



Health Innovation
North East and North Cumbria

**Impact
Report**

2023/24

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Welcome from our Chair



The importance of system wide working to develop and spread innovation for improved health and care outcomes.

It is clear from the achievements of HI NENC over the previous two five-year licence periods, as well as during the last year, that I have joined an organisation that is very well established, respected and the regional authority on the adoption and spread of innovation.

As the newly appointed Chair, I am able to draw on my wealth of NHS, academic and business experience within the health sector to guide and shape the strategic direction of HI NENC as it continues to drive health and care innovation across the regional, national and international ecosystems.

As HI NENC looks to the next five years, there is huge potential to build on the great work that has gone before and to explore new and exciting avenues for growth.

We work collaboratively with primary and secondary care, the Integrated Care Board, social care, the Third Sector and commercial organisations to drive a collaborative culture of innovation across the North East and North Cumbria region. We will continue to strengthen our position within the region's health ecosystem and play a leading role in ensuring value adding life and wellbeing innovations are adopted and spread with the ultimate goal of improving the health and wealth of our region.

Innovations in all their forms are crucial to improving the region's health, supporting our workforce and boosting economic growth. We are committed to the ongoing acceleration of transformative innovation across the health and social care sectors, and delivery of our ambitious plans to achieve better health and wellbeing for all.

Professor Dean Fathers DL, Chair, HI NENC

Foreword by Dr. Nicola Hutchinson, Chief Executive Officer, HI NENC



Health Innovation North East and North Cumbria awarded third five-year licence to drive innovation into the health and social care sectors.

It has been an exciting year for our organisation as we embarked on another five year licence with NHS England, in October 2023. The new licence marked the start of our third, five year commission and reflects the crucial role of innovation within the NHS. It gives me great pleasure to showcase some of our fantastic achievements from the last year. Under the new licence, we changed our name, from Academic Health Science Network for the North East and North Cumbria, to Health Innovation North East and North Cumbria (HI NENC). We were also delighted to welcome Professor Dean Fathers as our new Board Chair in December 2023.

Although there have been some changes, our vision remains the same and it is a privilege to work with our partners to accelerate innovations that improve population health, support our economy and reduce inequalities. Achieving this goal is only possible by fostering a culture of innovation within the NHS, which HI NENC proudly champions throughout the North East and North Cumbria.

As the health and social care landscape is rapidly evolving to address the needs of our communities, including improving patient safety and ensuring equitable access to healthcare, innovation stands as a pivotal force driving progress and improvement.

To enable us to address key challenges, we work closely with system partners to harness and develop creative ideas and solutions originating from both the NHS and industry sectors. Over the last year, we have

supported many innovators with the development and adoption of life changing innovations through our Innovation Pathway.

Reflecting on the year, working with the ICB and becoming embedded within the ecosystem has been a particular highlight. We have several joint initiatives such as the regional Health and Life Sciences Pledge, over 150 organisations have pledged to unite in our ambition to reduce health inequalities, increase investment and promote economic growth for the region.

We continue to deliver a number of health programmes aimed at supporting the reduction of health inequalities and improve health outcomes, including our CVD programme of which you will find out more about in this report.

We are very much looking forward to continuing to work closely with our Member Organisations, partners and stakeholders to support the development and adoption of even more transformative health and social care innovations, for the benefit of the citizens, and economy of the North East and North Cumbria.

This Impact Report aims to provide a comprehensive overview of our initiatives, achievements and the measurable benefits we have delivered over the last year, and reinforce the crucial role we play in driving the development, adoption and spread of innovation across the health and social care services.

Dr Nicola Hutchinson, CEO, HI NENC

Supporting the Reduction of Health Inequalities

There have been a number of exciting health programmes delivered over the last year which have delivered significant improvements and impact across our health and social care system. Here we showcase three of these programmes.



The North East and North Cumbria Integrated Care Board has the highest levels of cardiovascular disease (CVD) and accordingly have continued to have a particular focus on addressing the factors that put our population at risk. In particular, we have projects in primary and secondary care harnessing expertise with our pharmacy workforce.

We have also delivered our Innovation for Health Inequalities Programme (InHIP) which has increased our understanding of the challenges faced by communities when engaging with annual CVD checks. We have delivered this important project in Middlesbrough in collaboration with our colleagues at the NIHR Applied Research Collaboration NENC, with the Cardiac Prevention Clinical Network, the Public Health Team in Middlesbrough and the Middlesbrough FC Foundation. As part of this Programme, we have also worked with the company PocDoc to increase access to cholesterol testing for those in disadvantaged communities.

Our Healthy Happy Places Programme has delivered a number of projects which have made a real difference to the lived environment for people in Horden, Ashington and North Shields.

Other national programmes of work delivered in partnership with our ICB have included the National Polypharmacy Programme and our National Insight Priorities Programme (NIPP), which has focussed on supporting primary care to address the challenges of high levels of opioid prescribing. Areas of local health programme work have focussed upon Respiratory, Mental Health and Pain.

Professor Julia Newton, Medical Director, HI NENC

Improving Health and Outcomes for People Living with Cardiovascular Disease Risk Factors

HI NENC supports people in the region living with cardiovascular disease (CVD) risk factors to live longer, healthier lives.

To achieve this, the HI NENC CVD Prevention Programme facilitates educational opportunities for healthcare professionals, and works in collaboration with system partners on the development of tools, pathways and services, that can be spread and adopted across the region.

Since 1st September 2023, HI NENC has trained

1125

people in lipids optimisation across the North East and North Cumbria.

HI NENC has a broad CVD team with specialist clinicians and experienced programme and project leads with a proven track record of delivery. With over five years of experience supporting CVD prevention in the region, the team has built a strong track record of delivering impactful programmes aimed at helping people with CVD risk factors - including disordered lipids, familial hypercholesterolaemia, atrial fibrillation and hypertension - to reduce the incidence of further CVD events, such as heart attacks and strokes.

In 2023/24, the team continued to provide support, resources and education targeted at healthcare teams. This included funding opportunities to accelerate innovation in CVD prevention and treatment.

A primary focus area of the programme was assisting practices in achieving their Quality and Outcomes Framework (QOF) cholesterol targets. Through ongoing support and education, this involved an emphasis on optimising the treatment of disordered lipids, to provide patients with the best chance of avoiding cardiac events.

