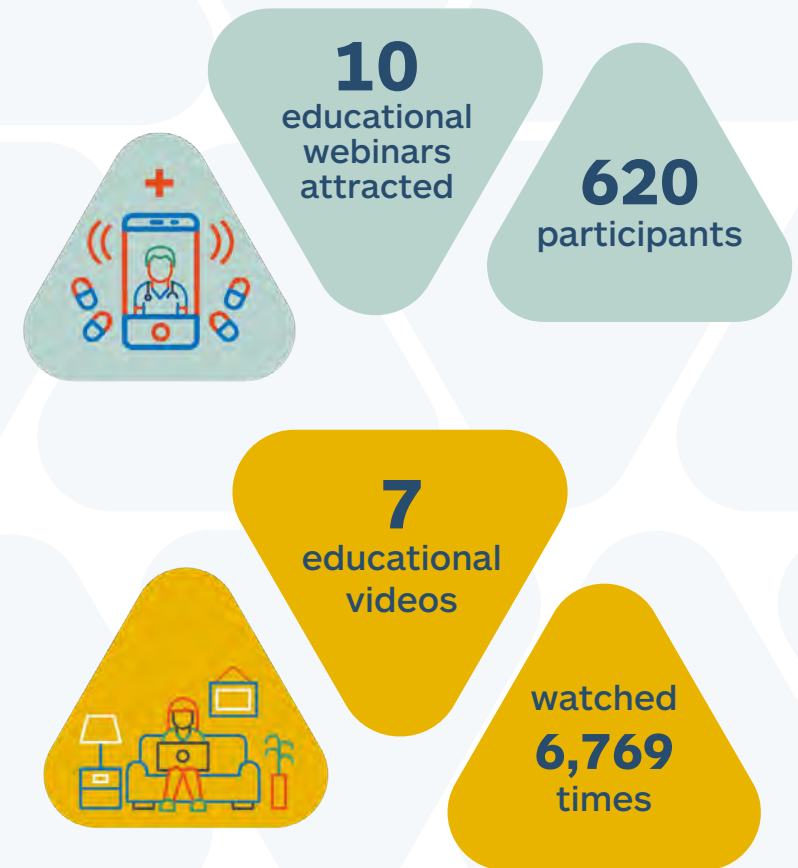
We played a pivotal role in facilitating key activities aimed at improving lipid management and awareness. Acting as a conduit between organisations, we helped to ensure the effective implementation and coordination of efforts to achieve the project's objectives through:

- Collecting and disseminating five case studies showcasing exemplary practices in lipid optimisation.
- Implementing an educational pilot project on menopause and CVD in Doncaster for 18 women. This initiative educated participants about CVD risks, facilitated experience sharing, promoted physical activity, supported mental health, and encouraged dietary and lifestyle changes through nutritional advice. At the end of the 10 week programme, the women lost 17.8kg and 436.5cm between them.
- Creating an education programme of 10 webinars and educational sessions, attracting over 620

members of the NHS workforce. Additionally, seven educational videos posted on YouTube have been watched 6,769 times.

- Running a 'Tackling Cholesterol Together' event in partnership with Heart UK which was attended by 50 healthcare professionals – bringing them together for the first time to share good practice and further knowledge.
- Directly engaging with PCNs in Humber and North Yorkshire (26 PCNs), and South Yorkshire (14 PCNs). This focused on enhancing PCNs' understanding of data, identifying improvement areas, introducing relevant searches and tools and signposting to relevant education and training from us.
- Participating in 8 public and patient engagement events across Scarborough, Kirklees, Barnsley, Sheffield, and York, attended by over 400 individuals. These events facilitated direct dialogues with the public and raised awareness on lipid management.

Our CVD programme in numbers:





- Attending three events providing point of care testing for cholesterol. More than 50 people were tested, over half for the first time, and we were also able to increase their awareness of CVD symptoms and how to manage their risk.
- Development of an electronic lipid management pathway aligned with the newly revised national guidelines, streamlining the process for better patient care and outcomes.

The programme has markedly improved lipid management and awareness which will directly impact population health outcomes. By facilitating education and awareness for both healthcare professionals and patients, and streamlining care pathways in alignment with national guidelines, we have fostered a more informed, engaged, and proactive approach to cardiovascular health management. This holistic approach has not only supported patient care but also empowered individuals and healthcare providers with the knowledge and tools necessary to effectively manage and mitigate cardiovascular disease risks, contributing to healthier communities.

Familial Hypercholesterolemia

Alongside several other health innovation networks, we took part in trialling a Child-Parent Screening Programme to detect Familial Hypercholesterolaemia (FH) within families, aligning with the NHS Long Term Plan’s goal of reducing CVD.

In Yorkshire and the Humber, the uptake and enthusiasm for this project has been excellent, we have been responsible for signing up 15 practices, over 25 per cent of the national target of 50 practices. This level of interest demonstrates significant potential for wider rollout.

Spreading CVD innovations across the North

Digital North is a programme delivered by the four northern health innovation networks to help companies increase adoption and spread of innovation across the North of England. This year, the programme’s focus has been on the prevention of CVD, and the major risk factors associated with CVD.



Having the cholesterol testing at our blood pressure stall in Barnsley market went down really well with local residents. We often have people asking if we do cholesterol testing, so to be able to offer this service to people was great. Comments back from members of the public were really positive and we welcome working with you again in the future.”

**Kaye Mann, Public Health Specialist Practitioner:
Public Health and Communities Directorate,
Barnsley Metropolitan Borough Council.**



The programme involves bespoke support for each company, including a series of masterclasses, before the companies present their digital solutions in an interactive forum to over 100 people, including representation from the Office for Life Sciences, NHS England and senior NHS CVD leads from across the North.

This current cohort of companies include:

Addvantage Technologies – Healthya is a health kiosk that is a class 2 medical grade self-service health station which collects height, weight, blood pressure, heart rate, body fat composition and other key medical information. The solution can capture and share data directly into the electronic patient record system.

Iplato – The Connect Platform allows primary care practices to seamlessly communicate with their patients, and patients to take an active, empowered role in their own health and wellbeing. Connect now includes free NHS App integration, meaning GPs can engage with their patients on both the myGP app and the NHS App.

PocDoc – Have created a smart phone cholesterol test for assessing five lipid markers. The PocDoc digital platform and associated tests allow individuals to test themselves for major diseases using their smartphone, with results available immediately in the PocDoc app, see a full health assessment and have access to follow on care where required.

CheqUp – A personalised, physician-led, weight management programme, equivalent to NHS Tier 3 weight management services, facilitated by an online virtual health platform allowing accessible, effective treatment and data gathering across all key patient cohorts. Rates of obesity are rising, particularly in remote or deprived populations. CheqUp facilitates a cross-community approach and social prescribing, leading to more effective targeting and data gathering.





Evaluating the rapid diagnosis and treatment of influenza to alleviate winter pressures

We are supporting the implementation of a rapid ‘test and treat’ influenza community pathway through a collaboration with Roche Products Limited and Roche Diagnostics Limited. Rapid diagnostic tests have been distributed across three settings and results are being evaluated at 28 sites across West Yorkshire. Emerging themes show that the project helps support reduced community flu transmission, reduces anxiety for patients and facilitates treatment in the most appropriate setting.

Influenza can give rise to severe respiratory symptoms and complications, particularly in older and clinically ‘high-risk’ populations. Respiratory diseases are a major factor in ‘winter pressures’ often [experienced by NHS hospitals](#) which is contributed to by severe cases

of seasonal influenza [resulting in hospitalisation](#).

We are supporting the implementation of a rapid ‘test and treat’ influenza community pathway which is being evaluated across West Yorkshire. We are assessing whether rapid, community-based diagnosis and





appropriate management could help improve patient outcomes and reduce the burden on the health and care system.

In primary care it can be difficult to differentiate between influenza, COVID-19 and chest infections [without additional tests](#). To confirm a flu diagnosis a general practitioner (GP) may send a swab taken from a patient's throat to a centralised microbiology service for a laboratory-based test. Results can take over 36 hours to arrive which is too late for the timely administration of [antiviral treatments](#). Patients waiting for a diagnosis may sometimes be prescribed unnecessary antibiotics which may contribute to antibiotic resistance.

The Anti-Microbial Resistance Team at NHS West Yorkshire Integrated Care Board (ICB) wanted to explore how implementing rapid, community-based testing might improve diagnostic confidence (potentially reducing the prescribing of unnecessary antibiotics), and impact upon the wider healthcare ecosystem. The innovation allows GPs to confirm whether their patients have flu, and this diagnostic certainty can help GPs in managing their patients (for instance, in helping decisions about whether patients should isolate or not).

Working in collaboration with, Roche Diagnostics Ltd, and Roche Products Ltd, we initiated a service evaluation. This aimed to build on prior evidence from a pilot project in 2022-23 that demonstrated a potential positive impact on patient outcomes achieved by community-based rapid diagnosis of patients with Flu A/B and COVID-19, and their subsequent [management by GPs](#).

We identified appropriate industry partners, managed the collaborative programme, and ensured that information governance requirements were met. We worked closely with our West Yorkshire community services and infection control teams

to efficiently onboard multiple implementation sites that included 9 general practices, 11 care homes, and 13 elderly and dementia wards.

The project resulted in over 100 tests being carried out, with data collection of patient outcomes facilitated by a digital reporting innovation from the NHS-owned company Health Call Solutions. We provided qualitative data collection and analysis expertise to ensure the workforce and patients could share their respective experiences and contribute to the evaluation report. This ongoing work has already identified several positive themes including:

- familiarity of equipment enabling efficient usage by staff, ultimately providing patients with rapid results and helping to alleviate anxiety
- deployment of tests within care services and residential wards, permitting effective decision-making regarding patient isolation and so minimising community flu transmission and protecting others.

Positive outcomes and lessons learned are being used to help support the development of the flu 'test and treat' pathway. We have presented at 5 events to discuss this work with key stakeholders, and the programme has recently gained wider exposure in the [national press](#). This has already resulted in 10 Primary Care Networks across our region expressing an interest in using a rapid diagnostic test during the next flu season. Our future aims are to support West Yorkshire ICB in the development of a business case to validate the continued use of rapid community-based diagnosis and work closely with the NHS, the public, and policy makers to help spread the pathway across the UK to mitigate future winter pressures on the healthcare system.



Supporting the MedTech Funding Mandate

We continue to support the MedTech Funding Mandate (MTFM) policy, which ensures patients and the NHS benefit from clinically effective and cost saving medical technologies faster and more equitably. These innovations enable high-quality outcomes from treatments, depend on fewer resources, and can reduce theatre time and hospital stays, enabling more patients across England to be treated quickly.

Our role in supporting the adoption and spread of these products varies from brokering initial discussions between key partners, to business case development and understanding the benefits for patients and healthcare providers. Ultimately, we strive to provide support whenever it is needed, acknowledging the pressures our healthcare partners face.

There are seven medical technologies currently being supported including the XprESS multi-sinus dilation system, Thopaz+, Spectra Optia and four Benign Prostatic Enlargement treatments - Rezum, PLASMA system, UroLift and GreenLight XPS.

