



SBRI HEALTHCARE ANNUAL REVIEW 2022 | 2023

ACCELERATING INNOVATION IN
HEALTH AND SOCIAL CARE FOR
PATIENT BENEFIT

**Health
Innovation
Network**



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SBRI Healthcare Programme

The Small Business Research Initiative (SBRI) Healthcare is a national award-winning programme. It accelerates innovative technologies in the NHS and the wider health and social care system, tackling unmet health and care needs.

SBRI Healthcare provides funding and support to early-stage projects to enable testing for business feasibility and technology development. Also to more mature products for real world implementation studies.

The Programme is funded by the Accelerated Access Collaborative (AAC) which brings together industry, government, regulators, patients and the NHS, and is supported by the Health Innovation Networks (formerly AHSNs).

The Programme supports NHS Long Term Plan goals including funding, staffing, reducing inequalities and alleviating the pressures from a growing ageing population. It signals the challenges that the NHS and the

wider system face in achieving these goals and invites outstanding entrepreneurs to put forward breakthrough innovations that can deliver improved outcomes of care.

Individual competition themes are scoped by working in close collaboration with frontline NHS and social care staff, and the Health Innovation Network. Through the funding and support from its networks, the Programme:

Improves patient care

Increases NHS efficiencies

Enables the NHS to access new innovations that solve identified health and care challenges and unmet needs

Brings economic value and wealth creation opportunities to the UK economy.

To be awarded a contract, applicants need to show the impact the proposed solution can deliver to the health and care system, ensuring it supports the best outcomes for patients and is affordable to the NHS. The innovation must have the potential to shape the future of healthcare, deploying new models of care, helping tackle health inequalities and reducing carbon emissions.

Competitions are open to any type of organisation, as long as a strong commercialisation plan is presented, including academia, NHS providers, charities and corporates, but are particularly suited to small and medium sized enterprises.

Accelerating innovations into the NHS

The UK is internationally recognised for our leadership in innovation, the excellence of our scientific institutions, and the vibrant entrepreneurial community that supports our economy.

It is SBRI Healthcare's commitment to further leverage the Programme's reputation for developing and scaling innovations at pace into the NHS, the social care system and the wider market. SBRI Healthcare aspires to unblock the barriers that hamper entrepreneurs' ability to accelerate innovations into clinical practice, staying instrumental to achieving NHS England goals as well as Governmental objectives (such as the Life Sciences Vision), and continuing to create synergies across funders and the wider innovation ecosystem to facilitate innovators' journeys.

We aspire, by working closely with NHS England's AAC team, to increase the volume of proven innovations in the hands of clinicians and patients, and to contribute to the NHS as an effective place to innovate, with patient benefit at the heart of SBRI Healthcare's mission.

SBRI Healthcare has gone from strength to strength and in the last financial year, the Programme has:

Onboarded

65 ventures

Provided tailored support to entrepreneurs

Secured co-funding opportunities

Run a second competition tailored to Net Zero innovations

Run a second NHS Cancer Programme Innovation Open Call

In the Financial Year 2022-23

In response to our commitment to help tackle health inequalities, contribute to the NHS's ambition towards net zero, and support some of the key clinical missions of the Life Sciences Vision, in the financial year 2022-2023, the SBRI Healthcare Programme awarded **£31.7 million** of funding to 65 projects:

£1.9 million of Phase 1 funding

to 10 innovations that support autistic people and people with a learning disability, and 10 innovations that reduce health inequalities in maternity care.

£5.2 million of Phase 2 funding

to support 7 innovations addressing three primary issues in stroke management: Pre-hospital diagnosis, rehabilitation, and life after stroke.

£6.1 million of Phase 3 funding

for real-world testing and implementation of 8 innovations that help detect, prevent and manage Cardiovascular Disease (CVD) and 6 innovations that support people with respiratory diseases.

£6.4 million of Phase 1 and Phase 2 funding

to 18 innovations that improve patient care and save money whilst making the NHS greener.

£12.1 million of late-stage funding

to 6 innovations that help detect and diagnose cancer earlier. The Innovation Open Calls are led by the NHS Cancer Programme, supported by SBRI Healthcare and AAC.



We are very thankful for the support received from Autistica and Asthma + Lung UK who provided invaluable insights into the challenges currently faced by the system, and access to patients with lived experience. Also NHS England's demand signalling team.



We would also particularly like to acknowledge the Stroke Association and the NHS Greener Team who contributed financially to the competitions.



4 Competitions supported

7 Challenges (Autism and Learning Disability, Health Inequalities in Maternity care, Stroke, Cardiovascular Disease (CVD), Respiratory diseases, Net Zero, and Net Zero: Clinical innovation)

1 NHS Cancer Programme Innovation Open Call

165 Phase 1 applications submitted (Autism and Learning Disability, Health Inequalities in Maternity care, and Net Zero)

31 Phase 1 companies awarded

18 Phase 2 applications assessed (Stroke and Net Zero)

14 Phase 2 companies awarded

44 Phase 3 applications submitted (CVD and Respiratory diseases)

14 Phase 3 companies awarded

31 NHS Cancer Programme Innovation Open Call 2 proposals submitted

6 NHS Cancer Programme Innovation Open Call projects awards

£31.7m

total investment

Phase 1: Autism and Learning Disability

Between 1.1 million and 1.4 million people in England are estimated to have a learning disability but only approximately 280,000 of those have a learning disability recorded in their primary care record. Approximately 650,000 people in England are recorded as being autistic in their NHS primary care record but it is estimated that between 1 million and 1.6 million people in England could be autistic. Many people have both a learning disability and are autistic.

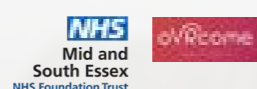
Alongside progress being made by the NHS Long Term Plan, NHS England's Transforming Care Programme, and the Core20PLUS5 initiative, 'Competition 20 - Autism and Learning Disability' was launched in May 2022, as a Phase 1 development funding competition in partnership with Autistica. It specifically sought innovations to help with early identification and diagnosis and equal access to effective support and care.

"NHS England remains committed to improving healthcare for autistic people and people with a learning disability, who can face significant health inequalities. Innovative technology along with good quality research about its effectiveness will be key in achieving some of the goals set out in the NHS Long Term Plan, such as reducing diagnosis waiting lists, delivering efficient services and improving coordination and quality of care."

Dr Lorcan Kenny, National Research Lead for Autism, NHS England

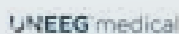
AUTISM AND LEARNING DISABILITY (PHASE 1)

The University of Sheffield
Co-development of a digital support needs assessment for autistic adults



Mid and South Essex NHS Foundation Trust and oVRcome
A Virtual Reality programme and exposure therapy to support patients with a learning disability and/or autistic people to overcome anxieties and phobias around healthcare situations and social anxiety

UNEEG medical UK Ltd
Subcutaneous EEG monitoring for people with intellectual disabilities or autism



RIX Software
The RIX Multi Me Toolkit for person-centred Integrated Health and Care for People with a Learning Disability and Autism



Tellmi
The Tellmi Autism project: A Digital innovation to reduce suicide and increase access to effective support for autistic young people

Little Journey
A co-designed digital eSupport platform to psychologically prepare, support and inform children, and families, throughout healthcare interactions (both routine care and clinical trials)



Health Companion Ltd - Health Fabric - Unity
An AI-enabled self-management platform to enable people from diverse communities / ethnicities to manage the challenges associated with autism and to empower families



XR Therapeutics
A VR supported intervention to treat anxiety and phobias, adapted to support individuals with a learning disability



Maldaba
Improving Annual Health Checks and Health Action Planning (HAP) processes and interoperability



Uncommon
The world's first neurodivergent wellbeing platform bringing affordable and effective mental health and wellness solutions to neurodivergent people



"Autistica is delighted to be partnering with NHS England and the Small Business Research Initiative Healthcare to solve unmet needs of autistic people and people with a learning disability. The SBRI Healthcare funding pathway will support the research initiatives to bring new technologies to the NHS as a crucial step to enabling autistic and other neurodivergent people to live happier, healthier, longer lives. These projects demonstrate that rapid innovation based on high-quality evidence and collaboration between industry, health and care services, and academic experts, is both possible and necessary to create practical solutions to improve the lives and outcomes of autistic people."