This included educating healthcare professionals about various treatment options, including promoting the implementation and supporting the adoption of novel therapies within the

"In the 42 years I've been a pharmacist, I've never been so excited at the opportunity of breaking down barriers and being able to work collaboratively across all sectors. Together we are making a real difference in tackling health care inequalities and driving down cardiovascular morbidity and mortality."

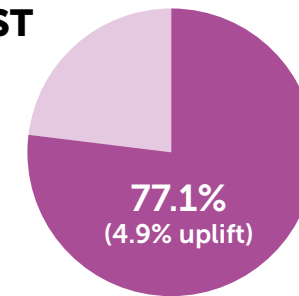
Barry Todd, North East Pharmacist and the Pharmacy Lead at Wallsend Primary Care Network

lipid management pathway. The Collaborative Lipid Fund has enabled this work and data demonstrates that all prescribing milestones were exceeded for 23/24. The data from Open Prescribing and IRLS England Analytics is shown below.

In addition, HI NENC regularly hosts events and training opportunities. Notable events this year included a face-to-face workshop on achieving QOF targets held in September 2023, as well as a series of lunch-and-learn webinars.

All prescribing milestones have been exceeded. Latest data (Open Prescribing & IRLS England Analytics) shows:

HIST



Ezetimibe

24,469 (uplift of 8,449 monthly items)

Inclisiran

2,765 items at 19th January 2024

To find out more visit: <https://healthinnovationnenc.org.uk/what-we-do/improving-population-health/cardiovascular-disease-prevention/>

Improving access to CVD Health Checks for Ethnic Minority and Underserved Communities in Middlesbrough

As part of the national NHS England mandated Innovation in Healthcare Inequalities Programme (InHIP), the North East and North Cumbria project focused on addressing health inequalities in cardiovascular disease in Middlesbrough.

The targeted work, led by HI NENC, aimed to increase the uptake of heart health checks for underserved population groups.

Although CVD is preventable, in some parts of the North East and North Cumbria, the condition is the cause of 1 in 5 deaths.



In response to this, HI NENC collaborated with system partners to address healthcare inequity by increasing the uptake of health checks within communities at the highest risk of CVD mortality.

As part of the InHIP Programme, HI NENC gathered behavioural insights from targeted Core20Plus5 populations, to understand the barriers and challenges they face when accessing heart health checks locally.

Focus group interviews highlighted several key themes, including difficulties accessing healthcare from their GP due to language barriers, varying levels of health literacy, and the need for gender-appropriate services.

The insights from this research informed the co-design of heart health checks tailored to the needs of local communities, empowering them to take ownership of their health.

These health checks were delivered in community locations, such as places of worship and community hubs. The checks included a cholesterol check using PocDoc's innovative cholesterol test, blood pressure, height and weight checks. Heart health checks were delivered to approximately 500 people from underserved communities including Afro-Caribbean, African and South Asian communities. Over 60% tested had an abnormal result and were referred to their GP for a lipid medication review.

To ensure the sustainability of these outreach services, the

Middlesbrough has the highest mortality rate for cardiovascular disease (CVD) in the North East – with the disease accounting for more than 1 in 5 deaths.

"Women have had varied results [from the health checks]. The feedback we have had is mainly that they are so glad they came. It was in a safe environment, testing and advice has been thorough, informative and friendly."

Shazia Noor, founder of Nur Fitness

Programme engaged commissioners from public health in Middlesbrough in the co-design of the heart health checks. This research has been timely, coinciding with reviews of public health services to enhance their effectiveness and reach all communities within the population they serve.

Tracy Marshall, Project Manager at HI NENC, led on the delivery of the checks at some of the community locations. She said: "The earlier you can diagnose cardiovascular disease, the lower the risk. If we can diagnose people at the appropriate time and refer them to their GP, we have the potential to identify those at higher risk of a heart attack or stroke and help them to lead healthier lives."

For more information please visit:

<https://healthinnovationenc.org.uk/what-we-do/improving-population-health/healthcare-inequalities-programme-inhip/>

<https://healthinnovationenc.org.uk/what-we-do/improving-population-health/cardiovascular-disease-prevention/at-home-cholesterol-testing-pilot/>

Designing the Environment for Mental Health and Wellbeing

Healthy Happy Places acts as a bridge between sectors and the community, to come together to turn unloved spaces into healthier, happier places.

The aim was to use the designed environment to create positive mental health and wellbeing in areas of inequalities in the region. Healthy Happy Places uses a set of ingredients and a creative approach to develop places that are more joyful, calming, and nurturing places to be.



Find out more: <https://healthinnovationnc.org.uk/what-we-do/improving-population-health/mental-health/healthy-happy-places/>

Projects supported as part of our Healthy Happy Places portfolio, include: -

Places of Sanctuary, Wallsend and North Shields – the team worked with the Council public health and regeneration teams as masterplans were being developed and implemented for both towns. The purpose was to evidence how a health and wellbeing overlay could be applied to the masterplans. A creative brief was developed to explore ‘how can our towns create and nurture positive mental health and wellbeing for all?’

In Wallsend, Mustard Stories Arts CIC used creative writing techniques with participants from Anxious Minds to create an animated video and zine which was fed back to the Council and was included in the Cabinet Report as part of the future development of the area.

In North Shields, using the same brief, artists Sally Southern and Nicola Lynch worked with participants in Changing Lives and Cedarwood Trust and used the insights to create a temporary installation in the shopping centre to demonstrate the future possibilities for the space in the town.

“I went from being unsure about whether to participate to feeling I and others present had a valuable contribution and our voices were heard.”

Participant, Wallsend

Garden At The Hub, North Shields – A community garden space achieved through a collective of nine partners to activate an underutilised green space outside a Primary Care Network Hub. The area is now a beautiful growing and social space which is maintained by ‘Garden At The Hub’ Community Association, a regular group of volunteers.

Heart and Hopes of Horden – operating at a village scale, this was a creative exploration of citizens experience of their place,



“It’s got a nice feeling to it, like you know it’s a safe space. I can’t thank you enough for making me feel welcome...you are all lovely people and I feel blessed I have found and joined in. It was a breath of fresh air.”

Darius, citizen and garden volunteer

conducted in the context of redevelopment plans presented by the Council.

Using mapping exercises (both digital and face to face), prompts invited people to consider where their places of kindness were, what places made their heart sing, as well as places that needed hope and care. Extensive collaborative working and the Healthy Happy Places ingredients and insights gained from the mapping work resulted in a report which shared possibilities for the future spaces of Horden.