The Getting It Right First Time's (GIRFT) National Specialty Report for Urology recommended that





Urology Area Networks (UANs) should be established to improve patient outcomes and experience. By aligning our objectives to deliver MTFM technologies with GIRFT and organisations including the South Yorkshire Acute Federation and West Yorkshire Association of Acute Trusts, we are contributing to the development of UANs in our region. This collaborative approach helps to provide urology services over a close geographical footprint, alleviate pressures on frontline staff, facilitate resource sharing, and improves the management of waiting times.

Importantly, the UAN offer should empower patients to have more say over where and when they receive surgical treatment. We have been working with our developing UANs to ensure patients have access to all these effective MTFM Benign Prostatic Enlargement treatments within the service network to meet patient and system needs.

We have seen progress on adoption and early impacts of XprESS and Thopaz+ which provide alternative treatments to more invasive procedures.

To date, three providers in our region have adopted XprESS, enabling chronic sinusitis procedures to be performed out of theatre and into outpatients under local anaesthetic. This has generated cost savings of approximately £1,400 per patient, bringing faster patient recovery and reduced discharge times.

Early adopters of Thopaz+, a portable digital system for managing chest drains, have seen improvements in patient safety and clinical effectiveness. Benefits include faster patient recovery, reduced length of stay in hospital and improved clinical decision making to diagnose patients, through the continuous monitoring of air leaks and fluid loss.



We have had a number of quality successes due to this partnership. It has been a great experience for me working alongside extra support (Health Innovation Yorkshire & Humber) who can bridge certain gaps and stakeholders that possibly I wouldn't normally have contact with."

Lynn Taylor Smith, Account Manager, Medela (suppliers of Thopaz+)

Impact of Benign Prostatic Enlargement treatments between April 2022 and March 2024:



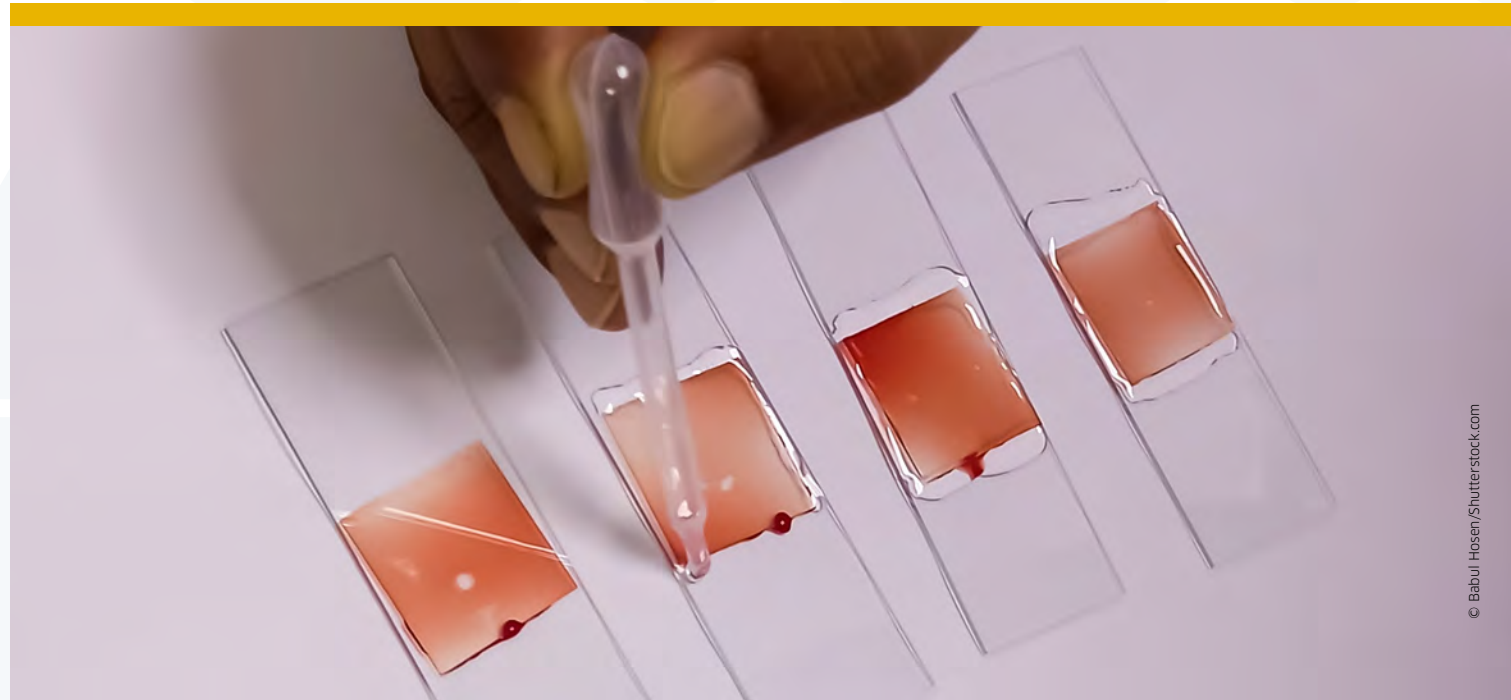


“ In general, if the lung was down, it would be up within a few hours and if not coming up within 48 hours, it was a referral to surgeons. Normally this would take five to seven days, but time to decision is now two days. Plus, we have reduced the number of interventions for the patient.”

Dr Daniel Trushell-Pottinger, Consultant Respiratory Physician, Doncaster and Bassetlaw Teaching Hospitals NHS Foundation Trust

We are supporting the Health Innovation Network as the lead organisation for the rollout of the MTFM product Spectra Optia across England. Through close collaboration with key stakeholders, including NHS England, the MTFM team, NHS England Specialised Commissioning, NHS Blood and Transplant, Terumo, and the Sickle Cell Society, we are seeing a huge expansion of automated red blood cell services for sickle cell patients where they are most needed and a significant reduction in health inequalities. You can read more about our progress to increase access to services and improve patient care outcomes for patients affected by sickle cell disease on [page 22](#).

Locally, we are working with our providers, NHS Blood and Transplant, and the North-East Yorkshire Haemoglobinopathy Coordinating Centre, to support increased use of automated red blood cell exchange for the sickle cell population in Yorkshire and the Humber. Our goal is to improve patient access by bringing this treatment closer to home. We are also working towards securing additional funding for emergency departments to provide automated red blood cell services and ensure availability outside of regular hours.





Enabling the effective diagnosis of pre-eclampsia

Pre-eclampsia is a condition that can affect pregnant women, usually during the second half of pregnancy (from 20 weeks) or soon after their baby is delivered. It causes high blood pressure and protein in the urine and, if not diagnosed and closely monitored, it can lead to potentially life-threatening complications. We have been working with all 13 maternity services in our region to ensure that their business cases have been agreed to implement Placental Growth Factor (PLGF) based testing, a blood test that helps to diagnose pre-eclampsia.

Adopting this test across Yorkshire and the Humber means that no matter where women live in our region, or where they decide to have their babies, their nearest or chosen hospital will be better able to diagnose pre-eclampsia. The test eliminates the risk of poor prediction of the condition and reduces the risk of unnecessary hospitalisation for women who will not go on to develop it. We are also working with clinicians at Leeds Teaching Hospitals NHS Trust and Sheffield Teaching Hospitals NHS Foundation Trust to evaluate the service to measure its financial, clinical and emotional impact. This will enable trusts to ensure that the adoption of the test becomes standard practice.





Reducing hospital admissions for COPD patients

Our work to support the independent evaluation of a Lenus Health and Hull University Teaching Hospitals NHS Trust project has demonstrated that Chronic Obstructive Pulmonary Disease (COPD) patients have seen an improved quality of life while the hospital has reduced A&E attendance and hospital admissions for the condition by 50%.

As part of our role to assist in the identification of the best solutions for our health and care systems across the region, we help to demonstrate the benefits of new services and products through real-world evaluations. We recently supported Lenus Health's funding application to the Small Business Research Initiative (SBRI) to implement its digital solution in Hull University Teaching Hospitals NHS Trust.

The project analysed the effectiveness of Lenus Health's solution in improving the management of patients with COPD and in reducing adverse effects, especially emergency admissions.

Lenus Health's technology was implemented at the hospital as Hull and the surrounding area has a higher proportion of residents with COPD than the national average. The innovation





offers the ability for patients with the condition to manage their own care using digital tools, in a supported self-management model of care.

We were included as a partner in the funding application, providing support on project governance, continuing adoption strategy, and the dissemination of the project's results. We also provided advice on further adoption and spread as part of the project's steering group.

York Health Economics Consortium (YHEC) was commissioned to supply an independent health economic evaluation of Lenus Health's technology. The evaluation showed the following benefits for this technology:

- 50% reduction in A&E attendance by COPD patients.
- 50% reduction in hospital admissions for patients with COPD.
- Improved quality of life reported by patients.

- Over £1,500 cheaper and more effective, per patient per annum, than the current standard of care.

The study at the trust has been led by a respiratory consultant, with input from respiratory nurses who manage COPD clinics. It recruited patients from the hospital following an admission or virtual ward stay, who were then provided with a digital app to self-report and recognise their symptoms, access self-management resources and directly communicate with the clinical team if there was cause for concern. This helped patients to identify and flag when they were at an early risk of exacerbation so that appropriate interventions could be actioned by the clinical team, informed by the data captured from the patient and shared in the services' clinical dashboard.

The trust was encouraged to implement Lenus Health's technology due to strong evidence of success from previous implementations in Glasgow. The new evaluation in Hull

generated similar results, strengthening the case for the continued use of the technology and for further spread and adoption elsewhere.

Together with Humber and North Yorkshire Integrated Care Board (ICB), we are supporting Lenus Health with the further evaluation of this technology. The ICB will also be supporting the dissemination of results of the evaluation undertaken with YHEC to respiratory stakeholders across the region and nationally.



Reducing COPD readmissions in Hull



Improving patient safety by tackling polypharmacy

Problematic polypharmacy is when many medicines are prescribed inappropriately, which can cause side effects, potentially leading to hospitalisation and reducing a patient's quality of life. The Health Innovation Network's polypharmacy programme focuses on improving patient outcomes by optimising structured medication reviews within primary care. We have been instrumental in supporting frontline staff to improve medication management across our region by increasing the uptake and use of the resources available through the programme. More than 160 clinicians have undertaken the training available through this initiative to enhance their knowledge and skills. We have also helped to create a polypharmacy community of practice bringing together

over 80 stakeholders from multiple cohort groups including patients, academia, primary and secondary care. The community of practice helps health and care professionals to feel more confident in supporting patients to engage more in their own care, and stop unnecessary medication. We have also hosted two polypharmacy masterclasses which were attended by more than 170 clinicians.

Our Medicines Safety Improvement Programme reduces the harm caused by opioids prescribed for persistent and chronic non-cancer pain. We are streamlining approaches and messaging across both these programmes to ensure maximum benefit and value is provided to system colleagues and patients.