Dr Amanda Roestorf, Head of Research, Autistica

Phase 1: Health Inequalities in Maternity Care

Alongside progress being made by the NHS Long Term Plan, the Maternity Transformation Programme, and the Core20PLUS5 initiative, more needs to be done to accelerate change and use the best of cross-sector collaboration and technical expertise to address health inequalities in maternity care.

In consultation with clinicians, nurses, midwives, and other stakeholders working in the provision of care across the maternity care spectrum, 'Competition 20 - Health Inequalities in Maternity Care' was launched in May 2022 as a Phase 1 development funding competition, focusing on perinatal mental health, risk identification, stratification, and intervention, and support for women post-discharge.

HEALTH INEQUALITIES IN MATERNITY CARE (PHASE 1)

Barnardo Services Limited

The Universal Language: Multi-channel, hyper-local services to address perinatal mental health inequalities among Black and South Asian communities through a hyper-local offer which draws on national teams and digital assets

LatchAid Ltd: Anya

An award-winning app utilising 3D interactive technology, an AI-powered virtual companion leveraging 1-to-1 specialist support, and virtual support communities, to provide families with scalable breastfeeding and early parenthood support 24/7

Damibu Ltd

Hyper-localised digital health information tailored by culture, language, ethnicity, sexuality, faith etc.

Sheffield Hallam University: DigiCP

A digital service to support users to navigate existing perinatal Mental Health Care Pathways

First 4 Health Group

A maternal psychosocial risk identification tool to proactively flag up women at-risk across preconception, pregnancy and post-birth for support

Digital Care Systems

CarePath-ASSIST
Knowledge-based and conversational AI to improve the diagnosis of perinatal PTSD

mOm Incubators Ltd

A lightweight, compact, portable incubator designed to extend neonatal and newborn care to new settings across hospitals and keep families together

The Real Birth Company

The 'Giving Birth to your Baby Early' Module to raise awareness of Preterm Birth, the Neonatal Journey and Perinatal Mental Health amongst marginalised communities and provide support

Buckingham Medical Technologies Ltd

A new design of spinal needle that reduces the impact of failed spinal anaesthesia as a consequence of incorrect needle placement.

University Hospitals of Leicester NHS Trust in collaboration with 2SN HEALTHCARE LTD and the University of Leicester: JANAMAPP

A mobile application providing pregnancy and postnatal information in a culturally sensitive way and in multiple south Asian languages

"The SBRI Healthcare awards are another step forward in delivering the NHS Long Term Plan commitments for maternity care, including postnatal care for women and their families. It's fantastic to see so many projects promoting innovation and learning to support the NHS to achieve the very best, evidence-based maternity services – they will help to accelerate the NHS' action to deliver the latest medical innovations to patients - improving access to support and reducing health inequalities in maternity care."

Dr Matthew Jolly, former National Clinical Director for Maternity and Women's Health, NHS England

"The programme has been a refreshing balance between the freedom to truly explore ideas and innovations, working iteratively, with an understandable programme structure that offers quick responses when we needed additional support. Like any technology innovation we've discovered things during the project that were exciting and were able to quickly communicate with our project leads and get agreement to explore these new insights that have undoubtedly helped us to create a better product than we could have originally envisioned before starting the project."

John Callaghan, Project Manager, Damibu Ltd

Phase 2: Stroke

Stroke is the fourth biggest cause of death in England with more than 100,000 strokes a year in the UK and is the largest cause of complex adult disability (NHS Long Term Plan, 2019). There is intense pressure on the stroke rehabilitation pathway, from acute to community stroke services.

In line with the priorities for stroke survivors, carers and healthcare professionals, identified in NHS England's demand signalling report and the Stroke Association and James Lind Alliance report, SBRI Healthcare 'Competition 18 - Stroke and Technology' in partnership with Stoke Association focused on addressing three primary issues: Pre-hospital diagnosis, rehabilitation, and life after stroke.

Following the demonstration of technical feasibility and impact at Phase 1, Phase 2 funding provided support for up to twelve months for the development of prototypes and evaluation, before real-world implementation.

STROKE (PHASE 2)

Upfront Diagnostics (formerly Pockit Diagnostics Ltd)



A point-of-care blood test for the pre-hospital identification of stroke patients suitable for emergency thrombectomy treatment

Cognitant Group Ltd



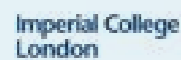
Providing a coordinated, connected world for all stroke survivors and their families through a personalised, digital support package: the 'My Stroke Companion' hub

NeuroVirt Limited



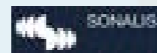
Immersive Virtual Reality for post-stroke patient rehabilitation and quantification of impairment and improvement

Imperial College London



OnTrack Rehab: A digital system for upper limb rehabilitation after stroke

Sonalis Imaging Limited



Accelerated stroke diagnosis and triage using full-waveform inversion of transmitted ultrasound

Odstock Medical Limited



A two-channel neuromuscular stimulator with improved usability and wider application for therapeutic and orthotic use for people with central neurological damage

Evolv



Move Well virtual platform for stroke survivors' rapid rehabilitation through fun exergaming-based learning of accurate body movements

“The SBRI Healthcare programme has given us a unique opportunity to develop important improvements to our existing virtual therapy solution and then test it in a real world scenario with stroke survivors at home. It also gave us the possibility to work with renowned rehabilitation experts at the UCL Queen Square Neurorehabilitation Programme during the development phase. The fact that the development and testing was specifically funded by the NHS as part of a call for stroke technologies provides important backing to our solution in the eyes of potential clients around the world. The continued feedback from our LGC project supervisors has been invaluable to help us progress efficiently at each step.”

David Fried, CEO, Evolv Rehab

“We are delighted to continue our partnership with SBRI Healthcare by supporting seven stroke projects in Phase 2. This will enable the projects to build on their success in Phase 1 and further develop and test their interventions in stroke diagnosis, treatment and care. These projects address key research priorities identified by stroke survivors and clinicians in the stroke Priority Setting Partnership. Every minute stroke goes untreated, 1.9 million brain cells die. Improved pre-hospital diagnosis will help ensure people get the right care as quickly as possible, while innovative rehabilitation and long-term care solutions can help survivors make the most of their recovery and rebuild their lives.”

Dr Richard Francis, Head of Research, Stroke Association

Phase 3: Cardiovascular Disease (CVD)

CVD is the single biggest condition where lives can be saved by the NHS over the next decade. There are 7.6 million people living with CVD in the UK, and CVD is a leading cause of premature disability, mortality, and health inequalities, and responsible for one in four deaths each year (British Heart Foundation UK Factsheet). The UK Health Security Agency estimates that the annual healthcare costs in England relating to CVD are around £7.4 billion, with an annual cost to the wider economy of £15.8 billion.

'Competition 21, Phase 3 for Real-world Testing and Implementation: CVD' focused on the early detection of high-risk individuals, improving prevention strategies, and patient empowerment and self-management of CVD.