“Ultimately the report has illustrated that residents do have a voice and if the suggestions are taken on board, it will inspire progress in the years to come and hopefully help us realise we can have more control of what happens to the village and thus greater authority over our own futures.”

Paula. Resident.

Transforming Patient Safety across North East North Cumbria (NENC)

HI NENC's ambition for the Patient Safety Collaborative fully aligns with the NHS National Patient Safety Strategy which is "for the NHS to continuously improve patient safety".



As one of 15 Health Innovation Networks commissioned by NHS England to host a Patient Safety Collaborative, the HI NENC Patient Safety team have successfully fostered the regional learning and quality improvement systems needed to deliver five National Safety Improvement Programmes in 2023-2024 covering

1. Maternity and Neonatal Safety
2. Managing Deterioration in Care Homes
3. Medicines Safety (supporting the reduced prescribing of opioid medicines for chronic non-cancer pain)
4. System Safety (roll out of the Patient Safety Incident Reporting Framework across Secondary Care)
5. Reducing Restrictive Practice

The team worked closely with the NENC ICB and other regional and national partners across health and social care to support the delivery of these programmes and through co-design, co-delivery and co-investment, have generated significant improvement and positive impact for many patients living in the NENC region.

Supporting Patient Safety Initiatives

HI NENC invested almost £100K in regional patient safety initiatives significantly improving outcomes for patients living in the North East North Cumbria region.



In August 2022, HI NENC launched a project call inviting applications from regional NHS organisations to apply for up to £30,000 to deliver projects that contributed to the overall aims of the five National Patient Safety Improvement Programmes. An incredible 35 applications were received, and HI NENC funded five projects, spanning all five national themes. The five projects were delivered in 2023-2024 and individual case studies are in the process of being created.

The projects supported are:

Maternity and Neonatal - Optimisation and Stabilisation of the pre-term infant - South Tees NHS Foundation Trust

'Optimisation and Stabilisation of the Preterm Infant' supported the introduction of a Life Start trolley to improve optimal cord management, by providing intact cord resuscitation, improved their optimal cord management rate from 58% to 85% by October 2023.

Medicines Safety - An Opioid Reduction Programme - Bridge View Medical Group, Sunderland – Opioid Reduction

We supported the appointment of a specialist pharmacist to contribute to a programme of activities and strategies with the aim of reducing the prescribing of opioid medicines for chronic non-cancer pain across the practice, including reviewing their prescribing protocol and contacting patients on high dose opiates, the specialist pharmacist provided a dedicated clinic appointment with patients, who wanted to reduce their opiates.

The project achieved a sustainable reduction and a change in

practice philosophy about how patients on opioids are managed.

Mental Health & Learning Disabilities – Reducing Restrictive Practice - Cumbria, Northumberland, Tyne and Wear NHS Foundation Trust

Designed and evaluated trauma informed care training to support reducing restrictive practice in a learning disabilities and autism service. A specially developed individualised trauma focussed workshop was undertaken with 120 staff members who work closely with specific patients. Analysis of the results indicated significant improvements immediately after the training and at follow-up within staff participants in the measures of knowledge, confidence and optimism in relation to the patient they were supporting.

Managing Deterioration - Provision of Training - North Tees & Hartlepool NHS Foundation Trusts

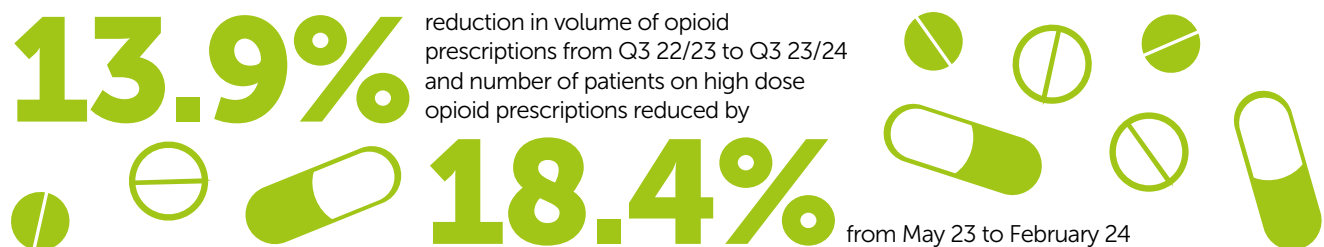
Supported the team to provide training and upskilling of 200+ healthcare workers, to enable early identification and intervention of deteriorating patients in care home and residential settings.

System Safety - Provision & Evaluation of training - South Tees Hospital NHS Foundation Trust

Supported the national adoption and scale-up of the Patient Safety Incident Response Framework, and in particular the engagement of patients, families and staff by funding the delivery of training to staff to facilitate restorative practice dialogue and meetings between patients, who have been harmed and the staff involved in the event.

13.9% reduction in volume of opioid prescriptions from Q3 22/23 to Q3 23/24 and number of patients on high dose opioid prescriptions reduced by

18.4% from May 23 to February 24



Improving Outcomes for Preterm Babies

The HI NENC Maternity and Neonatal Safety Improvement Programme (SIP) has significantly improved the outcomes for babies born earlier than 34 weeks gestation, due to the highly effective collaboration and best practice sharing between all mat/neo organisations in the North East North Cumbria region.

An effective way to improve the outcome of pre-term birth is to ensure the mother and baby receive a number of evidenced based interventions given before, during and after birth.



One of the aims of the National Maternity and Neonatal SIP is to contribute to the national ambition to reduce the national rate of preterm births from 8% to 6%.

This aim links to national priorities including Better Births, Safer Maternity Care, and the Three Year Delivery Plan for Maternity and Neonatal Services.

The NENC MatNeoSIP has adopted a system-wide quality improvement approach to this, tapping into existing system level entities and their infrastructures, including, but not limited to, NENC Local Maternity and Neonatal System (LMNS), Northern Neonatal Network and the NENC Integrated Care System, plus the eight Trusts and ten Units which deliver maternity and neonatal services. This collaborative approach maximises both capacity and impact as well as reducing duplication.

NENC has focused on ensuring that preterm babies are born in the appropriate setting as this improves survival and neurodevelopmental outcomes. NENC has been one of the highest performing regions in the UK for this in recent years, achieving over 90% compliance. This achievement has been maintained in 2023/24.