“**I think the importance of polypharmacy for patients, especially for patients from South Asian backgrounds, is integral. Harm from taking too many medicines, particularly following a care transition such as hospital discharge, can be a patient safety concern.**”

Nazreen But, patient and carer



Addressing Health Inequalities

We collaborate with Integrated Care Systems and other partners including industry, NHS providers, academic institutions and voluntary organisations. This has led to the successful rollout of innovations and new community-led approaches that reach our most underserved communities, improving diagnosis, access, patient experience, care pathways and social prescribing.



Improving care for people affected by sickle cell disease

As a key partner for the delivery of the Medtech Funding Mandate (MTFM) policy, we have been instrumental in expanding access to automated red cell exchange services to improve care for people affected by sickle cell disease.

Sickle cell disease is a debilitating and painful condition that can cause infections, and reduce life expectancy, profoundly impacting the lives of those affected. Automating red blood cell exchanges can help reduce the need for top-up transfusions, effectively manage pain, and lower the risk of experiencing an episode. This condition disproportionately impacts people from West African and Afro-Caribbean communities, and patients who often live in the most socio-economically deprived areas who are at higher risk of both hospital re-admissions and in-hospital mortality.

For this particular MTFM product, we act as the national lead on behalf of the Health Innovation Network. We coordinate the work of all the 15 health innovation networks across England to increase the uptake of red cell exchange Spectra Optia Apheresis System devices in hospitals, where this service is most needed. Our role is to ensure we work closely with key stakeholders including NHS England, the MTFM team, NHS England Specialised Commissioning, NHS Blood and Transplant, Terumo, and the Sickle Cell Society to understand the data in order to prioritise the expansion





of this service in areas where there is a high prevalence of sickle cell patients, but access to care is limited or non-existent.

Thanks to this collaborative effort, we were able to secure £1.5m in funding to work with NHS England Specialised Commissioning and distribute 25 new Spectra Optia Apheresis System devices in 22 trusts across England. This investment in more devices could provide an additional 10,000 apheresis procedures annually, meaning that more people who need automated red cell exchange could access this service.

Co-designing effective sickle cell services

Patient experience is fundamental to designing services that deliver effective care. To do this, we collaborated with NHS England's Patient and Public Involvement and Engagement Team within the Innovation, Research and Life Sciences Group, Haemoglobinopathy Coordination Centres, and the Sickle Cell Society.

Together, we conducted a national survey and webinar. Acknowledging the considerable challenges confronted by patients with this condition in accessing necessary care, the insights gathered from the survey and webinar provided a clearer understanding of the obstacles faced by sickle cell patients in accessing services.

Analysis of the survey results and conversations during the webinar indicated a need for change across five priority areas within the sickle cell treatment pathway:

- More emphasis on informed decision making.
- Better and more appropriate access to out of hours care.
- More thought given to the impact of travel and transport.
- Greater understanding of the barriers in attending treatment: pain, fatigue and waiting times.
- The importance of effective pain relief: the wait, under prescribing and overdose.

We have already implemented several initiatives to improve services. We have worked with Terumo and the Sickle Cell Society to produce an avatar in English and French to help patients understand their treatment options and how automated red blood cell exchange is not just for emergencies, but can be accessed routinely every few weeks by eligible patients.

We are currently helping all ten Haemoglobinopathy Co-ordination Centres across England to look at their sickle cell populations and devise cost-effective options for the expansion of their services.

We are also working with NHS Blood and Transplant to deliver education and training to emergency department staff, enhancing their understanding of the disease and the specific needs of patients seeking care.



Improving care for people living with sickle cell disease



Engaging communities to improve access and outcomes for underserved groups

Health inequalities are estimated to cost the NHS £4.6 billion a year. People in deprived areas, along with Black, Asian, and minority ethnic communities, as well as inclusion health groups like the homeless, face the greatest risk of poor access and health outcomes.

NHS England's Innovation for Healthcare Inequalities Programme (InHIP) aims to tackle healthcare disparities among underserved populations. Working with the three Integrated Care Systems in our region we secured nearly £300,000 of funding from this programme for Yorkshire and the Humber. Through our routine population health

roundtable we were able to clearly identify and narrow our systems' priorities to three distinct projects that have significantly helped to improve the quality of life and care outcomes of the population groups concerned: a respiratory project in Humber and North Yorkshire and two cardiovascular disease (CVD) projects in West and South





Yorkshire. In addition to these three InHIP programmes, we also supported a community-led outreach project in Bradford.

All three InHIP projects have now been completed and an evaluation report has been submitted to NHS England and the Accelerated Access Collaborative for inclusion within the national InHIP report. The West Yorkshire InHIP project evaluation report scored particularly highly, predominantly for providing qualitative patient experience information. NHS England is going to use it as a best practice example for other sites that require further information/iteration.

The total number of patients benefitting across all three InHIP projects:

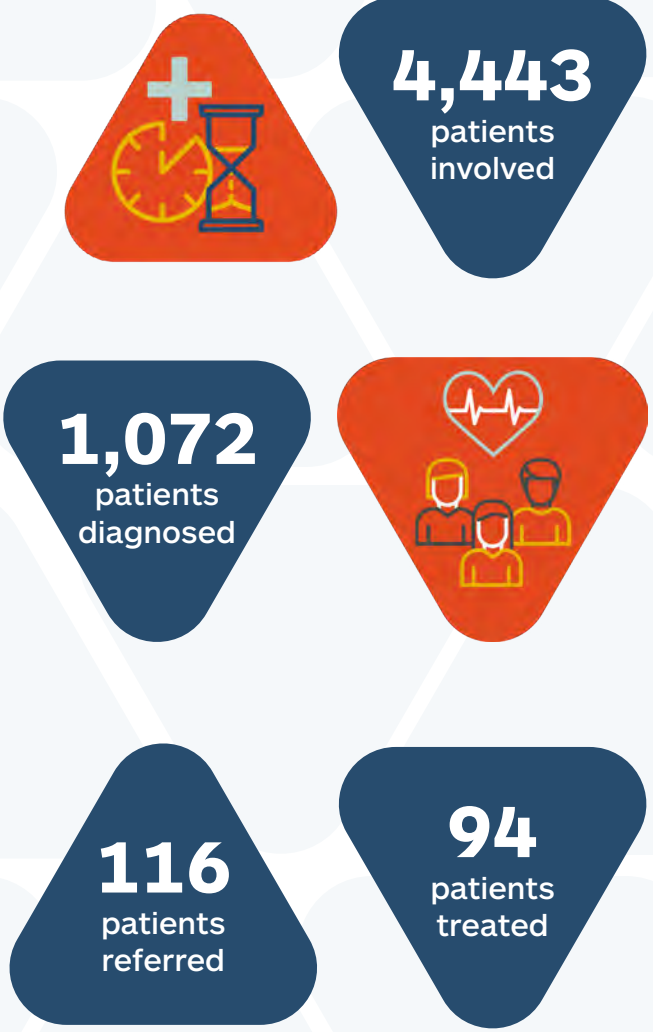
Involved	4443
Diagnosed	1072
Referred	116
Treated	94

Improving access to asthma care across Humber and North Yorkshire

Humber and North Yorkshire Health and Care Partnership initiated an asthma biologics project, which identifies patients with uncontrolled severe asthma in rural and coastal areas where referral rates were lower than expected. The project exposed barriers in the provision of good asthma care and overcame challenges to treat patients effectively, optimising patient care where possible in primary care and referring those with serious uncontrolled asthma to the Severe Asthma Centre in Hull. The project team enlisted the support of local media to notify patients that any contact they received was part of a targeted campaign, urging them to attend clinics if invited. This approach led to higher clinic attendance rates illustrating the need for health education alongside any outreach work.

In total, 22 clinics were scheduled in GP surgeries, increasing access to specialist asthma advice. Throughout

Total number of patients benefitting from our InHIP projects





the life of the project, we played a central role in project scoping, planning, ensuring data analysis was being undertaken and reported on and that governance arrangements and oversight from the respiratory clinical network was robust. We helped maintain local relationships with primary care and provided support to the integrated care system when they were reporting to NHS England.

The positive outcomes for patients include:

- More than **430** health care professionals across Humber and North Yorkshire received severe asthma education to enable them to better support patients.
- A total of **253** severe asthma patients who were potentially eligible for asthma biologics were identified through electronic health record searches.
- **80** patients were then identified and invited for a clinical review.
- **17** patients completed a second review prior to referral for asthma biologics.

Community outreach to improve CVD outcomes in West Yorkshire

In South East Leeds, we supported a community-based CVD and lipid outreach project. We collaborated with community organisations including Leeds GATE, Hamara, and BITMO who were instrumental in facilitating engagement with the Gypsy, Traveller, and Roma communities. The aim of this project was to better meet their health and care needs with a particular focus on point of care testing and outreach care.

This outreach initiative helped the multidisciplinary CVD team within the West Yorkshire Integrated Care Board build strong, trusted relationships with these community groups, welcoming them into traveller sites and homes for further health discussions.

The positive outcomes for patients include:

- **203** people were seen in community settings.
- **180** people received a blood pressure check; **137** people had point of care cholesterol check; **9** people who had no previous cholesterol test were identified as having a cardiovascular risk greater than 20 per cent
- **6** patients started using statins; **9** patients had lipid or blood pressure treatments optimised.
- **1** patient was newly diagnosed with hypertension.
- **42** patients were signposted to a GP and **9** signposted to community pharmacies.

Patient case study

At an outreach event, a male in his mid-60s, residing at a Leeds Council-run caravan site, interacted with the team. Previously, he had attended GP appointments sporadically, during our appointment he was diagnosed with high blood pressure and cholesterol. Due to limited English literacy, the gentleman didn't understand his medications, leading him to stop taking several long-term, important medicines. Through this intervention, the multidisciplinary team were able to reinstate his medications and support him with a comprehensive plan.



Taking blood pressure tests to community settings in South Yorkshire

Working in tandem with the South Yorkshire Integrated Care System, we supported the Barnsley Place CVD and Lipid Community project, an extension of the popular 'How's Thi Ticker?' campaign.

Life expectancy in Barnsley is lower than the national average and there are a significant number of people at high risk of CVD, so it was important to detect the root cause and develop an innovative approach to reach people and encourage them to have a blood pressure test.

The 'How's Thi Ticker?' campaign targets middle aged men by taking blood pressure clinics to community settings such as barber shops, markets, libraries and community centres. Building on this successful prevention initiative, the InHIP project broadened the scope to include community pharmacy referrals for lipid testing if a person's blood pressure was high.

The InHIP project also established a successful partnership with Barnsley Football Club, engaging with targeted demographic groups through their Walking Football and Sporting Memories initiatives. In total, 27 people took part in these physical activity events, and while the numbers were modest, the project team were able to educate participants and conduct heart health testing. This proved effective in reaching the intended population indicating potential for scalability. Using sports facilities for future health checks has the potential to further enhance outreach and impact, fostering continued collaboration between the sports and health sectors.

The positive outcomes for patients include:

- More than **2,000** people (up to February 2024) accessed blood pressure checks and lipid advice and resources, through 'How's Thi Ticker?' community events delivered in areas with high health inequalities. 40% of attendees were identified as having high blood pressure and referred to either a GP or a local community pharmacy.
- Of the Core20PLUS5 population group, **381** patients were identified at risk of coronary heart disease and were not on lipid-regulating drugs; **130** declined optimisation, however **251** were optimised.