CARDIOVASCULAR DISEASE (CVD) (PHASE 3)

Abtrace

Clinical Process Automation of Identification, Prioritisation and Recall of Patients at risk of CVD



professionals with a patient management system that connects to patient facing digital services, designed to improve health outcomes, access to care, and the efficiency of delivering care to patients with long term conditions, supporting them to make the best choices at the moments that matter

PocDoc

Improving primary and secondary prevention of CVD and keeping people out of hospital through easier, more cost-effective access to lipid testing. PocDoc has developed a world-first smartphone-based lipid test which can deliver a 5 marker lipid panel, via the PocDoc app, within 6 minutes, with results shared immediately back with the healthcare system



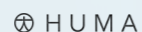
Discover Momenta Ltd

Scaling a market-leading Cardiovascular Disease prevention programme (CPP) co-developed with the South Eastern Trust in Northern Ireland with input from the British Heart Foundation



Huma

A digital first, population-level, early detection, engagement and self-management programme for people who are undiagnosed and/or high-risk of developing modifiable Cardiovascular Disease (CVD). For this project, Huma and iPlato's technologies will proactively engage and support people who are identified by their GPs as being high-risk of undiagnosed CVD



Healum Ltd

To scale and evaluate the ROI of using the Healum integrated care planning software, patient facing self-management app and live learning research network, in supporting ICS commissioners and multidisciplinary teams working in primary care, to implement intelligent personalised care and support strategies to patients at risk of Cardiovascular Disease. Healum provides healthcare



Cardisio GmbH

Assessing the impact of using community-based heart testing to detect early signs of Cardiovascular Disease through a novel, quick, low-cost screener which uses sophisticated AI-based analysis



Inavya Ventures Ltd

Avatr is an AI platform that lets doctors input care and medication plans and removes complexity making it easy for patients to follow. During the Post-Operative 60 Days (PoP-60) study, the clinical and economic benefits of Avatr will be evaluated for cardiac patients discharged from hospital



Southwest London Integrated Care System

The CVD Prevention Decathlon – a culturally tailored, highly personalised behaviour change programme that rewards people for becoming healthier and empowers people to improve their health



“

“Our company has been awarded both a phase 1 feasibility study and a phase 3 award as part of the CVD prevention call. Phase 1 was called: Intelligent Mobile Solutions that Enable GP's to Support Patient Self-Care. Both awards have enabled the company to undertake transformational research and development activities that would not have happened without the award. Phase 1 led to follow on funding from Innovate UK, investment of circa £2m from the private sector and enabled the company to develop our MVP. In phase 3 we have received a lot of help and support in the set up phase with really intelligent input from the monitoring officer. We have also benefited greatly from the events that SBRI Healthcare have set up.”

Healum

“

“The SBRI Healthcare programme has been a fantastic opportunity to showcase and develop our innovation and work collaboratively with NHS and academic partners. We have thoroughly enjoyed the experience of working in partnership with the SBRI Healthcare team who have helped steer our programme forwards. We are looking forward to quantifying the impact of our innovation through this funding award and hopefully scaling our innovation beyond the programme.”

Huma

Phase 3: Respiratory Diseases

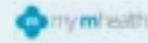
1 in 5 people are diagnosed with a respiratory disease, the third biggest cause of death in England after cancer and cardiovascular disease (CVD). Patients are commonly diagnosed when a respiratory disease has progressed, leading to poor prognoses and patient outcomes.


In the UK, asthma affects 8 million people and there are approximately 3 million people living with COPD, with 2 million undiagnosed (Public Health England, 2018). Emergency admissions to hospital for exacerbations of COPD are the second largest cause of emergency admissions in the UK (Health Foundation, 2017).

Respiratory diseases are a major factor in winter pressures faced by the NHS; with hospital admissions for lung disease at three times the rate of all admissions generally.


SBRI Healthcare 'Competition 21, Phase 3 for Real-world Testing and Implementation: Respiratory Diseases' focused on early diagnosis – in both adults and children – of respiratory diseases, monitoring and management, and access to the right care at the right time.


RESPIRATORY DISEASES (PHASE 3)

my mhealth Limited 
Improving COPD Outcomes through Digitally Enhanced Care Pathways

Lenus Health Ltd 
Implementing and evaluating the Lenus COPD Support Service for remotely managing chronic obstructive pulmonary disease (COPD) in Hull University Teaching Hospitals NHS Trust (HUTH)

Adherium Europe Ltd 
Smart Digital inhaler enabled asthma management in high-risk children aged 5 to 16 years managed in primary care to prevent asthma attacks

Tiny Medical Apps 
Making Young People's Asthma Self-management Smarter (MYPASS)

patientMpower 
A randomised, prospective evaluation of health outcomes, service and health economic impact of hybrid (remote+clinic) versus clinic alone to enable right-time, right-place care for the follow-up of patients after lung transplantation

Aseptika Ltd 
Real-world validation in both community and hospital-based settings for a technology-enabled hybrid service delivery model for Pulmonary Rehabilitation, affordable at all stages of condition, to increase uptake and service capacity

“New tests that can diagnose people with lung conditions quickly and easily are vital to making sure people get the correct treatment for their symptoms. We're delighted to have worked with SBRI Healthcare who provide funding through the Accelerated Access Collaborative for promising medical innovations that will help address unmet patient needs and ensure the respiratory community benefits from this great funding opportunity. Lung conditions are the third biggest killer in the UK and funding for research and innovation is needed to help diagnose, treat and manage them more effectively and transform and save millions of lives in the UK and across the world.”

Dr Samantha Walker, Director of Research and Innovation,
Asthma + Lung UK

Improving care for patients whilst delivering a greener NHS

In October 2020, the NHS became the world's first health service to commit to reaching carbon net zero, in response to the profound and growing threat to health posed by climate change. Across the health and care sector, innovations to reduce harmful emissions are an essential part of delivering better care for patients and delivering value for the taxpayer, while building a more sustainable greener NHS.

Developing sustainability technologies and investing in innovation accelerates actions and ensures the best outcomes for patients and communities, improves care, saves money, and reduces emissions.

Through a partnership between the Accelerated Access Collaborative and the Greener NHS programme, and in collaboration with the Health Innovation Network, our second Phase 1 net zero competition

(competition 22) sought innovative solutions that focus on decarbonising the clinical pathways that are the most carbon intensive. The NHS interacts with 1.6 million patients each day, and every one of those interactions has an associated carbon footprint. Decarbonising clinical pathways requires change across all areas of care. The four challenge areas for this competition were:

- Decarbonising surgical pathways

- Reducing waste in surgery and critical care
- Net zero personalised care
- Tools to support the workforce to deliver net zero care.

Following successful 'Competition 18: Delivering a Net Zero NHS' Phase 1 funding in 2021/22, Phase 2 funding was awarded to 7 projects that focus on reducing emissions from care miles and surgical pathways whilst improving patient care, reducing nitrous oxide emissions, and tools to support low-carbon decision making.

“The support from being involved with the programme has been invaluable - not only being able to invest in understanding how to commercialise our services, but also the support inherent in the process.”

Hazel Walsh, Centre for Sustainable Healthcare

“The climate emergency is also a healthcare emergency. To work with the NHS it's crucial that innovators put sustainability at the heart of their innovations. The health innovation networks are helping innovators to consider the impact of their innovations on the environment right from the start of their journeys, and to understand how to work with, and in, the NHS. It's encouraging to see such a diverse mix of companies awarded funding through SBRI Healthcare and we look forward to working with them in support of patients.”