For women, there has been emphasis on ensuring that they receive magnesium sulphate (which reduces the risk of cerebral palsy), intrapartum antibiotics (reducing the risk of Group B Streptococcus and sepsis), and antenatal corticosteroids (which reduces the risk of preterm lung disease, brain haemorrhage, necrotising enterocolitis [NEC] and sepsis). During 2023/4 NENC has made improvements in all three of these interventions.

For babies, attention has been on optimal cord management (which reduces the risk of brain haemorrhage as well as the need for blood transfusion), keeping babies at the optimal temperature (which reduces the risk of mortality and brain haemorrhage, NEC and sepsis) and maternal breast milk (to reduce the risk of sepsis and NEC). Again, improvements have been made in all these interventions during 2023/24.

NENC is proud of these achievements and plans to continue this work in 2024/25.

Babies born in the appropriate care setting: NENC has been one of the highest performing regions in the UK for this in recent years, achieving over

90%

compliance. This achievement has been maintained during 2023/24.

NENC has supported the implementation of seven interventions which improve the outcomes for babies born preterm, and has made improvements across all of these

Developing a System-wide Approach to Opioid Use in Elective Surgery

A Secondary Care Opioid Reduction Network has been set up across the region aiming to address the inconsistencies across Trusts in opioid prescribing and guardianship when patients are admitted for surgery, to ensure that prescribing protocols are harmonised and good practice is shared across all hospital trusts in the region.



The HI NENC Pain team hosted an event in November 2022 where work from the Surgery Department of Northumbria Healthcare NHS Foundation Trust was presented. A quality improvement poster was also submitted for display at the conference from the Surgical Team at Gateshead Health NHS Foundation Trust.

HI NENC linked the two surgical pharmacists from these Trusts to share work they had been undertaking and this provided the catalyst for the creation of the Network. The group now has representation from across the region from all eight of the secondary care Trusts. HI NENC also facilitated for other allied health professional groups to join the network such as physiotherapists and nurses.

A Surgical Pharmacist from Gateshead Health NHS Foundation Trust has also joined the recently established Clinical Pain Network where she presented her work on the development of the NENC Secondary Care Opioid Reduction Pharmacist Network across the region. This was also presented at the Q4 National Patient Safety Improvement Programme Opioid Action Learning Set.

Work undertaken by the Network to date includes:

- OUCH – Opioid Use Change video – used in Trusts to train the medical and pharmacy teams.
- Post-operative modified release to immediate release opioid switch.
- Patient Opioid Leaflet – Risks associated with opioids – British Pain Society 'Managing your pain after surgery' leaflet has been implemented across Trusts.
- Reduction in codeine/morphine sulphate liquid quantities supplied to patients following daycase surgery.
- Opioid stewardship groups are now in place at Trust level.
- Links made with PCN pharmacists.
- Work has started on improved communication to primary care.
- One Trust has switched from 100ml to 20ml morphine sulphate 10mg/5ml liquid bottles to be given to appropriate patients on discharge.

For further information and resources to support opioid reduction and pain management please visit <https://healthinnovationenc.org.uk/what-we-do/improving-population-health/medicines-optimisation/reduce-opioid-prescribing/>

All 8 NENC secondary care Trusts have a pharmacist representative on the NENC Secondary Care Opioid Reduction Network. HI NENC have facilitated the relationships and collaboration



Supporting the NHS in Health and Social Recovery

Innovation in health and social care encompasses the development and integration of new technologies, practices, and approaches to streamline clinical pathways, improve patient outcomes, enhance the efficiency of care delivery, and ensure sustainable health systems.



Mandated by NHS England and the Office for Life Sciences, HI NENC supports the regional NHS organisations to build a culture of innovation, where innovative ideas can be fostered and progressed.

HI NENC works closely with our NHS colleagues to harness ideas and innovations, arising from within the regional health and care system, and facilitates the development and embedding of these innovations to improve health outcomes and support in health and social care recovery.

We work collaboratively with a wide range of stakeholders from across the NHS including staff, partners and members from primary care, secondary care, and the wider health and social care sectors, to identify unmet needs and support the development of innovations to address the gaps, provide equitable access to care and reduce inequalities.

Improving Shoulder Injury Outcomes

A piece of gym equipment has inspired an innovation, which significantly improves treatment and recovery for patients, who present with a shoulder injury in Emergency Departments. Shoulder dislocations are one of the most common large joint injuries seen by Emergency Departments and can be extremely painful and debilitating for people.



Dislocated shoulders are a painful and potentially serious injury, which happen when the upper arm bone (humerus) pops out of the shoulder socket (glenoid).

The current practice to treat a patient with a dislocated shoulder is to administer a local anaesthetic and then a doctor will gently move the humerus back into the glenoid socket.

Several staff members are needed to support the treatment; including an anaesthetist, nurse practitioner and observer before and after the administration of the anaesthetic, as well as a doctor to undertake the procedure.

The current procedure also requires valuable resources, including a hospital bed in the emergency room and an anaesthetic. The patient must stay in the hospital bed throughout the procedure, as well as a subsequent monitoring period while the anaesthetic wears off.

This process can be lengthy and can be delayed while staff members attend to more seriously ill patients in the emergency room. It is important to note that the sooner a dislocated shoulder is treated the lower the risk of permanent injury to the socket.

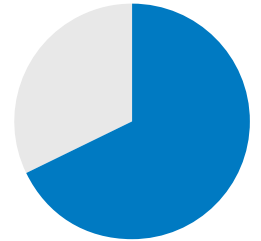
Dr Ala Mohammed and Dr Philip Dowson from the South Tyneside and Sunderland NHS Foundation Trust have developed a procedure which uses a piece of patented equipment called the Sunderland Shoulder Reduction Bench.

It allows a dislocated shoulder to be treated without the need for an anaesthetic procedure. This leads to the patient being seen more quickly and discharged sooner, reducing the amount of time they are in pain.

Using the Sunderland Shoulder Reduction Bench means staff resource is freed up, a hospital bed is no longer required and the costs of administering the anaesthetic is saved. Doctors Mohammed and Dowson have also been able to train nurse

Using the chair has led to a

68%



reduction in the number of patients who need to be sedated, and an average reduction time from presentation at the department to discharge of **52 minutes**, 31 minutes sooner than before (83 minutes).