The initiative has managed to secure funding to sustain activity and the range of advice areas being offered is being expanded to cover respiratory advice (including smoking cessation) and some early cancer screening, in line with NHS Core20PLUS5 priorities.





Case study

Community-led health checks in Bradford

Working in collaboration with the Yorkshire and Humber Improvement Academy, Bradford Institute for Health Research and Bradford Teaching Hospitals NHS Foundation Trust, we funded the extension of a project to take health checks into the community, including local faith settings and community hubs. The health checks are essential to help identify undiagnosed hypertension, diabetes and cardiovascular disease (CVD) amongst underserved communities, improving accessibility.

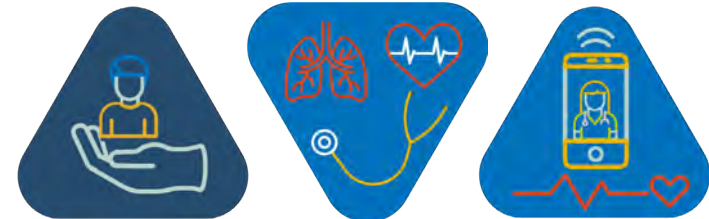
To date the project has assessed 423 patients, of these 153 have been detected with high blood pressure.

Nominated for a health inequalities HSJ award, the project is going from strength to strength, now crossing into other clinical priority areas such as cancer and hepatitis C. Organisations involved in this project have created strong connections with charities such as European Drum to encourage the participation of Roma populations at events, exploring ways to effectively engage these groups through targeted communication strategies and language-specific materials to raise awareness of CVD. This initiative is also supporting pharmacy students to fulfil their training requirements through interesting

placements to bolster clinical capacity. Future plans include the development of an implementation toolkit that will be a useful resource for those who want to replicate this model in their region.

“ During a local community health check event that my friends had organised, I received a diagnosis of hypertension...This incident was a wake-up call that prompted me to make serious lifestyle changes, especially for the sake of my three young children.”

Community member





Working together in research

In South Yorkshire, a significant portion of the population faces reduced life expectancy and prolonged periods of ill health, with disparities existing among different communities. Tackling these challenges requires a strong emphasis on inclusive research.

To effectively address this issue, health and care research must focus on understanding the experiences of underserved populations and actively involve historically marginalised groups.

Our South Yorkshire Innovation Hub has been working with the South Yorkshire Voluntary, Community and Social Enterprise (VCSE) Alliance, the South Yorkshire Integrated Care Board (ICB) engagement

team, the Yorkshire and Humber Clinical Research Network, and the Applied Research Collaborative on a programme of work to diversify public participation in research, called 'Working Together in Research'.

In partnership with the VCSE Alliance programme director and voluntary community sector partners, we led on the co-design of a successful bid to NHS England for just under £100,000 of funding to encourage closer collaborations between





voluntary community sector partners, research partners and our communities to ensure that no-one is excluded from research.

All this funding was invested into VCSE organisations in South Yorkshire through:

- VCSE-led workshops to identify barriers and new co-design ways of working that will build strong community and researcher partnerships for future research.
- A grant programme, through which just under £40,000 of funding was awarded to 10 local VCSE organisations. This funding was used to capture and share valuable insights on how communities who are too often marginalised from health and care services and research want to be involved and engaged.

For the hub, this has been a fantastic opportunity to build closer relationships with voluntary and community partners, and the programme is a great example of

what collaborative working between different partners can achieve in breaking down barriers and ensuring we are more inclusive in the way we work.

Through the programme, we have developed:

- A set of principles that set out what community organisations in South Yorkshire value when it comes to building strong partnerships around research.
- A maturity matrix that helps research partners to self-assess where they are in their own journey to building high-quality, inclusive research partnerships against the standards communities have told us they want us to aspire to.

We are now working with partners, and the South Yorkshire ICB, to take forward the proposals for how we bring these principles to life and embed them into practice, building on the relationships this programme has kick started.

Working Together in Research programme awarded:





Driving **System Transformation**

Enhancing productivity in health and care requires a multifaceted approach that incorporates innovation, streamlined processes, and an empowered health and care workforce.

Supporting the wellbeing and professional development of the healthcare workforce is crucial. We work on a range of national and regional projects to increase flexibility in scheduling, optimise capacity, and upskill staff in specific areas including digital innovation and transformation. We also support the NHS in its efforts to transform its approach to sustainability, reduce its carbon footprint and promote net zero practices.



Enhancing workforce flexibility and reducing agency reliance

More than 1,400 members of staff have joined the first non-medical mental health collaborative staff bank. The initiative, which supports the movement of the workforce across organisations, was developed in conjunction with three mental health trusts. In its early stages, it has already enabled an increase in shift fill rates and a decrease in agency spend.

As workforce shortages continue to be one of the largest challenges facing the NHS, a situation exacerbated by the COVID-19 pandemic, there is a need for improved management systems for the existing workforce. With a focus on enhancing flexibility to improve outcomes in population health and health

care, the collaborative staff bank reflects NHS England's priority to build capability and capacity, as highlighted in the NHS Long Term Workforce Plan.

Since 2021, we have been working closely with three mental health trusts to successfully implement a collaborative staff bank for





“ The project has been highly complex, and we’ve faced several challenges around aligning processes, practices and training.... However, working together with representatives across the three trusts and Health Innovation Yorkshire & Humber, we’ve been able to work through these challenges and develop collaborative solutions. The support from Health Innovation Yorkshire & Humber has been pivotal to successful delivery of the project.”

Sonya Robertshaw, Workforce Project Lead, Mental Health, Learning Disabilities and Autism Programme

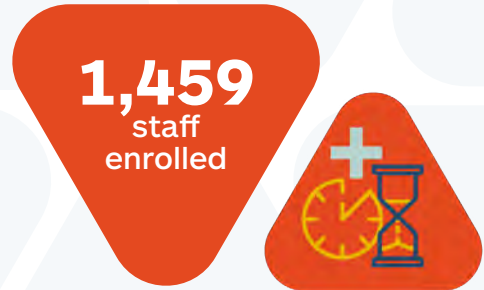
support workers, registered nurses, admin and estates professionals, allied health professionals and scientific and therapeutic workers. Members of staff who have joined the staff bank have had the opportunity to book more shifts and work flexibly across a wider variety of trust sites and services.

The initiative piloted in December 2023, with seven volunteers from Leeds and York Partnership NHS Foundation Trust, South West Yorkshire NHS Foundation Trust

and Bradford District Care NHS Foundation Trust testing the new system and highlighting any issues. At the end of January 2024, the bank formally launched for all support worker and registered nursing staff, and within 48 hours the trusts had seen over 200 members of staff opting to join on the bank’s microsite.

There are now 1,459 members of staff enrolled. We are continuing to see an increase in the number of shifts being picked up and a

Impact of the Mental Health Collaborative Staff Bank:





decrease in unfilled shift rates. Following the pandemic in 2021-22, the number of unfilled hours seen across the three organisations was approximately 111,591 hours per quarter. Following the launch of the staff bank the trusts have seen this reduce significantly to 49,928 of unfilled hours per quarter. Staff feedback has revealed that they felt the process of joining and taking shifts via the bank was easy and organised and shared that colleagues at other trusts had given them good inductions and were helpful and friendly.

Following this success, other staff groups will be added to the new bank further increasing the workforce size in understaffed areas and enhancing patient safety and care. There is also potential for this model to be adopted by other acute trusts in the future and combine resources with the mental health trusts, keeping both patients and staff safe and supporting new ways of collaborative working.



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Digitally upskilling the primary care workforce

A nine-week pilot programme designed to strengthen the digital innovation, transformation, and improvement skills of the primary care workforce has successfully increased the knowledge and confidence levels of participants so that they can implement digital innovation back in their practices and create more efficient ways of working.

The Digital Ambassador's programme is a collaboration with the West Yorkshire Health and Care Partnership and is delivered through the West Yorkshire Innovation Hub's Primary Care Innovation Collaborative. The course develops skills on topics such as digital inclusivity, innovation to drive down health inequalities and regulatory requirements for digital technology. The course also helps delegates to successfully implement these skills in their everyday work by providing a blend of real-

world expertise with theoretical knowledge.

The implementation of the programme included undertaking a needs assessment across the system and primary care networks in West Yorkshire through stakeholder engagement and knowledge sharing to help define the programme objectives.

It was carefully designed and continually developed to ensure that the skills of our existing workforce are enhanced,





arming them with digital skills and tools to create greater productivity and efficiency in primary care. The time commitment for staff was as low as 1.5 to 2 hours per week and each session allowed experts with real-world experience to deliver immersive workshops to support participants with the practical application of transformation and innovation skills.

The course content covered: understanding inclusive digital transformation, how it can help reduce health inequalities and understanding your organisation's digital readiness. It also champions the importance of patient and public involvement, co-design, and safeguarding the future of healthcare services. Delegates were provided with relevant tools and templates to support them back in their own organisations.

The initial cohort of ambassadors have fed back positively about the programme, with evaluation showing that the sessions were instrumental in building knowledge of the different aspects of digital transformation and innovation and confidence about skills increasing significantly between the start and end of the programme.

Feedback showed 94% of delegates improved their confidence in applying digital transformation over the course of the programme with a survey showing confidence had increased across all areas. Notably there was a 50% increase in innovation identification with only 33% stating they were 'somewhat' or 'very confident' in innovation identification pre programme increasing to 83% post programme, while confidence identifying barriers to change increased to 94% from 66% pre-programme.

“ I have a deeper understanding of what my role and responsibilities are in supporting my teams to be open to innovation. I can recognise now that I need to clearly define what the problems are that I need to solve, to design or purchase solutions which directly improve the problem and support staff throughout the process.”

Cohort member

Impact on delegate's confidence after having received Digital Ambassador training





Working towards a Net Zero NHS

The NHS is the first health service to commit to delivering net zero carbon emissions to tackle the climate crisis. We are supporting several sustainability programmes including partnering with Humber and North Yorkshire Health and Care Partnership to deliver a green award programme celebrating innovative projects that demonstrate carbon reduction potential with 172 tonnes of CO2 equivalent saved within 12 months.

The Sheep Shed Green Award Programme celebrates carbon reduction projects that have been identified by staff and helps progress them into action. Each of the innovations from this programme were required to demonstrate how simple changes will continue to support high-quality patient-centred care whilst protecting the environment and NHS resources for future generations.