Kathy Scott, Chief Operating Officer and Deputy Chief Executive at Health Innovation Yorkshire and Humber

DELIVERING A NET ZERO NHS: CLINICAL INNOVATION (PHASE 1)

Revolution-ZERO Group Ltd

ZERO-DECON: Net Zero-focused medical textile decontamination



52North

Optimising the Neurocheck solution, and creating an electronic tool to measure Carbon-related Patient-Reported Outcomes



Medisyne Ltd

An environmentally friendly, reusable, computer-based device to replace existing disposable, plastic urometers



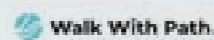
AiSentia Ltd

De-carbonizing CT imaging by reducing the levels of iodine in hospital wastewater / the wider environment, the amount of packaging (needle/pump injector plastic tubing, etc.), as well as the supply chain



Walk with Path Limited

A smart wearable and telemedicine platform to prevent diabetes foot ulcers and reduce the carbon footprint through a reduction in the use of disposables



Airway Medical Ltd

CAMSUtm – a net zero medical suction device made from renewably sourced bio-polymers to replace an existing High-GWP technology



Centre for Sustainable Healthcare (CSH)

Upskilling clinicians to use SusQI to measure the health outcomes of a service against its environmental, social and economic costs



Definition Health Ltd

Digitising Orthopaedic surgery at University Hospitals Sussex through the Total Digital Surgery Platform



Labcycle Ltd

Sorting, decontaminating and recycling single-use plastics in the NHS, and creating a circular plastic supply chain



HammondCare

A specialist virtual clinic – the Virtual Dementia Behaviour Support Clinic (DBSC), accessible anywhere, anytime for carers of people experiencing severe behaviours associated with dementia



Alvie Health

(formerly Onkohealth) Digital prehabilitation in personalised cancer care pathways



DELIVERING A NET ZERO NHS (PHASE 2)

Apian Ltd

Project Angel: Using uncrewed aerial vehicles (UAVs) to deliver greener, faster and smarter healthcare to patients in the North of England



Primum Digital Ltd

CrossCover – The evaluation of the clinical, financial cost and carbon cost effectiveness of the CrossCover Clinical Pathway Development and Operations (DevOps) Platform



Revolution-ZERO Group Ltd

Revolution-ZERO: Zero Waste, Zero Carbon, Circular Surgical Textiles



Elegant Design and Solutions Ltd

EnviroLieve (patent pending), a medical device which substantially reduces the amount of Entonox used at the bedside to achieve clinical effect



YewMaker

MCF Classifier: Evidence-based tools supporting carbon-informed medicines optimisation and prescription



Green Rewards Limited trading as Jump

Jump: World-first healthcare specific carbon engagement tool



Open Medical Ltd

SurgiCare NetZero - An environmentally sustainable waiting list management tool



NHS Cancer Programme Innovation Open Call

Following the success of the first round of the NHS Cancer Programme Innovation Open Call, Innovation Open Call 2 was launched in April 2022. Led by the NHS Cancer Programme with support from SBRI Healthcare, the Call invited applications to implement late-stage innovations into front-line settings to improve the early detection and diagnosis of cancer. The Innovation Open Call supports the NHS Long Term Plan (LTP) and its ambitions for cancer that by 2028, an extra 55,000 people will survive cancer for five years or more, and 75% of people will be diagnosed earlier, at stage one or two.

NHS CANCER PROGRAMME INNOVATION OPEN CALL 2

Cyted



Project CYTOPRIME2:
Earlier Oesophageal Cancer Detection in Primary Care
This non-endoscopic test for the earlier detection of oesophageal cancer is transforming the care pathway for people living with chronic reflux

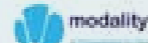


The Institute of Cancer Research
BRCA-DIRECT: A digital pathway for germline genetic testing in women with breast cancer



iPLATO Healthcare
Democratising Cancer Screening Uptake - Increasing early detection of Bowel Cancer, with a particular focus on engaging with ethnic minority communities

Modality LLP



Using a Novel Biomarker Approach to Transform Ovarian Cancer Diagnostic Pathways

Skin Analytics



Streamlining Early Diagnostic Skin Cancer Assessments in the Community using a Class II UKCA-Certified Artificial Intelligence Medical Device

The University of Manchester / Roche Diagnostics Limited



Implementation of Elecsys® GAAD clinical algorithm for the early detection of Hepatocellular Carcinoma (HCC) in routine practice



“The support of the Surrey and Sussex Cancer Alliance has been extensive and ongoing, providing assistance throughout the entire project life cycle and facilitating connections with multiple providers in the region. With their assistance we have identified our lead provider sites. Thanks to the leadership of Greater Manchester Cancer Alliance we have established partnerships with Royal Salford and Bury, and are now working primarily at the provider level within this locality.”

Open Medical

NHS Cancer Programme Innovation Open Call: Impact to date

82 Applications Assessed

14 Innovations supported

£21m of funding awarded

160,000 Participants potentially involved in implementations

17 Cancer Alliances involved in Implementations

270+ Sites participating

10 Health innovation networks supporting the projects

Enhanced support for Innovators

Supported by experienced guest speakers and partnership organisations, the Programme Management Office organised a series of tailored workshops to break down barriers to innovation and provide support for commercialisation and IP, Public and Patient Involvement and Engagement (PPIE), and Data Analytics.

Innovators were also given opportunities to network peer-to-peer to facilitate knowledge sharing, attend Q&A drop-in sessions to help maximise the potential for successful project outcome delivery at each stage of the venture journey, and to showcase their work to investors.

Innovations Showcase event, 17 June 2022, London Stock Exchange

14 companies from the SBRI Healthcare, NIHR Invention for Innovation (i4i) and AI in Health and Care Awards portfolios showcased their work to investors at our Innovations Showcase event at the London Stock Exchange.

Visit <https://sbrihealthcare.co.uk/about-us/available-support> for the video and Innovations Showcase booklet.



NHS Innovation Showcase event

15 of the inspirational companies in our portfolio showcased their work at the AAC NHS Innovation Showcase on 24 February 2023 at the Royal Institution as part of the NHS's 75th anniversary celebrations. The event was a big success and was an opportunity for the innovation community to come together, build new collaborations and plan for upcoming projects.



SBRI Healthcare and AI in Health and Care Awards Annual conference

24 April 2023 saw our first face to face SBRI Healthcare and AI in Health and Care Awards Annual Conference at the Francis Crick Institute. The conference was opened by Lord Markham and attended by 150+ innovators and stakeholders.



"It was great to see the number of clinically-led innovations that are scaling across the NHS, as these are the types of innovations that help tackle real problems on the ground, delivering meaningful change, and helping with adoption challenges. Feeling very inspired and excited about the future of clinically-led innovation!"

Dr Piyush Mahapatra, Chief Innovation Officer, Open Medical

"We had the pleasure of attending the SBRI Healthcare AI in Health and Care Awards annual conference at The Francis Crick Institute, and what a fantastic event it was! We had the opportunity to listen to talks and participate in workshops conducted by leaders in the healthcare industry. One of the highlights of the conference was the chance to network with other entrepreneurs and healthcare professionals from the NHS and national innovation networks. We left the conference feeling inspired and energized to continue pushing the boundaries of innovation in healthcare.

We also want to take a moment to express our gratitude to SBRI Healthcare for the opportunities and support they have provided us. Since our successful SBRI Phase 2 project, our business has experienced significant growth and is hitting value inflection points more than ever. SBRI Healthcare has been instrumental in supporting our work and helping us to bring our idea to life. Their commitment to fostering innovation in the healthcare industry is truly commendable, and we feel fortunate to have had their support every step of the way."

Carolina Bell, Co-founder & CFO, NeuroVirt Ltd

International Women's Day 2023 campaign

For International Women's Day on 8 March 2023, we ran a successful social media campaign featuring 40 inspirational women innovators from the SBRI Healthcare portfolio.



Health Innovation Network support

The 15 regional health innovation networks that make up the national Health Innovation Network have supported SBRI Healthcare since the programme's inception in 2009.

Health innovation networks work with health and care businesses and individual innovators to help realise the potential of their ideas. Their unique role is to bring the NHS, care, research and industry together, so that more people can benefit from the very best innovative solutions, and to create economic growth.

The Health Innovation Network exists to transform the way the NHS identifies, adopts, and spreads innovation. The Network operates simultaneously as a single national network, and as 15 locally embedded and integrated organisations with strong partnerships at Place and Integrated Care System (ICS) level. Health innovation networks support the rapid 'importing and exporting' of innovations, and have created a national pipeline of more than 1,500 proven technologies that can be matched to local health and care needs.