Before the bench was introduced **57% of patients (n=30) required sedation and the average time to discharge was 3 hours 22 minutes. After the bench was introduced into practice this was of patients (n=31)**

practitioners to undertake the procedures, relieving capacity pressures. Health Innovation North East and North Cumbria assisted South Tyneside and Sunderland NHS Foundation Trust with market research and supporting the Trust with protecting the associated intellectual property for the bench.

Encouraging and Promoting Physical Activity Amongst our Older People

Rise and Shine was created to encourage a fun approach to physical activity on older person's inpatient wards, giving them an opportunity to take part in some physical activity when they are ready to prevent Hospital Acquired Deconditioning (HAD), in a fun, sociable way. It is primarily aimed at older hospital inpatients and care home residents.



A significant challenge in hospitals is the decline in mobility experienced by elderly patients. This inactivity can lead to complications and extend hospital stays. To address this issue, the Rise and Shine game was created, offering a fun and effective way to keep elderly patients healthy and active.

Patients participate by selecting a tile featuring an illustration and a description of a physical activity or cognitive challenge tailored to their individual abilities.

These activities might involve simple stretches, walking a short distance, or completing a memory game. Once they've completed the chosen activity, patients deposit their tile in a designated box. A touch of friendly competition is added by randomly selecting a winner who receives a small prize.

The Rise and Shine game goes beyond exercise. The use of game mechanics like selecting tiles and winning prizes fosters a sense of engagement and enjoyment, making physical activity more appealing for patients. Furthermore, the brightly coloured illustrations created by a local artist add a cheerful element to the hospital environment.

The benefits of Rise and Shine are multifaceted. Most importantly, the game helps patients maintain and improve their mobility, potentially leading to a faster recovery and shorter hospital stay. Additionally, the game fosters a more positive atmosphere by boosting morale for both patients and the staff

"It has been our pleasure to provide a range of business services to the Trust, and the innovator, to support the development of this wonderful game, and we look forward to seeing the positive impact this innovation will make to patient experience."

Victoria Christie, Associate Director at HI NENC

"Feedback from Patients and staff has been really positive with patients saying that it relieves boredom and gets them laughing. They have suggested other ideas of fun things to do since its introduction"

Gail Tunstall, Quality Improvement Facilitator.

who assist them. Early feedback indicates that Rise and Shine is achieving its goals, with both patients and staff reporting a more positive experience.

The success of the initial pilot program has led to the rollout of Rise and Shine in elderly care wards across a hospital trust. The long-term vision is to make the game available nationwide in hospitals and care homes.

Funds generated from sales will be reinvested to support further initiatives aimed at improving the care and experience of elderly patients. By combining innovation and fun, Rise and Shine offers a promising solution to a common challenge, promoting the well-being of elderly patients during their hospital stay.

Health Innovation North East and North Cumbria assisted South Tyneside and Sunderland NHS Foundation Trust with protection of the associated intellectual property, which facilitated commercialisation of the game.



Improving Health Outcomes through the Innovation Pathway



HI NENC is committed to nurturing and progressing viable and sustainable innovations for the NHS and healthcare sectors, to address the many health challenges facing our society.



Developed in alignment with UK Life Sciences Vision, our focus is to drive innovation across the system to solve regional healthcare challenges.

As a key delivery partner of innovation in the health and care sector, HI NENC works collaboratively with our partners and stakeholders to support the development, adoption and scale up of proven innovations through the Innovation Pathway.

Over the past year, HI NENC has worked with regional partners to make significant strides in developing innovation, arising from across the NHS and industry sectors, to improve population health and support our economy, both at a regional and national level.

As one of fifteen health innovation networks, HI NENC played a pivotal role in the national achievement of creating and safeguarding over 1,300 jobs and leveraging over £475 million additional funding. This is a 10% increase in the overall investment leveraged from the previous financial year and demonstrates the huge contribution that health and life sciences industries make to economic prosperity.

To support the contribution at a regional level, HI NENC continues to bring together the wider health and social care sector through the NENC Health and Life Sciences Pledge, which facilitates a collective approach to tackling challenges within the system and to celebrates our unique assets and infrastructure in the region.

View the Innovation Pathway:

<https://innovationpathway.healthinnovationnenc.org.uk/>

Improving Cardiovascular Disease Scanning with an Innovative AI Solution

Cardiovascular disease (CVD) causes a quarter of all deaths in the UK and disproportionately affects people living in lower-income areas. The North East in particular has some of the highest rates of CVD morbidity, in the country. If detected and treated early enough, CVD is largely preventable and it has been identified as the single biggest area where the NHS can save lives over the next 10 years.



HI NENC is providing support to the Aiatella innovation, a medical device that uses artificial intelligence (AI), to automate the most time-consuming and complex parts of the analysis of a scan.

A scan is one way to identify disease within a patient, by analysing the blood vessels throughout the body, including the aorta. Diseases associated with the aorta are very rarely found in time and can lead to serious, life-threatening complications, which are only treatable through surgery.

Traditionally, the process following the scan requires a highly specialised doctor to manually check for disease and is extremely time-consuming. A proof-of-concept study at Northumbria Healthcare NHS Foundation Trust, proved Aiatella performed this process over 100 times faster than a clinician, with a higher level of accuracy.

This helps clinicians better allocate their time and cut the backlog of patients, waiting for a scan. Aiatella has the potential to save lives and improve patient outcomes for those at risk of CVD, by increasing the early detection of the condition before it becomes life-threatening.

Co-founder and CEO, Jack Parker, said: "I'm proud to be from the region and the initial innovation evaluation was conducted out by regional NHS contacts. CVDs are a real issue here and it's essential to introduce Aiatella our region first, to help as many people as possible."

"My mentor said, 'If you want to save 100 lives, continue your education and be the surgeon. If you want to potentially save millions, then you need to solve a problem.' That was the motivation that planted the seed."

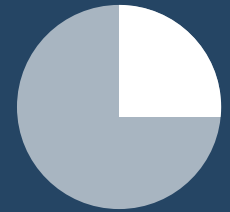
HI NENC has supported Aiatella by providing bespoke advice and guidance relating to intellectual property protection, value proposition generation, evidence gathering and marketing, and support with funding applications.

The next step on Aiatella's journey is to demonstrate the impact it can make on healthcare in our NHS and around the world.