We managed the programme, which offered up to £50,000 of funding, from inception through to award. 31 submissions for funding were received, with applications linked to waste management, estates, travel, and models of care. 11 applicants were invited to interview with five awards commencing activity. Projects included:

- A medicinal waste recycling scheme project





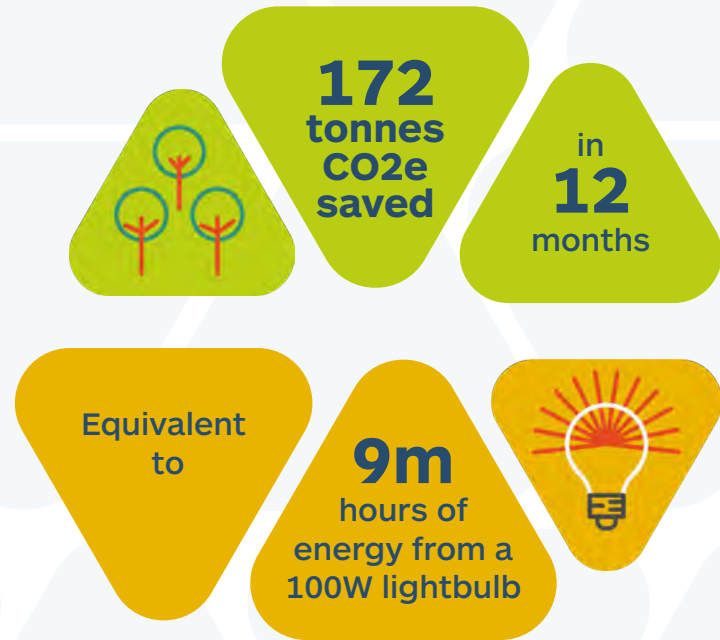
in York that enabled patients in the York area to recycle medicinal waste rather than adding to landfill. In the first 12 months, the scheme has recycled 180,000 medicinal strips weighing 1.7 tonnes equating to 6 tonnes of carbon dioxide equivalent (CO₂e).

- In Hull, we supported the implementation of food waste collection from patient wards across two hospitals. The new waste stream has displaced 35 tonnes of CO₂e within its first year and the project has now expanded to more wards across both hospitals.

- The Sheep Shed Green Award programme also supported the development of greener asthma guidance for clinicians when conducting asthma reviews to help deliver carbon reductions alongside excellent clinical care. The project has demonstrated a reduction in the asthma inhaler footprint across Meridian Primary Care Network, which covers six GP practices, saving 131 tonnes of CO₂e within nine months.

Together, these projects have saved a total of 172 tonnes CO₂e, equivalent to saving 9m hours of energy from a 100W lightbulb.

The winning projects in the Sheep Shed programme saved:





Stimulating Inclusive Economic Growth

Our work with UK innovators to export their products into the global arena, as well as with international companies to import their solutions to Yorkshire, actively contributes to the region's economy and further develops the life sciences industry.



Growing HealthTech and life sciences in Yorkshire and the Humber

Our work with innovator companies is a central aspect of our role as we seek to help health innovators flourish and stimulate growth in the HealthTech and life sciences sectors to improve health, and create a thriving economy in our region.

Over the last three years, we have spent approximately 8,924 hours supporting 1,013 companies ranging from small and medium-sized enterprises (SMEs) to individual clinical entrepreneurs and innovators, learning about their products and assessing how we can best guide them according to their needs. Bespoke support has been provided including assistance with evidence generation, market access, adoption strategy, evaluation and access to finance.

We are dedicated to fostering advancements in health technology and life sciences, particularly through our commitment to assisting

innovators in securing grant funding. Our support plays a pivotal role in enabling these innovators to access the resources they need to drive impactful change and breakthroughs in healthcare. In 2023-24, we have supported 45 companies with grant applications to the National Institute for Health and Care Research (NIHR), Innovate UK, SBRI and other regional and national funders. Of these, we know that 16 have been successful, leveraging £17.3m of investment into our region.

We have also supported multiple successful funding bids ranging from funding for digital transformation projects, to projects





which support early cancer detection and innovator support packages. And we also helped applicants with business development, project management or planning their adoption strategy.

Some of the highlights include:

- We supported PinPoint Data Science with a successful application to Small Business Research Initiative (SBRI), from which they received £700,000 of funding to undertake further evidence generation for their game-changing, AI-driven blood test for cancer which is designed to optimise the NHS two-week wait urgent referral pathways.
- We partnered on a bid with the University of Huddersfield who received £3.8m of funding through the West Yorkshire Shared Prosperity Fund to develop a Health and Wellbeing Innovation Centre.
- We have supported each of the three regional Integrated Care Boards (ICBs) to receive between £500,000-£900,000 of funding through the HealthTech Adoption and Acceleration Fund to

accelerate projects that will meet the needs of their populations. We will continue to support each ICB with the delivery of their initiatives.

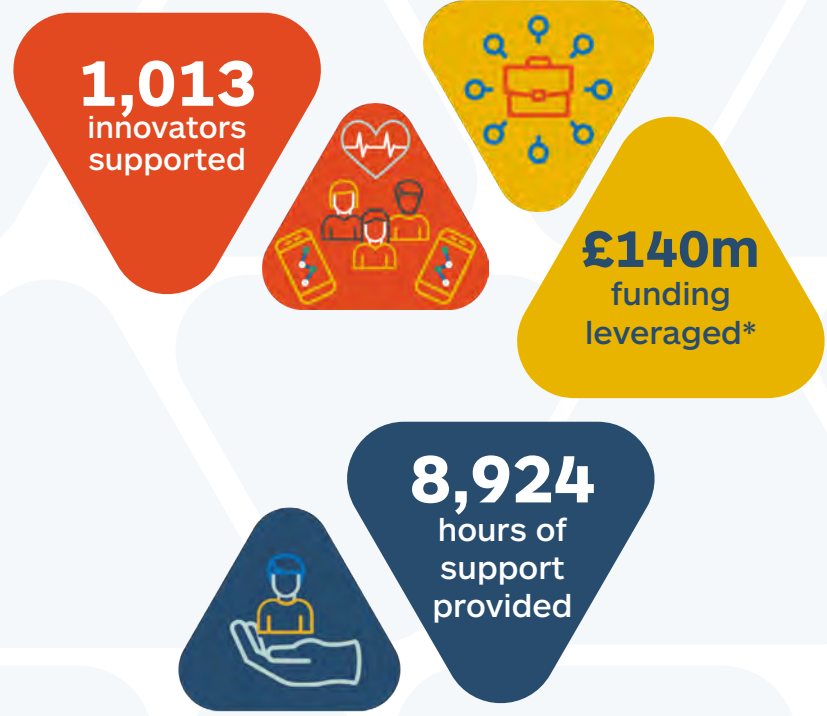
In addition to the above successes, we have also played a crucial role in facilitating other funding applications. We supported FemTech companies in their applications to Innovate UK's Biomedical Catalyst. This assistance stemmed from our collaborative efforts running a FemTech accelerator alongside our partners from Health Innovation South London.

Within our broader strategic mission throughout West Yorkshire, we are dedicated to fostering inclusive economic growth. In the last year, the West Yorkshire Innovation Hub has played a pivotal role in catalysing investment across the region. Notably, we contributed as a co-author to a successful Innovate UK proposal, securing £7.5m for the West Yorkshire area to propel HealthTech innovation forward.

West Yorkshire fought off competition from nearly 40 other areas to secure the new investment. The hub worked alongside partner organisations such as: West Yorkshire Health and Care Partnership, Leeds Teaching Hospitals

NHS Trust, the Universities of Bradford, Huddersfield and Leeds, as well as industry partners at Medilink North of England, Medipex, and the Association of British HealthTech Industries. We are proud to have been a part of the bid that brought this opportunity into our region, and as companies will be able to bid for funding of up to £1m, the launchpad programme will also further support our ambition of inclusive economic growth.

Over the last three years our work to support economic growth in our region has led to:



*Funding secured through a combination of locally driven partnerships and our support for Integrated Care Boards' bids.



Turbo-charging digital health innovation

Our Propel@YH accelerator programme supports HealthTech innovators to implement their digital solutions in the Yorkshire and Humber region.

Propel@YH is our digital health accelerator programme that provides companies developing digital health solutions with a six-month course of bespoke support and content aimed at enabling accelerated company growth and adoption, so that our region's population can benefit from new technology first.

Now celebrating its fifth year, the programme has supported over 100 innovators. It provides them with a series of 10 masterclasses covering

crucial topics including funding, finance and legal, and three months of 1-2-1 support and mentoring. The programme is funded by our commission from the Office for Life Sciences.

In 2023-24, we supported 11 innovators including:

- **Doctoria:** a real-time clinical interpretation tool dedicated to ethnic minorities.
- **Inicio:** which delivers clinically-led, patient-centred digital solutions for health.





Find out more about our Propel@YH 2023-24 programme

- **MAIYA:** an automated assistant that provides primary care with the management of long-term conditions.
- **MediTask:** a mobile app that connects medical students to doctors, supporting clinical skills.
- **MyOpNotes:** a digital platform that streamlines writing operation notes and improves medical coding accuracy.
- **EnrichMyCare:** a personalised health and care monitoring platform that accelerates care for children and young people.
- **Neu Health:** which makes the latest Parkinson's and dementia care accessible for all.
- **Optimise BP:** which automates the management and screening of hypertension.

- **THEIA AI:** which develops AI supported software to support decision making in neurology.
- **Pogo Digital Healthcare:** which provides personalised medical information and symptom tracking for people living with long-term conditions.
- **Sympa Health:** the next generation of women's AI powered digital therapeutics, personalised treatment plans and expert support.

Our partners

Our delivery partners use their expertise to support the innovators with their journey into the NHS. This year, we have expanded the Propel@YH partner programme from five organisations to ten, including, Leeds Teaching Hospital NHS Trust's Innovation Pop Up, which assists innovators with clinical engagement and real-world validation projects.

Other partners include: Nexus, University of Leeds, for networking, Barclays Eagle Labs for funding and finance, Hill Dickinson for legal advice, Prova Health covering evidence and evaluation, Par Equity for investment and fund raising, 6B for system integration, Quiddity Health for business support, CDS for user centred design and reducing health inequalities, DigiSafe for clinical safety and Acord Compliance covering Digital Technology Assessment Criteria (DTAC).

We have also worked closely with national and local government organisations including the Department of Business and Trade, West Yorkshire Combined Authority and Leeds City Council.

Supporting and working in partnership with our local NHS system has also been enhanced through collaboration with our local Integrated Care Boards via our Innovation Hubs and the Humber



and North Yorkshire Innovation, Research and Improvement System (IRIS) initiative.

We funded six months of support through Nexus for the 11 innovators and funded nine SMEs for innovation support via the Leeds Teaching Hospitals NHS Trust's Innovation Pop Up.

This year, we were also pleased to see that Propel@YH alumnus, MyOpNotes, secured Innovate UK grant funding to support the integration of its digital platform for surgeons in the NHS, improving patient outcomes and enhancing hospital efficiencies.

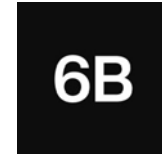
“The programme was really well thought out, prepared well, with excellent facilities.”

James Davis, Inicio CEO



Hear from our Propel@YH cohort

Propel@YH partners



HILL DICKINSON





Case study

Leeds Teaching Hospitals NHS Trust's Innovation Pop Up

This year we have worked closely with the Innovation Pop Up. By engaging with their innovation leads we identified the value they could bring to the Propel@YH cohort. This included providing a briefing session to the cohort covering the trust's strategy, priorities for innovation, the building of its new hospitals and its 'Building the Leeds way' initiative.

As part of Propel@YH, we also funded nine of the innovators to become members of the Innovation Pop Up scheme. This will give them access to the innovation team who will work with them to showcase their solutions and provide crucial access to their clinical and procurement teams.