The health innovation networks collaborate with the SBRI Healthcare Programme Management Office to design competitions to attract innovations that respond to specific health and social care needs. Their health innovation teams engage industry to apply; contribute to the selection process; and they continue their relationship with successful companies to ensure maximum levels of traction within the NHS and social care system. The health innovation networks have provided comprehensive support to SBRI Healthcare competitions as well as assisting with webinars and events for innovators and participating in the SBRI Healthcare Independent Strategy Advisory Board.

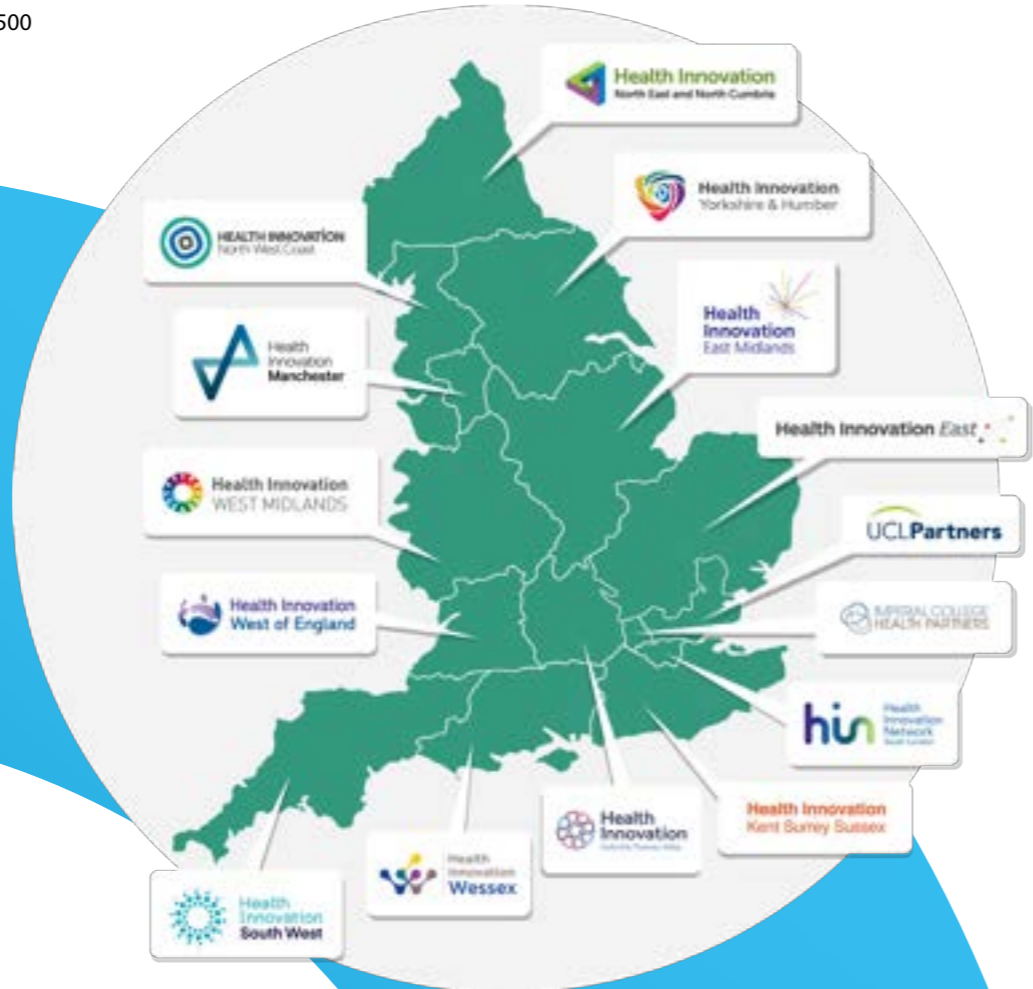
Health Innovation Network

"The Health Innovation Network's support for our innovation has been fantastic, for example supporting us with our real-world evaluation and connecting us to people throughout the NHS who are working in maternity transformation. This support has helped with awareness which ultimately supports scaling."

The Real Birth Company

"Working with the Health Innovation Network has been transformational. They inputted on: 1) Proposition requirements 2) Market access strategy 3) Evidence roadmap. They included us in a number of partnerships that have helped to accelerate our progress and opened up opportunities in all the aforementioned areas."

Healum



SBRI Healthcare Independent Strategy Advisory Board (ISAB)

The Board has multidisciplinary expertise and advises NHS England on the strategic direction and development of SBRI Healthcare, taking into consideration the remit of the programme and the wider health and social care innovation landscape.

Mike Lewis
Professor of Life Science Innovation
 University of Birmingham and Joint Director of SBRI Healthcare and NIHR i4i Programmes
LinkedIn: /michael-lewis-b22938b

Steve Morris
Royal Academy of Engineering Visiting Professorship
 Bangor University

Stephen Edgar
Patient and Public Involvement and Engagement representative

Mike Batley
Deputy Director of Research Programmes
 Department of Health and Social Care
LinkedIn: /mike-batley-06174b66

Arjun Sikand
Innovation Director
 Surrey Heartlands ICS
LinkedIn: /arjun-sikand-25910013

Laura Fenner
Patient and Public Involvement and Engagement representative

Ian Brotherston
Head of Public Sector Innovation Strategy
 Innovate UK
LinkedIn: /ianbrotherston

Mark Wyatt
Investment Director
 Mercia Asset Management
LinkedIn: /mark-wyatt-2533b5

Richard Deed
Associate Director of Industry
 Health Innovation Manchester
LinkedIn: /richard-deed-4b945914

Kath Mackay
Director of Life Sciences
 Bruntwood SciTech
LinkedIn: /drkathmackay

Nuala Foley
Portfolio Lead: Commercial and Partnerships
 Kent Surrey and Sussex AHSN
LinkedIn: /nuala-foley-58b1822b

Tony Young
Director of Medical Innovation
 Anglia Ruskin University and National Clinical Director for Innovation at NHS England
LinkedIn: /drtonyoung/

IMPACT TO DATE

2013 - March 2022



£140m

Total invested

306

Products supported

284

IP granted

1,792

New collaborations established

19,957

Sites accessed through trials or sales

2,235

Jobs created/retained

£684m+

Private investment leveraged

1 IPO 3

(£15m+ raised) acquisitions

92

Companies with commercial revenues

£73m

Revenue generated

64

Products exported

79

Companies with sales in the NHS

>7.7m

Patients involved through sales and trials



IMPROVED PATIENT CARE



INCREASED EFFICIENCY IN THE NHS



ENABLED THE NHS TO ACCESS INNOVATION



UK ECONOMIC GROWTH



*Data is taken from the SBRI Healthcare Annual Survey sent to our portfolio

Looking Forward

Going forward our commitment is to further leverage the SBRI Healthcare programme's reputation for developing and scaling innovations at pace into the NHS, the social care system and the wider market. We aspire to unblock the barriers that hamper entrepreneurs' ability to accelerate innovations into clinical practice, ensure the programme becomes instrumental to achieving NHS England goals as well as Governmental objectives (such as the Life Sciences Vision), and continue to create synergies across funders and the wider innovation ecosystem to facilitate innovators' journeys.

WE WILL HELP IMPROVE DIVERSITY AND INCLUSION, AND DECREASE HEALTH INEQUALITIES

We will continue to focus on the Core20PLUS5 and Core20PLUS5 for Children and Young People approaches to support the NHS in reducing health inequalities at both the national and system level. The programme is committed to unleashing innovations that can help deliver equitable healthcare and benefit the most vulnerable groups of society and deprived communities. We will continue to commit to ensuring diversity on our panels and in the portfolio of companies we fund, and to creating an inclusive and forward-thinking programme.