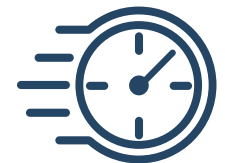


Diagnostic scans for CVD can be a time-consuming, resource heavy and complex process

CVD causes a quarter of all deaths in the UK, the highest rates are in the North East region



The Aiatella AI device can measure scan results over 100 times faster, and more accurately, than a specialist clinician



Fighting Malnutrition with new Sensory Menu

Numenyu® is the UK's first multisensory interactive menu from Sensmart Limited which combines visual, tactile, auditory and olfactory (or smell) which can help combat malnutrition and dehydration for people in hospitals or care homes. Health Innovation North East and North Cumbria is collaborating with a range of specialised partners to develop and share this innovation.



A multisensory food menu designed for hospitals and care homes has been developed by Aisha Purvis, founder of Newcastle start-up Sensmart. Numenyu® aims to tackle malnutrition and dehydration in patients by stimulating their senses and is the first of its kind in the UK.

Inspired by her experiences working in care homes and caring for her daughter with Rett Syndrome, Aisha designed the menu to empower patients to make choices. Numenyu® incorporates visual elements, textures, sounds, and even smells (like “chip shop” fish and chips) to cater to a wide range of users, including those with visual impairments or dementia.

Collaboration with regional partners has brought this idea to life. The National Centre for Ageing and Centre for Process Innovation (CPI) is helping develop realistic food aromas, while the Internet of Caring Things® (IoCT™) is providing marketing and funding support.

HI NENC has assisted with market research, intellectual property protection and real-world evaluation of the innovation. Further, they more recently assisted Sensmart to secure funding of £17,000 from the North of Tyne Combined Authority to carry out an evaluation and pilot project at Gateshead Health NHS Foundation Trust.

Associate Director for HI NENC, Jody Nichols, appeared on BBC Morning Live to discuss the innovation with Dr Ranj Singh and explained how Numenyu® can make a huge difference to patients in the NHS. View the video: <https://vimeo.com/916835699/946c536101?share=copy>

This project exemplifies regional collaboration in innovation, with the innovator expressing her gratitude for the expertise each partner brings. With continued support, Numenyu® is poised to improve patient experience and dietary choices in healthcare settings.

“It’s been amazing getting all the different types of support from CPI, IoCT™ and the AHSN NENC. Each have different skill sets and expertise that as a start-up, I just don’t have in-house. They have all helped me to take my idea to a point where I am close to launching it. I can’t thank them enough for the expertise and guidance they have provided.”

Aisha Purvis, Sensmart

HI NENC assisted Sensmart secure funding of



£17,000

from the North of Tyne Combined Authority to carry out project at Gateshead Health NHS Foundation Trust.

“We have been working closely with Aisha to test and develop her idea. She is a fantastic example of the home grown, innovative talent we have in our region and we will continue to support her as she grows her business.”

Jody Nichols, Associate Director at HI NENC

Identifying Large Vessel Occlusion Strokes

Upfront Diagnostics patented blood-based diagnostic “LVOne” identifies Large Vessel Occlusion (LVO) strokes within minutes, with 95% accuracy. This enables patients to be taken directly to specialist hospitals where they can receive urgent treatment.

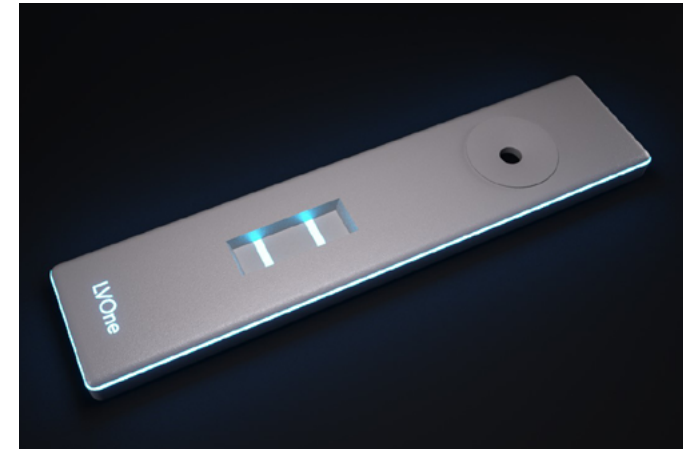
A stroke due to the blockage of a large artery in the brain disproportionately affects people from poorer backgrounds. Without urgent treatment, LVO strokes can result in death, disability, and care costs. Removing the blockage as quickly as possible (thrombectomy), gives the best chance of recovery. However, only specialised regional hospitals are trained to provide this treatment.

Currently, ambulance staff cannot recognise people with a large artery blockage and most patients are subsequently transferred to a specialist centre, following assessment at their local hospital. The delay in reaching a specialist hospital decreases the effectiveness of a thrombectomy.

If ambulances were able to diagnose an artery blockage immediately, they would be able to refer patients directly to specialist care and improve the chance of recovery. Alternative ways to identify LVO strokes are often expensive, require specialist training, and do not always provide accurate results.

Current means of identifying LVO strokes involve a brain scan and require a trained radiologist to interpret the results. The LVOne test is the first of its kind, using a finger prick of blood, the test uses blood biomarking to identify LVO strokes within patients quickly. The blood can be drawn by a technician and does not require a specialist consultant. Its ease of use and cost-effectiveness means it is easy to implement in current healthcare systems.

HI NENC supported the company with successful Phase 1 and 2 SBRI applications, which allowed the company to develop prototypes and manufacture the product. In addition, HI NENC supported the adoption of the LVOne test by facilitating introductions to frontline clinicians, as well as supporting them with NHS procurement advice.



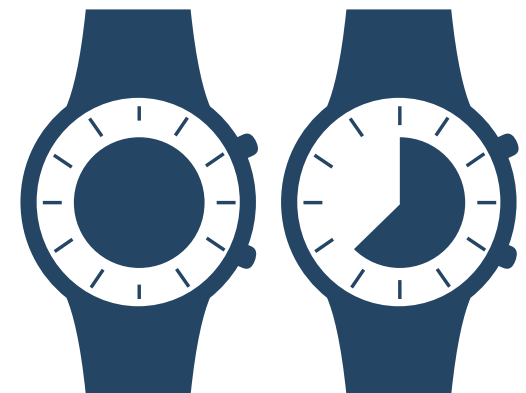
The test can increase a patient's chances of complete recovery by

20%

and

saves 97 minutes

of vital
time on
average.



Use digital solutions as an enabler

The Digital Transformation team is now well established across the NENC system. The team take a lead role in a wide range of local, specialist pathway and system-wide governance and interest groups.