Working with the Propel@YH team has been a great experience for us, helping the trust understand the potential of the innovators and identify products that can fulfil our unmet needs."

Richard Evans, Leeds Teaching Hospitals NHS Trust's Innovation Pop Up



Hear from our Propel@YH 2023-24 partners

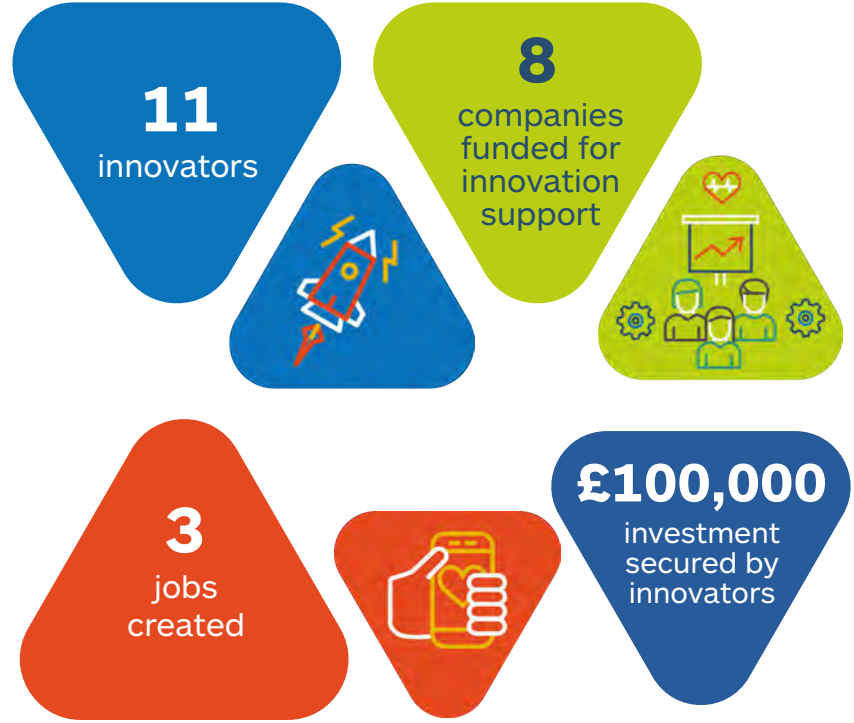


“ I have thoroughly enjoyed being part of this year’s cohort. Both my co-founder and I are currently at the end of our PhDs and have not had any previous experience working in/ with the NHS. The Propel@YH accelerator put all the information we could possibly need into one place about integrating into the NHS and understanding the processes required. It has also been valuable to hear from the other companies about their experiences and struggles. There is no doubt that this accelerator will prove to be useful as we enter the NHS landscape.”

Joe Sims, Co-Founder, THEIA AI

The Propel@YH cohort deployed their products into five new clinical settings. One of the cohort members raised **£3.6m** in investment. Another of the cohort, MAIYA, implemented its solution in a Sheffield GP Practice. Neu Health also won a contract with Leeds Teaching Hospitals NHS Trust in March, in line with the end of the programme.

Propel@YH by the numbers:



Find out why Leeds is the home of Propel@YH





Supporting international innovators

Our Propel@YH Boot Camp programme is designed to help international innovators launch their solutions into the NHS market. This ensures that people and patients in our region benefit from the latest health innovations as quickly as possible. Inward investment also bolsters the regional economy through the generation of new jobs created when these companies establish themselves in Yorkshire and the Humber.

The programme is designed for innovators outside the UK and builds on the success of Propel@YH. The five-day programme of intensive support and masterclass content, provided by our expert partners, gives innovators a crash course on the UK healthcare market, access to subject matter experts and the opportunity

to engage directly with NHS stakeholders, as well as the wider HealthTech ecosystem in the Yorkshire and Humber region.

This year has been pivotal for our Propel@YH International Boot Camps, with our first year of providing a structured programme of masterclasses, networking and 1-2-1 support





for international HealthTech innovators looking to export their technology into the UK. Over the last 12 months we have delivered the Boot Camp to Indian, Canadian and Nordic cohorts of innovators.

The Boot Camp is delivered with the same partners who deliver the main programme.

We also work in collaboration with a wide range of supporting organisations including:

UK government organisations

- Department of Business and Trade
- West Yorkshire Combined Authority
- Leeds City Council

NHS partners

- Humber and North Yorkshire IRIS team
- West Yorkshire Innovation Hub
- South Yorkshire Innovation Hub

International partners:

- Nordic Innovation
- Government of Ontario
- British Deputy High Commission Bengaluru

Boot Camps delivered in 2023-24

Our first Canadian Boot Camp was delivered in 2023 in collaboration with the Government of Ontario and we supported six innovators. In January 2024, we delivered our second Nordic Boot Camp in collaboration with Nordic Innovation.

India Boot Camp

The India Boot Camp was delivered over two events, the first involved our team and a delegation of staff from West Yorkshire Combined Authority and the Department of Business and Trade going out to India and delivering three days of Propel@YH content to a cohort of 25 Indian Innovators. The second event involved a UK visit of 11 Indian innovators coming to Leeds to attend a further three days of masterclasses and a networking event.

Having attended the Propel@YH India Boot Camp, LarkAI Healthcare has been working with global partners to explore opportunities. The company has raised \$500,000 in investment and additional government grants, recruited a sales director and during Arab Health, showcased its technology with the UK government, West Yorkshire Combined Authority and the Department of Business and Trade. LarkAI Healthcare is currently in the process of recruiting 25 people and opening an office in Huddersfield.





Case study

Hyivy Health lands in the UK

Hyivy Health has created a pelvic rehabilitation system for women dealing with a tight pelvic floor.

After the 2023 Canadian Boot Camp, Hylvy Health recruited a UK Account Director, officially opened a subsidiary in Leeds and is now in several exploratory talks for clinical trials with key partners including the University of Leeds and the University of Sheffield. They continue their progress with support via the Advanced Wellbeing Research Centre in Sheffield through its Advanced Wellbeing Accelerator programme.



Rachel Bartholomew, CEO & Founder, Hyivy Health

Norwegian innovation combats overcrowding in hospitals

Norwegian healthcare business SmartCrowding is striving to tackle an ongoing issue in the health industry, developing software for hospitals to reduce overcrowding through patient flow and planning.

After the Nordic Propel@YH Boot Camp, SmartCrowding has made strong connections in the domestic market with the help of Nexus, University of Leeds. The company is now working to expand its network in Leeds and is looking to hire someone to represent the company in the UK from this year.

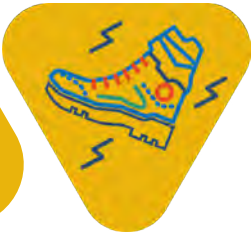


Thomas Ims, Business Developer, SmartCrowding



Propel@YH International Boot Camps by the numbers:

4
Boot Camps
x1 Nordic
x1 Canadian
x2 Indian



39
innovators
supported

£90,000
spent in the
local
economy

6
UK jobs
created



£3.7m
investment
secured by
innovators



6
companies
established
in West
Yorkshire



9
companies
established
in the UK



Horizon scanning for new innovations

Each year we undertake horizon scanning to identify current unmet demands that can be tackled by innovation. We organise innovation exchange webinars for the NHS across our region, which enables our team to support innovators and showcase their solutions to the health system, as well as providing valuable insight in the art of the possible.

By using the data in our innovation pipeline as well as that of the wider Health Innovation Network, we carry out horizon scans and run events and workshops that bring together proven innovations to address and explore specific needs and challenges.

These incoming requests from the NHS include asks for strategic planning, supporting the case for

change, procurements, market horizon scanning, due diligence, and support with funding where appropriate.

We have a clear purpose for these activities:

- Kick-start focused discussions on delivering innovation.
- Provide our innovator and NHS stakeholders with valuable insights.





- Bring together NHS and industry to help inform all parties and to support the case for change and develop funding bids.
- Showcase the proven innovations in our pipeline and aim to deliver further spread and adoption.
- Lead onto further innovation exchange events or collaborative roundtables to better understand opportunities.
- Enable our enterprise and innovation team to better support innovators by communicating priorities.

We continue to work closely with our colleagues and our Innovation Hub teams embedded within West Yorkshire Health and Care Partnership and South Yorkshire Integrated Care System. This approach has empowered us to communicate the horizon scan and demand signalling services we offer, highlighting the substantial benefits for both innovators and NHS partners. By adopting this collaborative method, our team gains insight into the priorities of the Integrated Care

Systems (ICSs) in our region, as well as an understanding of the challenges faced by their wider teams. Ultimately, it enables us to customise our offerings for our NHS partners and facilitate introductions between innovators and NHS leaders, fostering initiatives that align with both our commission from the Office for Life Sciences and the evolving needs of the NHS.

In the past year, we have run more than 30 horizon scans, showcasing over 350 innovations for a variety of organisations including cancer alliances, acute trusts, NHS providers, Integrated Care Boards (ICBs), local authorities and NHS Blood and Transplant.

After conducting these horizon scans, the findings are disseminated extensively, fostering deeper discussions, and empowering a range of teams within trusts and organisations to benefit. Themes have been wide and varied, from workforce, cancer, radiology/pathology AI to children’s mental health, urgent care and process automation.

This year, we have conducted:

30
horizon
scans

showcasing
350
innovations

We ran and supported:

14
demand
signalling
events

attended by
more than
240
people

We have run and supported 14 demand signalling events attended by more than 240 people including a wide range of partners across our region. These have included our ICS colleagues, Innovate UK, West Yorkshire Combined Authority, charities, and academia. This collaborative approach has helped to bring the NHS, researchers, funders, and businesses together providing a platform to share challenges, generate evidence for innovation and encourage further spread and adoption of proven technology across the health and care system.



Case study

Following these events, connections between industry and the health system are made, beginning the first step in the process of adopting innovation to solve unmet needs. Below are examples of how this approach supports the needs of our NHS partners.

South Yorkshire ICB urgent care roundtable

A great example of this was the virtual roundtable event we delivered with the South Yorkshire Innovation Hub team alongside the South Yorkshire ICB lead for urgent emergency care and the Director of Yorkshire Ambulance Service.

Following an ICB board meeting where urgent emergency care was identified as a priority for innovation support, our Innovation Hub team invited us to discuss the needs of the system. The objective was twofold: to gain deeper insight into the technology landscape and to explore piloting solutions within an emergency department.

We initially provided a horizon scan on relevant technology which was discussed and shared more widely with the ICB team. Following agreement, we then shortlisted relevant innovators to form part of a workshop and we developed a joint event to enable operational and clinical staff to discuss the challenges with innovators and support the case for change. Stakeholders included Yorkshire Ambulance Service, urgent emergency care leads from South Yorkshire trusts and several innovators with experience in this specialty.

The event delivered a positive and open discussion with those attending enabling both NHS and industry to better understand the landscape and to start scoping a potential project for the winter to trial in the region. The workshop allowed the group to agree on the opportunities and challenges inherent in operating within the complex environment of emergency departments. It also helped to identify patient cohorts for a potential trial during the course of this year.