WE WILL SUPPORT THE NHS TO ACHIEVE ITS NET ZERO GOALS THROUGH INNOVATION

Climate change is a global health and care emergency and threatens the core purpose of the NHS – putting the health and wellbeing of the patients and communities we serve at risk now and in the future. Innovation has a critical role to play in supporting the NHS to reach its net zero commitment, and collaboration across different industry sectors, government, academia and other organisations is key to deliver on this ambition. We will further strengthen our collaboration with the Greener NHS team to accelerate the development of greener innovations to help build a greener NHS.

WE WILL EXPLORE OPPORTUNITIES FOR ACCELERATION OF SPREAD AND ADOPTION

Through initiatives such as the NHS Cancer Programme Innovation Open Call, and by working closely with our colleagues at NHS England, the Health Innovation Network, and the Cancer Alliances, we will explore how to support the most promising technologies and approaches to be spread and adopted faster at regional and national level. We will provide opportunities to ensure networking and the showcasing of innovations to key opinion leaders as well as tailored support for innovators to address key challenges. We will share our learnings and insights with the innovation community through communications and events.

Meet the Innovators

A sample of SBRI Healthcare portfolio companies present their companies, their innovations, and the impact they're having on patients and NHS efficiencies.

NB. The views, projections and data included are those of the innovators/companies themselves and not necessarily those of SBRI Healthcare or its stakeholders.

COGNITANT
Mrs Daisy Allington
 Chief Operating Officer
 Cognitant Group Ltd
 @Cognitant Cognitant/
 hello@cognitant.com

Product name:
 My Stroke Companion
Available to buy at:
 cognitant.com/contact/



cognitant.com **p.33**



Real Birth Company
 KNOWLEDGE • CONFIDENCE • EMPOWER

Zoe Wright RM
 CEO
 The Real Birth Company
 @RealBirthCo
 /the-real-birth-company-limited/
 annemarie@therealbirthcompanyltd.com

Product name:
 The Real Birth Digital Programme
Available to buy at:
 Available on the framework -
 Atamis Family Portal



therealbirthcompanyltd.com **p.35**



Concentric
Dr Edward St John
 Chief Medical Officer and Co-founder
 Concentric Health
 @Concentric_Hlth concentrichealth/
 edward@concentric.health

Product name:
 Concentric digital consent
 application
Available to buy at:
 concentric.health/contact/



concentric.health/ **p.37**



DEFINITION HEALTH
Mr Sandeep Chauhan
 Co-Founder & CEO
 Definition Health
 @DefinitionH18 /definitionhealth/
 hello@definitionhealth.co.uk

Product name:
 Definition Health
Available to buy at:
 definitionhealth.co.uk



definitionhealth.co.uk **p.39**



Little Journey
Dr Chris Evans
 Co-Founder & CEO
 Little Journey
 @littlejourney
 littlejourney.health/contact-us
Product name:
 Little Journey (Free Smart-Phone Application)
Available to buy at:
 apps.apple.com/gb/app/little-journey/
 id1256824573 https://play.google.com/store/
 apps/details?id=com.littlesparkshospital.
 littlejourney



littlejourney.health/ **p.41**



RAIQC
Dr. Sarim Ather
 Co-founder & CEO
 RAIQC Ltd
 @RAIQC_Tweets /raiqc
 sarim@raiqc.com / info@raiqc.com

Product name:
 RAIQC
Available to buy at:
 raiqc.com



raiqc.com **p.43**



Cyted
Charlene Tang
 Head of Growth
 Cyted Ltd
 @charleneostang/
 charlene.tang@cyted.ai
Product name:
 EndoSign Capsule Sponge Test
Available at:
 • The Increasing Capacity Framework
 • Health Trust Europe - Diagnostic Service
 Solutions Framework (reference HTE010497)
 • Directly from Cyted at service@cyted.ai



cyted.ai **p.45**



OpenMedical
Dr Piyush Mahapatra
 Chief Innovation Officer
 Open Medical
 @OpenMedicalLtd /openmedical
 info@openmedical.co.uk
Product name:
 Pathpoint eDerma
Book a Demo at:
 openmedical.co.uk/ederma



openmedical.co.uk **p.46**



Revolution ZERO
Dr Tom Dawson
 CEO & Founder
 Revolution-ZERO
 @RevolutionZERO1 /Revolution-ZERO
 tom.dawson@revolution-zero.com

Product name:
 Revolution-ZERO DC+ Smart Materials
 Operating Theatre Solutions
Available to buy at:
 Procurement@revolution-zero.com



revolution-zero.com **p.47**



jump
Josh Cleall
 Product Director
 Jump (Green Rewards Ltd - trading as Jump)
 @jumpengagement
 josh.cleall@teamjump.co.uk

Product name:
 Jump Sustainability Engagement
 Programme
Available to buy at:
 teamjump.co.uk



teamjump.co.uk **p.49**



My Stroke Companion provides personalised digital information that supports people to navigate life after stroke.

In the UK, over 100,000 strokes occur annually – equivalent to one every five minutes – contributing to the 12 million strokes each year worldwide.

Following hospital discharge, people navigate the life-changing consequences of stroke using general information that may not be specific to their individual needs, ethnicity or social background.

My Stroke Companion is a digital platform that provides a connected world for stroke survivors and their families by providing personalised

health information about their stroke and follow-up care. The platform enables clinicians to generate bespoke information prescriptions based on individual needs including type of stroke, prescribed medicines, rehabilitation plans and conditions related to stroke.

Supporting the NHS 10-year plan, aiming to ‘improve the quality of care and treatment available for those who have had a stroke’, My Stroke Companion presents easy-to-understand information in varied formats, including video animations,

text-to-audio and picture-led easy reads. Additionally, My Stroke Companion is translated into multiple languages, includes tailored information about local services, navigating life after stroke, and support for caregivers. Initial pilot data demonstrates superior engagement levels compared to benchmarking data, high user acceptance, and investment from hospital staff. My Stroke Companion is being actively used in five NHS hospitals in the UK, and further in-depth evaluation is underway.



IMPACT

- A successful pilot has been completed with University College London Hospitals NHS Foundation Trust (UCLH), which supported over 300 stroke survivors and their families to access personalised information following stroke
- Adopted by four additional NHS sites, all of which are actively generating information prescriptions using My Stroke Companion
- Data shows that stroke survivors and their families in the UK have already interacted with the platform over 800 times, viewing content more than 2,500 times
- A panel of internationally recognised academics, stroke clinicians, charity partners and other stakeholders are actively invested in developing the tool further to support increasing research participation and reducing repeat hospital admissions
- A significant update has been released to the platform including support for caregivers, the ability for users to track and monitor their own health data, and a bespoke individual goal-setting function
- Partnerships with leading charities in the UK, and the convening of multiple panels of stroke survivors and caregivers, has allowed the solution to be co-designed with end users using participatory research methods
- Featured in the UK's Digital Health Playbook 2023



“This new educational platform will allow more people to understand their stroke and increase their likelihood of recovery. The information, shared both with stroke survivors and their carers, will always be accurate, appropriate and well-presented, unlike information searches on the internet, which can often be inaccurate and unsafe.”
Clinical Lead, Dr Rob Simister, Consultant Neurologist, UCLH

“[The information] is all in one place and it is targeted at me and my condition.”
Stroke survivor

“I’m excited to be working with Cognitant on My Stroke Companion; this is a big opportunity to provide people with personalised, relevant and accessible information after stroke, helping them understand and gain more control over their condition.”
Dr Phil Clatworthy, Consultant Stroke Neurologist and Chief Clinical Informatics Officer, CCIO, North Bristol NHS Trust



An interactive, user friendly, animated, easily accessible digital maternity tool, providing mothers-to-be with essential support.