This year HI NENC has continued to address digital inclusion, bringing leaders from across the region's health system together to ensure that health services don't widen existing digital inequalities. This has included hosting a regional digital inclusion forum and scoping the development of a regional device repurposing scheme, including legal and governance processes. The scheme involves piloting the use of refurbished smart devices across multiple care pathways within the NHS, so that people across the North East and North Cumbria have equal access to devices to manage their day-to-day health.

Within this Report, read more about two Programmes that have built on this year to support NHS primary care services. The Digital Pioneers Programme provides opportunities such as masterclasses and learning events, and includes an expert reference panels of expert clinicians who help to evaluate and support new innovations and innovators. In addition, the remote monitoring programme has supported GP practices to accelerate innovation by testing the use of existing technology in several clinical pathways. This has had a significant impact to free up clinician time from admin processes and as a result, support patients to receive timely care. In 2024/25, there will be an expansion of the Programme to build on this improvement process and develop new pathways.

Going into a new financial year, HI NENC will continue to support digital innovators from both within and into health and care, and continue to focus on enabling staff, patients, and citizens to access and benefit from innovations. The NHS continues to drive towards using technology to improve patient outcomes and experience, and HI NENC has a significant role in ensuring that everyone can benefit from digital transformation and no one gets left behind.

Driving Digital Innovation to Transform Services and Improve Patient Care in Primary Care

Within the North East and North Cumbria, the Digital Pioneers Programme was launched in April 2022 to provide education to the workforce and drive forward digital health ideas and innovations in NHS primary care services.

This included supporting colleagues working in General Practice, pharmacy, dentistry and optometry.



The Digital Pioneers Programme launched to support primary care services to adopt a 'digital first' approach, ensuring that this doesn't exacerbate existing digital exclusion among patients.

In its first year (2022/23), the Programme focussed upon building strong relationships within the region to understand the unique needs of local primary care services, and the role of innovation to enhance services.

After laying this groundwork in year one, the programme's second year involved building on two key programme elements:

Digital Champions Programme

In collaboration with Redmoor Health, the Digital Champions Programme was developed to upskill primary care colleagues and encourage practices to utilise digital technology.

The CPD-accredited 12-month education programme empowered staff to lead digital projects within their organisations. It also provided a community of practice forum to share learning and included masterclass education sessions to continuously upskill champions.

Innovative Ideas

This element of the programme provided opportunities for the primary care workforce to develop innovative digital ideas and apply for funding to implement solutions that could make a real difference, to improve patient care and transform services.

As part of this, the first project call for primary care was launched, inviting innovators to bid for funding, up to the value of £20,000. Applications were invited from innovators of all sectors including business, NHS teams and universities, working in collaboration with primary care teams. Utilising the Innovation Pathway model created by HI NENC 34 ideas have been supported, of these, funding has been provided to 6 innovators to further develop and allow for evaluations.

Innovations have included a pilot to digitise public health messaging in 20 pharmacies in Durham. More information about this innovation in this short 4-minute video - <https://youtu.be/Smn1TjpJXF0>

For more information please visit:

<https://healthinnovationnenc.org.uk/what-we-do/driving-digital-transformation/digital-pioneers/>



132
champions
trained



12
masterclasses
delivered
engaging with
708
people

"HI NENC has been instrumental in helping this idea become real." **Andre Yeung, Pharmacist Consultant**

5 working groups
established

76 action plans
created

100%

of attendees would
recommend to
others



Accelerating the use of Remote Monitoring Technology in General Practice

As part of the Digital Pioneers Programme, HI NENC introduced a digital accelerator project to help facilitate, design and develop new ways of working across primary care, in a rapid way.



The first accelerator pilot programme involved working with general practices in the region to pilot the use of remote monitoring within clinical pathways, with an aim to free up capacity and meet increasing demand for GP services.

HI NENC spearheaded a pilot project to test the use of existing remote monitoring technology in GP practices, in a bid to accelerate innovation and free up capacity in General Practice.

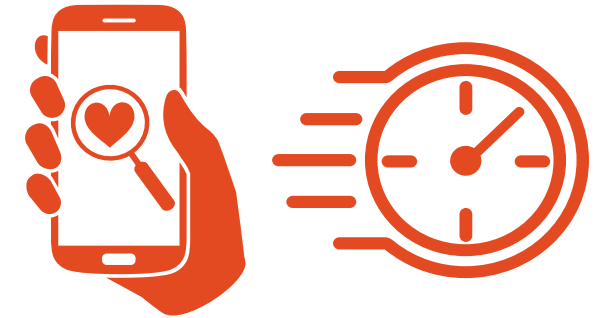
Over a six-month period, five GP Practices participated in the pilot, developing use cases for clinical pathways with the greatest potential to impact patient outcomes. These pathways included diabetes, hormone replacement therapy, and blood pressure monitoring.

Throughout the project, the participating GP Practices had access to HI NENC experts at every step of the pathway redesign process. This resulted in the development of a catalogue of solutions so that these innovations can be embedded within other practices.

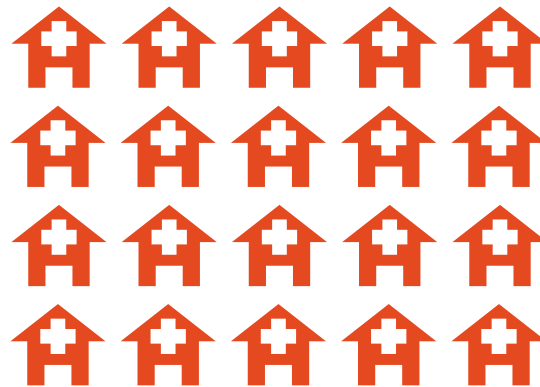
To facilitate the adoption of best practice; materials, such as standard operating procedures and how to guides, have been created. These resources are set to be shared with the primary care workforce so that change can be adopted at scale.

"For just the UTI pathway, by implementing these new changes we have saved approximately 29 15-minute appointments a month. If this is multiplied throughout the year, we could be freeing up 12 full days of vital GP appointments for just one practice."

**Kris Drummond, Team Lead at
Teams Medical Practice**



For more information please visit: <https://healthinnovationenc.org.uk/what-we-do/driving-digital-transformation/digital-pioneers/digital-accelerator/>



Following the success of the pilot, additional funding has been secured to extend the programme to another 20 GP Practices in 2024/25.