Cross-partnership demand signalling

We also developed and ran a roundtable event with West Yorkshire Combined Authority and regional Innovate UK teams as part of their Innovate UK West Yorkshire showcase event. This aligned with the launch of West Yorkshire LaunchPad, a £7.5m investment to support local business growth in the HealthTech sector thanks to a partnership between Mayor of West Yorkshire and Innovate UK.

Following on from the event, we have supported 13 applications from innovators in collaboration with NHS partners. This support ranged from providing advice and review of the applications, through to introductions and act as a delivery partner as part of the project. In a highly competitive programme, four projects were successful in securing a total of £1.5m in funding.



West Yorkshire Cancer Alliance horizon scan

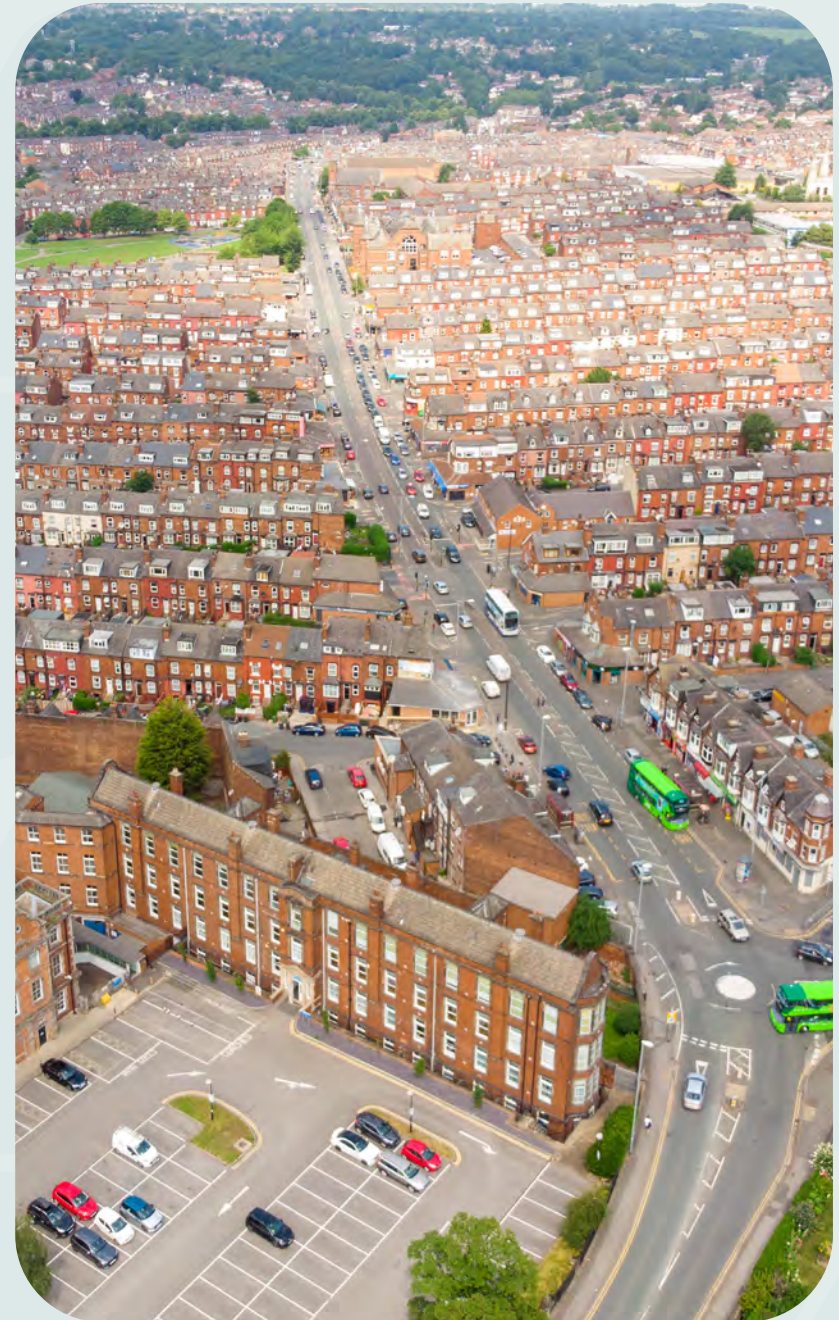
We have a long-standing and productive relationship with the West Yorkshire Cancer Alliance including supporting and attending their board meetings, working in partnership on innovation funding projects and providing informal support for strategic and innovation planning. As part of these activities, we were approached to provide a horizon scan on clinical decision support tools. Following review and discussion the horizon scan

was shared more widely within the Cancer Alliance and was used to drive discussion on a potential procurement of such a tool.

As part of the process the Cancer Alliance selected a small cohort of companies who appeared on the horizon scan. We went on to collaborate on the production of a showcase event where clinical, operational and management teams could attend to better understand the solutions and help to inform the requirements for the various teams.

“ Health Innovation Yorkshire & Humber worked closely with us to shortlist the most appropriate companies, culminating in an event where the companies showcased their services. This event proved very enlightening and informative, helping us to gather valuable information to use in the future.”

Helen Ryan, Innovations Programme Manager at West Yorkshire and Harrogate Cancer Alliance



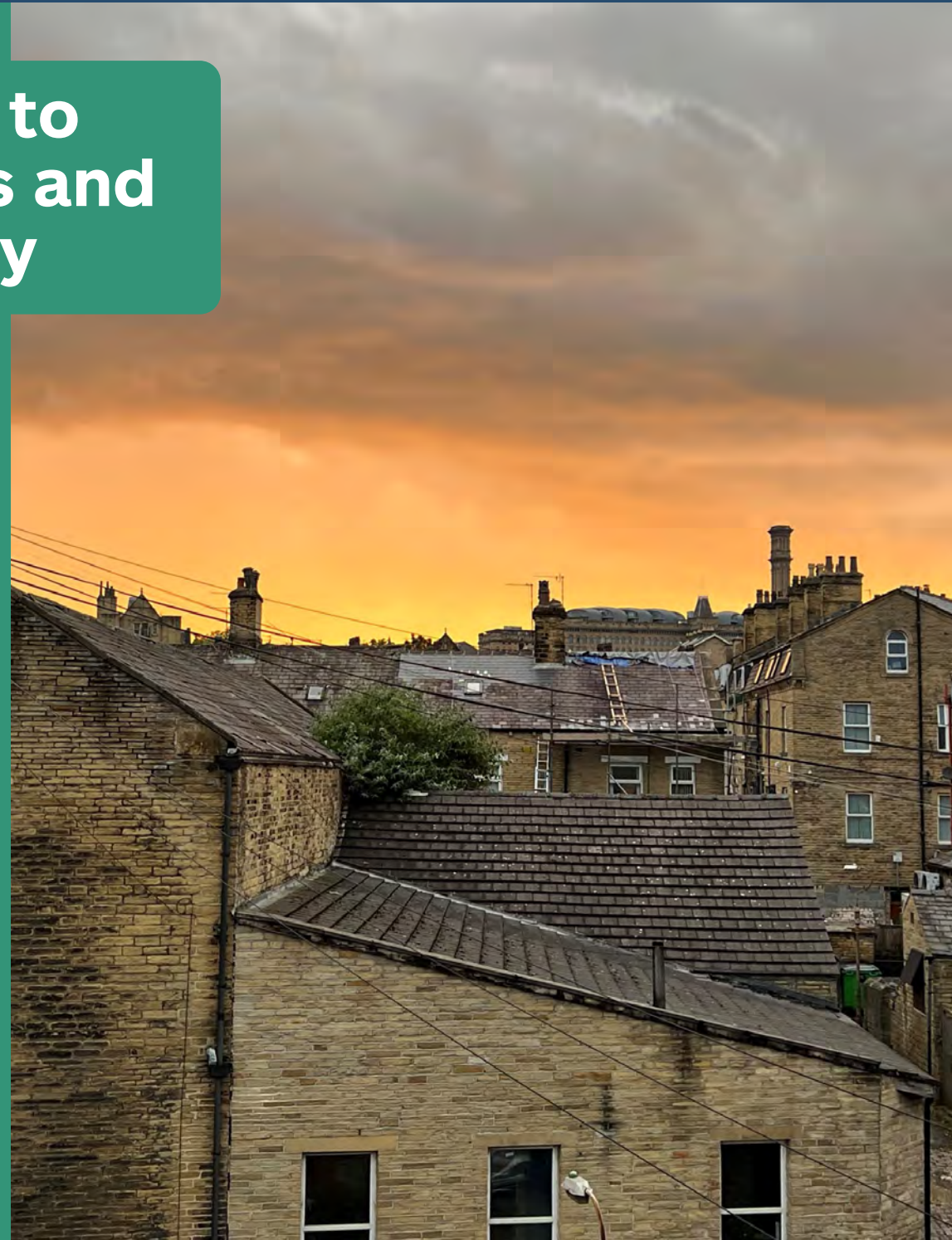


Empowering local places to improve health outcomes and tackle economic inactivity

Our purpose remains firmly focused on improving the health and prosperity of our region: using the power of innovation and new ideas to tackle long-standing inequalities and challenges. Previous sections of this report discuss specific examples of how we are working with system partners on initiatives to tackle health inequalities, enhance productivity, and improve life outcomes. In this section, we highlight the work we are doing to support our region's leaders and how we are creating the conditions for purpose-led, place-based partnerships to flourish.

The need for action

Our [YHealth for Growth campaign](#) has demonstrated the unbreakable link between health and the economy. It is well known that being in good employment raises living standards and helps develop physical and mental wellbeing. Similarly, being out of work or a prolonged absence from it, can lead to deterioration in health and wellbeing due to financial strains and the lack of psychological and social support. The impact of being out of work goes beyond the individual. Good employment is a key factor of health and prosperity for families and communities. It contributes towards wider regional economic growth through increased productivity and supports many of the foundations for levelling up





communities, delivering against ambitions outlined in the government’s [Levelling Up White Paper](#).

As far back as 2010, Sir Michael Marmot’s landmark report showed the nation’s health was deteriorating and gains in life expectancy were beginning to stall. Since then, Sir Michael’s work has continued to show health inequalities are rising, the time people spend in poor health is increasing, and the gap in healthy life expectancy between the most and least deprived areas of the UK is now almost 20 years. The impact of COVID-19 on the nation’s health was vast, but the impact was even more apparent in areas of the country already suffering with poor health, further driving increases in the healthy life expectancy gap.

This means that understandably, worsening population health is also clear to see in recent economic measures. The number of working-age adults who are out of work because of long-term sickness has been rising since 2019, from around 2m people in spring 2019, to about 2.8m in summer 2023. Similarly, total employment in the UK fell following the pandemic and still has not recovered to pre-pandemic level.