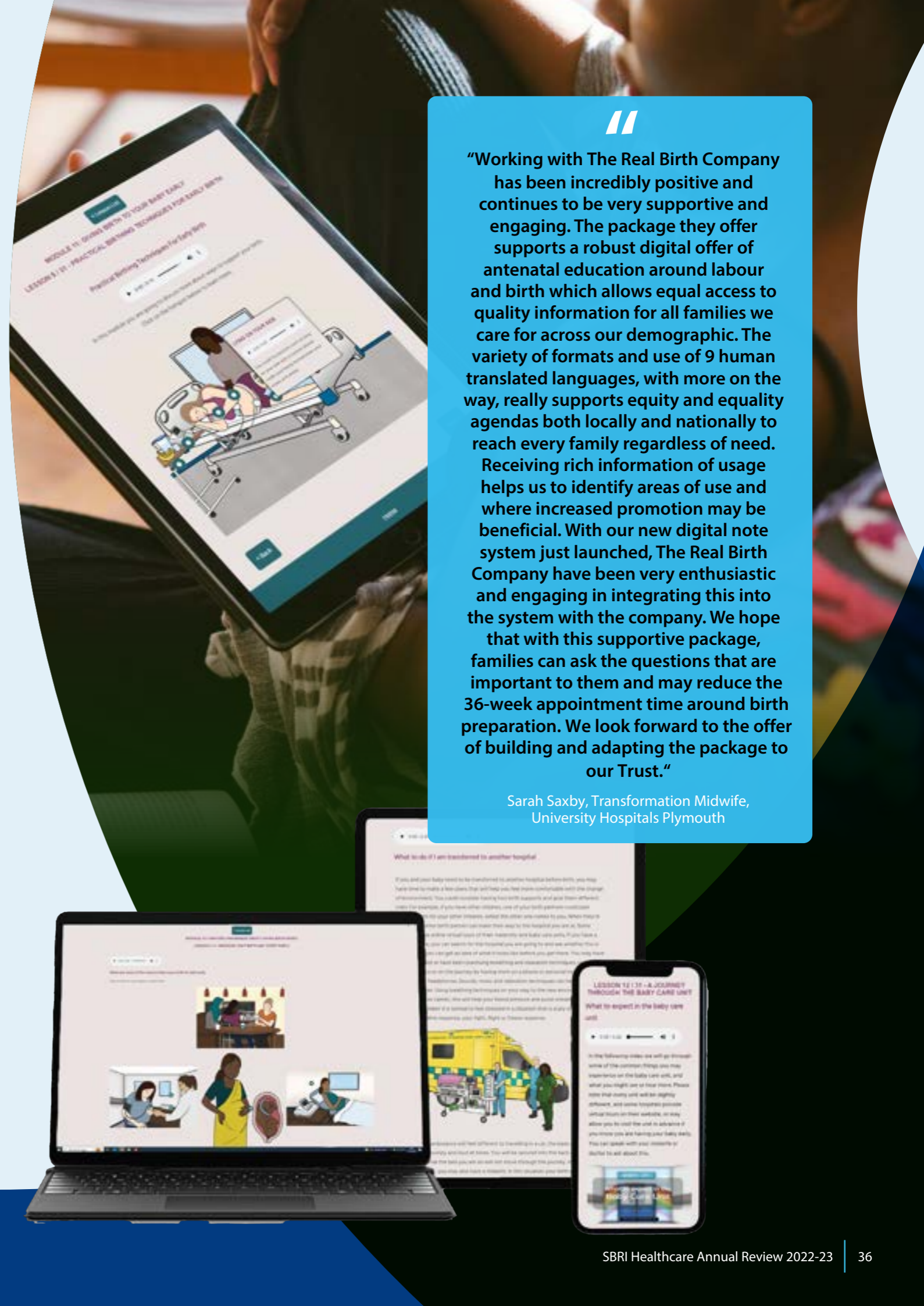
The NHS Long Term Plan set out key commitments to accelerate action to prevent ill health and tackle health inequalities, with the expansion of the roll-out of maternity digital care records so that by 2023/24, all women will be able to access their maternity notes and information through their smart phones or device, providing positive birth information and guidance to expecting parents. The Real Birth Digital Programme links into any digital maternity notes system or hospital app. Midwives can refer women to the technology which is accessed directly through a woman's digital maternity notes or a unique QR

code using android, iPhone, tablet or computer; alternatively, where someone is digitally excluded, the programme can be downloaded and printed. Our continuing development involves co-creation with service users of new modules. Evidence-based information is regularly reviewed and updated and presented in a holistic way, supporting findings from the 2020 Ockenden Review and NICE guidance on birth planning conversations.

We are active in several NHS sites across the UK, with some early adopters of our technology entering

the end of their second year. In these sites we can demonstrate an annual 30.1% increase in usage from pregnant women and people, year on year.

With approximately 620,000 births a year, our technology could support an additional 362,000 people nationally, providing 217,200 hours of midwifery support saving approximately £14 million a year.



"I am really excited to see this module roll out nationwide. I truly believe this tailored and much needed information will help to prepare and equip women like myself who went through the fear and uncertainty of preterm birth. It was a pleasure to take part and I'm glad that our experiences as a Lived Experience Team (LET) will help to shape such a vital medical provision."

Patient

"We recently worked with The Real Birth Company to secure their digital platform for our parent education sessions. It was super easy to arrange and they have been responsive to any requests for information/ support we have needed. The digital platform is easy to use and has benefited our parents to be."

Maxine Morris, Matron for Maternity, George Eliot Hospital NHS Trust

"Working with The Real Birth Company has been incredibly positive and continues to be very supportive and engaging. The package they offer supports a robust digital offer of antenatal education around labour and birth which allows equal access to quality information for all families we care for across our demographic. The variety of formats and use of 9 human translated languages, with more on the way, really supports equity and equality agendas both locally and nationally to reach every family regardless of need. Receiving rich information of usage helps us to identify areas of use and where increased promotion may be beneficial. With our new digital note system just launched, The Real Birth Company have been very enthusiastic and engaging in integrating this into the system with the company. We hope that with this supportive package, families can ask the questions that are important to them and may reduce the 36-week appointment time around birth preparation. We look forward to the offer of building and adapting the package to our Trust."

Sarah Saxby, Transformation Midwife, University Hospitals Plymouth



- IMPACT**
- Used by 30 Hospital sites in the NHS
 - Created 2 new jobs
 - Used by over 10,000 women in the first year
 - Supporting marginalised groups
 - Winner of the Health Innovation Network Innovate Award for Innovation Helping to Address Health Inequalities
 - Global opportunities in the pipeline





Leading digital consent to treatment application enabling clinicians to easily share personalised information with patients.

Consent to treatment is a key element of care, impacting the quality of clinical decision-making, experiences of patient-centred care and organisational medico-legal risk.

The current consent process is suboptimal for patients and clinicians giving rise to inefficiencies and even errors.

Concentric Health is a digital healthcare company working to transform the way decisions are made about our health, informed by patient outcomes, and shared by patient and clinician.

Concentric's digital consent to treatment application has digital

consent functionality, making it easy for clinicians to share personalised information with patients.

Clinicians use Concentric to create electronic consent forms. By selecting the proposed treatment, they are presented with relevant template concepts and resources to support each consent form element, tailoring them to the individual patient. There is a full audit trail and data is cryptographically secured.

Use of Concentric results in a reduction in consent process administration time and day-of-surgery cancellations and delays, and the near zero use of paper supports net zero carbon goals.

IMPACT

- Adopted across 25+ NHS Trusts including Imperial College Healthcare NHS Trust, Chelsea and Westminster Hospital NHS Foundation Trust and Oxford University Hospitals
- More than 200,000 patients have had personalised information shared with clinicians and given consent to their treatment via Concentric
- Average patient rating of 4.6 out of 5, with more than 35,000 5 star ratings
- Winners of 2023 HSJ "Empowering Patients through Digital" Award
- Featured in the UK's Digital Health Playbook 2023



"It's a great system, simple and intuitive for the clinician, yet a powerful shared decision making tool for the patient!"

Graham Walsh,
Clinical Chair at Circle Health Group,
Health Innovation Yorkshire & Humber



"Extremely good! You have given me the right amount of detail to make an informed choice. Very professional."