Supporting the Detection and Treatment of People Living with Chronic Kidney Disease using CDRC

Clinical Digital Research Collaborative (CDRC) and HI NENC teamed up to support primary care teams to use case finding resources. This work is part of HI NENC's cardiovascular disease programme, which includes a focus on chronic kidney disease (CKD).

Clinical Digital
Resource Collaborative
Supporting Clinical Decisions

Chronic kidney disease has a devastating impact on patients, healthcare services and the economy. The condition often coexists with other conditions, such as Diabetes and Hypertension, which can damage the kidneys and lead to the development of CKD.

HI NENC and CDRC collaborated to provide resources to general practices, to improve patient outcomes and the associated health economic system benefits.

The support package included:

CDRC Resources - new resources were developed by CDRC to support Primary Care Networks (PCNs) to detect and treat people living with CKD. Utilising these searches, GP Practices can identify patient cohorts, to improve the management and treatment of people with CKD within their population.

All CDRC resources are available at no cost to primary care users and accessible through SystemOne and EMIS.

Educational Video - A short video featuring Dr. Tom Zamoyski, GP Clinical Lead for CDRC, offers an overview of the range of resources available to practices. This video serves as a valuable tool for healthcare providers to understand and utilise the

provided resources effectively.

Education and Training – HI NENC hosted webinars for staff working in PCNs in the region. This series of three webinars is designed to support staff in the 2024/25 period as well.

By providing these comprehensive resources and training opportunities, HI NENC and CDRC aim to:

- support primary care to manage CKD effectively
- improve patient outcomes including reducing the development of cardiovascular comorbidity
- slow progression to end stage renal disease..

In addition to these resources, HI NENC is running a pilot project to further support GP Practices in Gateshead, which is set to commence in June 2024. Further resources to support primary care continue to be developed and will be available in 2024/25.

For more information please visit:

<https://healthinnovationenc.org.uk/what-we-do/improving-population-health/cardiovascular-disease-prevention/chronic-kidney-disease/>

<https://cdrc.nhs.uk/>

16,455

patients in the North East and North Cumbria are uncoded for CKD in primary care *CVD prevent data, accessed March 2024

People with chronic kidney disease are 20 times more likely to die of cardiovascular disease than end-stage renal disease



HI NENC Events

HI NENC run an extensive events and webinar programme. During the last year, (1 April 2023 - 31 March 2024) the team hosted 61 events a combination of face to face and online attended by 4355 delegates. A snapshot of these are shown across on the right:

Trauma Informed Community of Action Conference

More than 250 people working across the UK came together on 3rd May 2023 to share best practice and celebrate achievements at a milestone event in Newcastle hosted by the Trauma Informed Community of Action.

For the first time since before the pandemic, professionals from across the country enjoyed a day of networking and learning at the Trauma Informed Community Conference at St James' Park.

The conference, which was sponsored by NHS England, and led by Dr Angela Kennedy, Consultant Clinical Psychologist, had Samantha Allen, Chief Executive at the North East & North Cumbria Integrated Care Board (NENC ICB), do an opening address.

Other keynote speakers addressed issues of research, trauma therapies, the role of urban design and a call to action from lived experience.

Behavioural Insights

In 2022, the Innovation for Healthcare Inequalities Programme (InHIP) was launched, providing an opportunity for integrated Care Boards (ICBs) and AHSNs to define regional healthcare inequality priorities and co-design a project using innovation to minimise health inequalities.

In the North East and North Cumbria, a project was delivered in Middlesbrough, an area that is recognised for high levels of deprivation and inequalities relating to CVD. As part of this project, the team worked with the NIHR ARC NENC to understand the challenges faced by the South Asian, Afro-Caribbean and other disadvantaged populations in accessing an annual CVD check.

As part of this work to gather behavioural insights into why people do and do not engage with the health system, a webinar held on 29th June covered behavioural insights and how understanding them can improve the care provided.



Great North Pharmacy Research Collaborative Conference

This annual event was attended by over 240 pharmacy professionals who heard from a line-up of expert speakers on 14th July 2023 at the Hilton Newcastle Gateshead.

Chaired by Ewan Maule, Director of Medicines and Pharmacy at North East and North Cumbria Integrated Care Board (NENC ICB), the focus of the conference centred around pharmacy and health inequalities.

The conference provides a platform for the pharmacy community to share ideas and learning, and to recognise and celebrate the work of Foundation Pharmacists from across the region.

Delegates joined from a variety of roles and sectors including community pharmacy, general practice, primary care networks, local authority, higher education and the charity sector.

More than 100 posters were exhibited at the event highlighting the scale of pharmacy research that is taking place across the region.

To find out more about our full events programme visit: <https://healthinnovationnenc.org.uk/event/>

Bright Ideas in Health Awards

The Bright Ideas in Health Awards celebrated its 18th birthday last year. The Awards celebrate the achievements of individuals and teams working within the NHS, industry and academia, who have risen to the challenge of explaining how, and where, they believe that the services provided to patients can be improved, either through a technical innovation or through better service delivery.

Everyone can play a part in developing innovative solutions to the healthcare challenges that we face every day. The competition, depending upon the category, is open to all SMEs, NHS organisations and academic institutions in the North East of England and North Cumbria.

There were ten awards categories last year with some outstanding winners who received a cash prize as well as assistance to develop their innovation.



For more information on this year's event please visit: <https://brightideasinhealth.org.uk/>

Keep in Touch

Please visit our websites for more information on all our projects:

Visit our main website for all the latest HI NENC news, events and project information:
<https://healthinnovationnenc.org.uk/>

Visit our Innovation Pathway website to understand our approach to helping innovators to market:
<https://innovationpathway.healthinnovationnenc.org.uk/>

Visit our Innovation Library to find out more about a selection of our key projects in more detail:
<https://innovationlibrarynenc.org.uk/>

Our latest impact report can always be found here:
<https://impact.ahsn-nenc.org.uk/>

Visit the Health and Life Sciences Pledge website to understand how we are bringing together key stakeholders to better communicate, collaborate and celebrate:
<https://hlspledge.org.uk/>

Visit the Clinical Digital Resource Collaborative (CDRC) website to find out more about enabling clinicians and clinical organisations to deliver gold-standard patient care safely, efficiently and effectively.
<https://cdrc.nhs.uk/>

Please follow us on our social media channels by searching Health Innovation North East and North Cumbria on:





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