Evidence shows that the reason for increasing unemployment is people not able to work or not actively looking for work, rather than people who are unemployed searching for work and unable to find employment. This clearly points to the worsening health of the population: people are increasingly becoming economically inactive due to poor health. Data also shows that the UK has a higher level of preventable ill-health (e.g. smoking and other lifestyle factors) than its European counterparts,

The national, northern and regional picture reinforces the need for a new approach to improve health and economic wellbeing

much of which is driven by socioeconomic factors. This poses two questions. How can we help those who have fallen into ill health and become economically inactive following the pandemic to improve their health to support themselves as individuals? Secondly, how can we prevent people in areas with greater socioeconomic challenges from falling into preventable ill-health and instead, stay in good employment which supports their physical and mental health?



National:

£180bn a year

the cost of health-related economic inactivity to the UK

Northern:

£13.2bn a year

in lost productivity for UK plc as a result of health inequalities in the North

Yorkshire and Humber:

Third lowest life expectancy

in England for both males and females



It is clear this cannot be ignored. With increasing reductions in productivity and widening gaps in life outcomes between the North and the South and between affluent and deprived areas, targeted activity is required now.

The regional context

The vast difference in life outcomes between North and South are clear to see through Yorkshire and the Humber's performance on key health and economic outcomes.

Importantly, due to the delay in available data, it's expected the worsening trends outlined in the statistics will increasingly have a negative impact the region's health and economic outcomes.

How Yorkshire and the Humber is already embracing the need for change

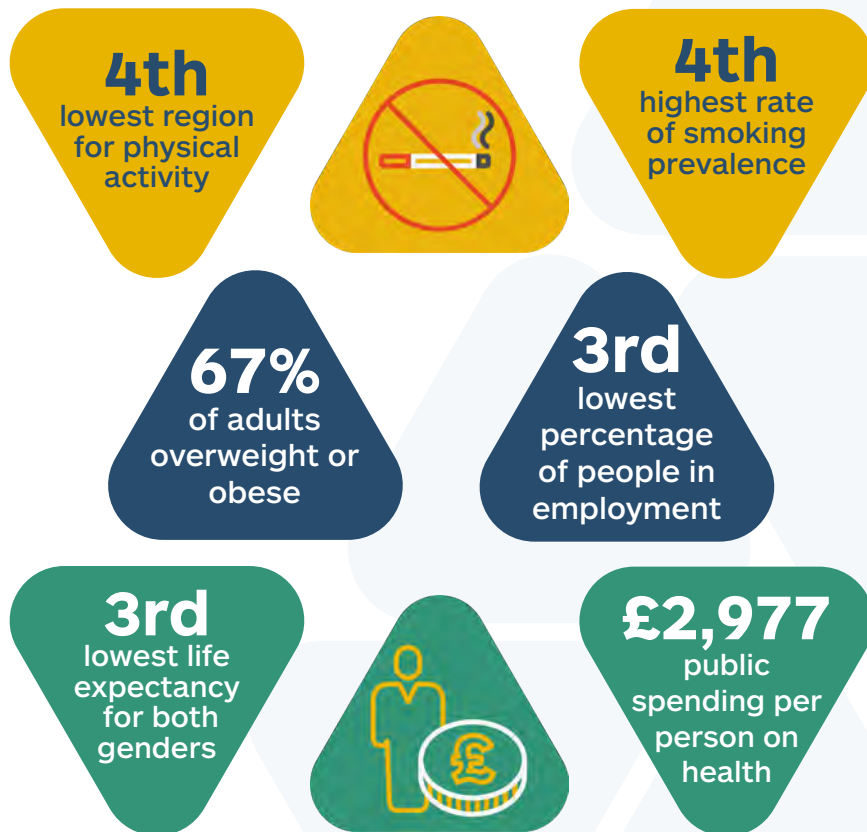
Yorkshire and the Humber has a strong track record of partnership working across the region, between sectors, and with national partners. In addition, the region has a wealth of assets which can support it to improve its health and economic outcomes.

Championing our locality and bringing together cross-sector partnerships is central to our work. This, combined with the region's desire for partnership working and wealth of assets, means we can tackle the long-standing challenges faced across the area to improve life outcomes and tackle economic inactivity.

- We are supporting The University of Huddersfield to develop its National Health Innovation Campus (NHIC). This pioneering new centre's mission is to improve health outcomes and lead innovation in healthcare.
- Our innovation hubs, in partnership with South Yorkshire Integrated Care System (ICS) and West Yorkshire Health and Care Partnership, continue to develop greater engagement between ourselves and ICSs, focusing on innovation to address local health and care needs and priorities.

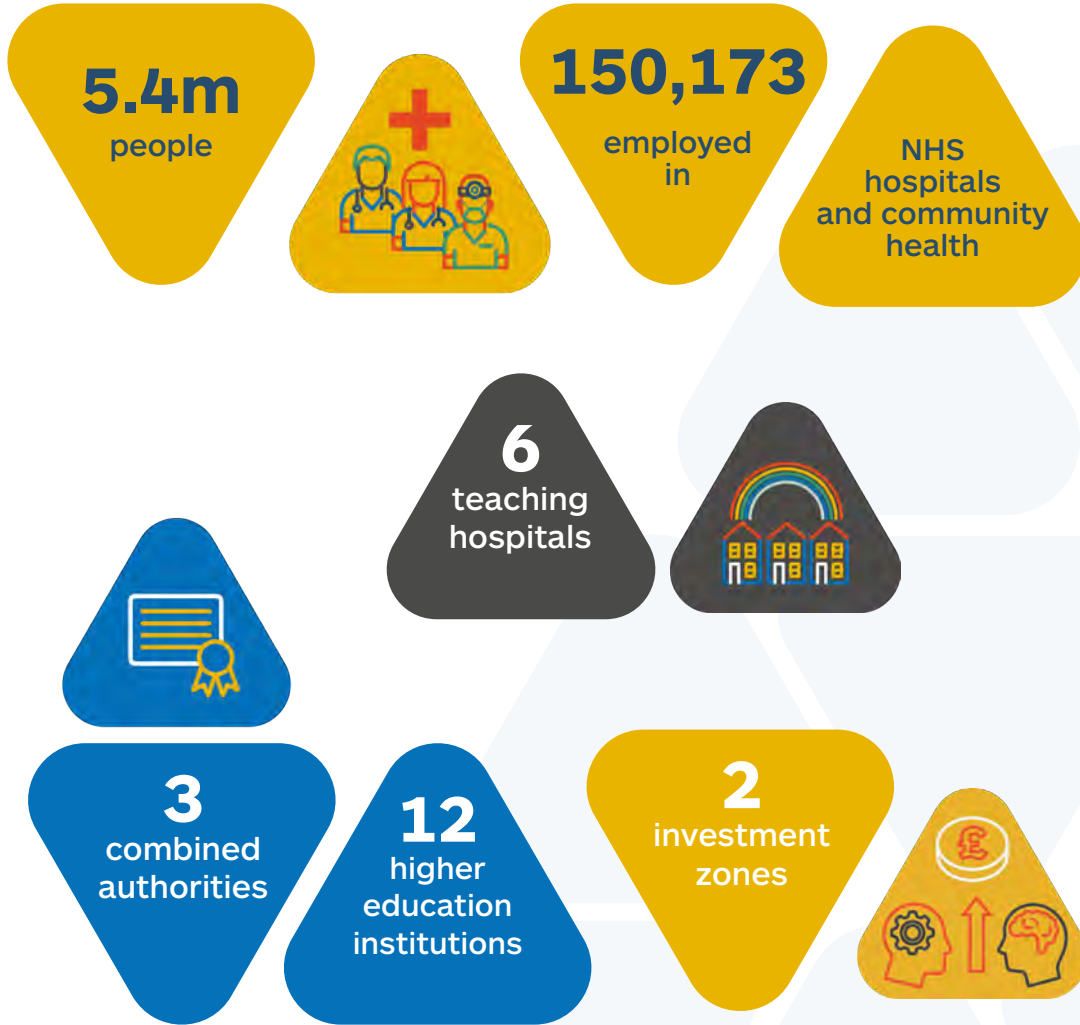
These are just two of a growing body of examples that demonstrate some of the place-based,

How Yorkshire and the Humber compares to other regions:





In our region:



people-focused assets we have in our region to help us tackle the challenges we face. There are more highlighted in our most recent YHealth for Growth white paper.

Creating the conditions for place-based leadership

Leaders and organisations across Yorkshire and the Humber are already embracing the opportunity to collaborate and tackle the region’s long-standing challenges, but what else could be done with more support from national government? What conditions and policies would better support this place-based action by local leadership?

These questions are topics we have been working to address with NHS Confederation and Yorkshire Universities through our recently published YHealth for Growth white paper ‘Empowering local places for health and prosperity: new perspectives from Yorkshire and the Humber’. Building upon our inaugural YHealth for Growth report published in 2020, our new collaborative white paper responds to the urgent need for action to narrow the health and economic gap across the region and puts forward 10 recommendations for national and regional leaders and for business. The recommendations focus on a twinned purpose: the need to work collaboratively and build upon existing activity to develop a strong regional economy, create healthy work environments, and improve health outcomes across the region; and secondly, the need to create the conditions nationally which ensure this locally-led work can develop with the greatest possible impact. Together, delivering against these recommendations has the potential to begin to arrest the current trends in economic inactivity.



There are a wealth of examples demonstrating how locally-led solutions deliver better outcomes and how empowering local leaders is the best way to make a real difference across the country. Similarly, leaders within organisations and specific sectors cannot drive change alone. Partnerships across regions are needed to make real change possible, not just between local government and the health service, but with businesses, universities and sporting bodies.

The white paper’s recommendations are underpinned by ‘4 Ps’, characteristics we have identified that should be at the centre of any approaches to address health and economic challenges:

Our place-based model for better health and economic prosperity:

- 
People-focused:
 People must be at the centre of policy making and delivery.
- 
Partnership-powered:
 Collaboration across a broad coalition of partners is essential to delivering place-based interventions.
- 
Place-based:
 A place-based approach is the best way to ensure barriers to good health and prosperity are addressed.
- 
Purpose-led:
 A single, shared purpose should be used to guide all partnership-working.

Driving change now

By promoting and championing work already underway across the region, the white paper and its recommendations are designed to be a rallying call to regional and local leaders, businesses, combined authorities, integrated care systems and other anchor institutions. For example, continuing to build upon existing public-private sector partnerships, ensuring businesses have a clear role, not just in developing a strong regional economy, but also in providing healthy work environments.

Yorkshire and the Humber’s diverse geography, economy and population, and strong partnerships make it a “perfect test bed” to pilot new ways of working, drive impact across the region, and scale this up nationally. The work already underway is demonstrating the region’s potential and highlighting how leaders are already addressing the region’s needs, despite the national challenges we face.

Nationally, the white paper and its recommendations are designed to simultaneously champion the region and the work already underway. It outlines the potential Yorkshire and the Humber has to tackle economic and health inequalities nationally, and shines a spotlight on the conditions which are needed within regions to truly unlock the potential of locally-driven activity.

We are continuing to work with the report’s co-authors to promote and embed the recommendations nationally, striving to create the conditions for locally-led work to thrive. We also continue bringing together ‘unusual’ cross-sector collaborations capable of tackling the region’s long-standing challenges. It is clear that as a region and nationally, we need to do something to tackle economic inactivity and inequalities in health and economic outcomes. Our region holds many of these answers and has much potential and we will continue to champion, promote, and support this important work.



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