Patient,
University Hospitals of Leicester NHS Trust



"I found it very useful and informative. It was also easy to navigate."

Patient,
East and North Hertfordshire NHS Trust



"Concentric is the Apple equivalent of digital consent solutions."

Theresa Richardson,
Consultant Ophthalmologist,
Imperial College Healthcare NHS Trust



"This is wonderful - so much easier and clearer to read."

Patient,
The Princess Alexandra Hospital NHS Trust



"From paper to econsent. What's not to like?"

Helen Pardoe,
CCIO,
The Princess Alexandra
Hospital NHS Trust



An end-to-end digital pathway supporting patients' surgical journeys, realising savings and efficiencies for healthcare providers.

Definition Health was founded to tackle the ever-growing importance of a digital future in healthcare and support the NHS's long-term plan of digitisation and the net zero commitment.

Definition Health provides an end-to-end approach to digital patient services by digitising the entire patient journey into one cohesive experience. Via the LifeBox platform, patients can access all stages of their hospital journey from one account, including customisable health questionnaires, personalised educational media, file sharing and post-operative recovery monitoring.

An independent study by Unity Insights, working in partnership with Royal Surrey NHS Foundation Trust

extrapolated to the Surrey Heartlands ICS, showed savings of £1.94 million per 43,000 patients over 5 years and a ROI of £1.50 for every £1 invested (50%). Per 12,000 patients over 5 years, 103 tCO2e could be saved in travel and 5 tCO2e in paper.

A pilot study showed that only 17 (14.2%) of 120 hip replacement patients needed follow-up by a consultant surgeon following use of LifeBox, creating vital time and resource efficiencies.

IMPACT

- Over 175,000 patients supported across all specialties
- Solutions deployed and utilised in more than 35 hospitals nationwide, and across 10 NHS Trusts
- Multi Award-winning including the HSJ Partnership Award for best elective care recovery initiative, in partnership with Royal Surrey NHS Foundation Trust, and the HSJ 2023 award for best partnership
- NHS Innovation Accelerator Programme 2021
- Innovate UK grants
- Co2 savings of 5,200 KGCo2e per 1,000 patients
- Featured in the UK's Digital Health Playbook 2023 as 'Ones to Watch'



“It empowers patients and engages them more fully in their own care, educating them about their surgical procedure and facilitating smooth admission. It also allows us to improve the standardisation of patient care and reduce unnecessary hospital visits.”

Dr. Harsh Saxena, Lead Consultant Anaesthetist, Royal Surrey NHS Foundation Trust

“It was user-friendly and easy to navigate through. The questions were comprehensive and helped me understand my health status better. I also appreciated all the personalised results and recommendations that were provided to me.”

Patient





Supporting children through healthcare procedures and clinical trials using an interactive and engaging digital preparation and support tool.

Approximately 500,000 children undergo elective ambulatory surgery per year through the NHS. 75% of children and parents are significantly anxious before the child's healthcare procedure with neurodiverse children twice as likely to develop anxiety compared to neurotypical children.

Anxiety and uncertainty are linked to worse patient experience and health outcomes, most notably, two weeks after an elective procedure, 50% of children develop symptoms of situational trauma ranging from

bedwetting and nightmares to separation anxiety.

The Little Journey platform is designed to psychologically prepare and support families throughout their healthcare journeys by providing a range of engaging, interactive, and age-tailored features. These include virtual tours, therapeutic games, relaxation guides, and information articles that can be accessed from the comfort of their own homes. Co-creation with children ensures a truly patient-focused user experience, and

provision of an inclusive and accessible solution. The platform is rapidly scalable to new procedures and languages and configurable to local hospital patient pathways through a web portal.

Little Journey is delivering significant health economic benefits to the NHS by advancing population health, enhancing operational efficiency, and improving patient experience.

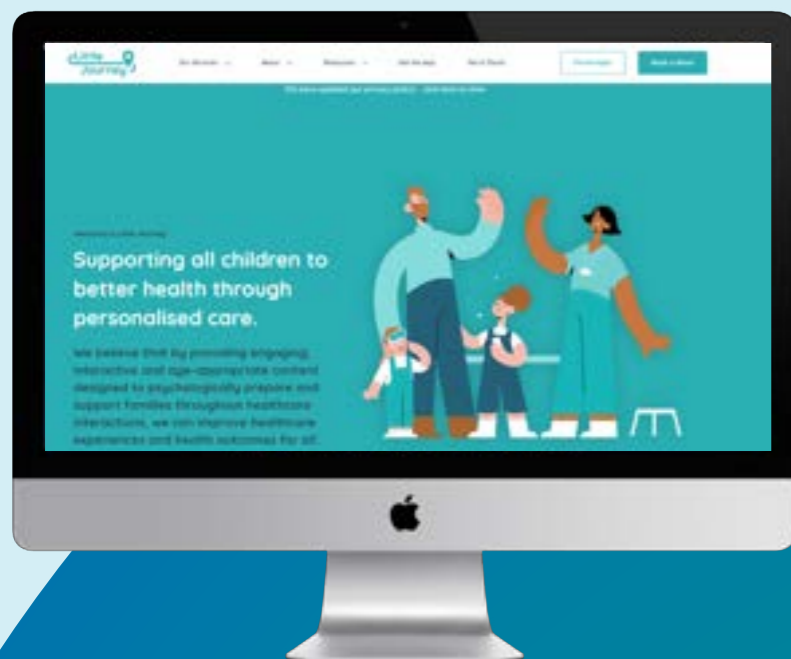
IMPACT

- Health economic analysis at five NHS hospitals showed a 3.5-fold cost-benefit for hospitals and a 6-fold cost-benefit for society, for every £1 invested in Little Journey. This is through operational benefits including: A 22% reduction in premedication rates; 30% reduction in time spent in high acuity areas; and 42% reduction in on-the-day cancellations
- Partnership with LEGO Foundation to support neurodiverse children coming to hospital
- Implemented in 20% of NHS acute Trusts
- Localised to 16 languages and working globally in 13 countries
- Supporting children through multiple procedures including ambulatory surgery, blood tests, MRI & CT scans, and endoscopy
- A 32% reduction in pre-operative anxiety in neurodiverse children, an increase in process understanding from 15% to 93%, and a 97% satisfaction with information score
- Named recommendation in Best Practice Guidelines for children coming for surgery
- £2.5m raise led by Octopus Ventures
- Featured in the UK's Digital Health Playbook 2023



"We used the Little Journey app to help a 9-year-old girl recently who was very anxious and is autistic. Her previous procedures have been a real challenge due to this. After the patient downloaded and used the app, it was a much less stressful situation, simply due to the immersive distraction she experienced from playing with the app."

Dr Alyson Walker, Consultant Paediatric Anaesthetist



"We think the app is a really good idea. We hadn't really discussed the operation with Freddie yet as we weren't quite sure what to say or how best to go about it, so the app really helps with that..."

Parents of Freddie, Aged 5



"The effect of using the Little Journey app was transformational with Alexander excited instead of scared for his 'big adventure'."

Father of Alexander, Aged 7





A web-based clinical simulation platform designed to develop and upskill medical image interpretation.

57% of patients attending the 180 type 1 Emergency Departments (ED) in England undergo an imaging investigation. Although initial interpretation of X-rays is mostly performed by ED staff, more complex CT and MRI scans usually await a radiologist's report. Rising demand for imaging has outstripped the supply of radiologists and report turnaround time is a major constraint in ED throughput. Increasingly, ED staff are looking to interpret imaging and make treatment decisions, but to do this safely, a training and quality assessment programme is necessary.

Report and Image Quality Control (RAIQC) is a state-of-the-art clinical simulation platform developed by radiologists to mimic real-world practice to improve image interpretation skills. By upskilling ED staff to understand abnormalities on

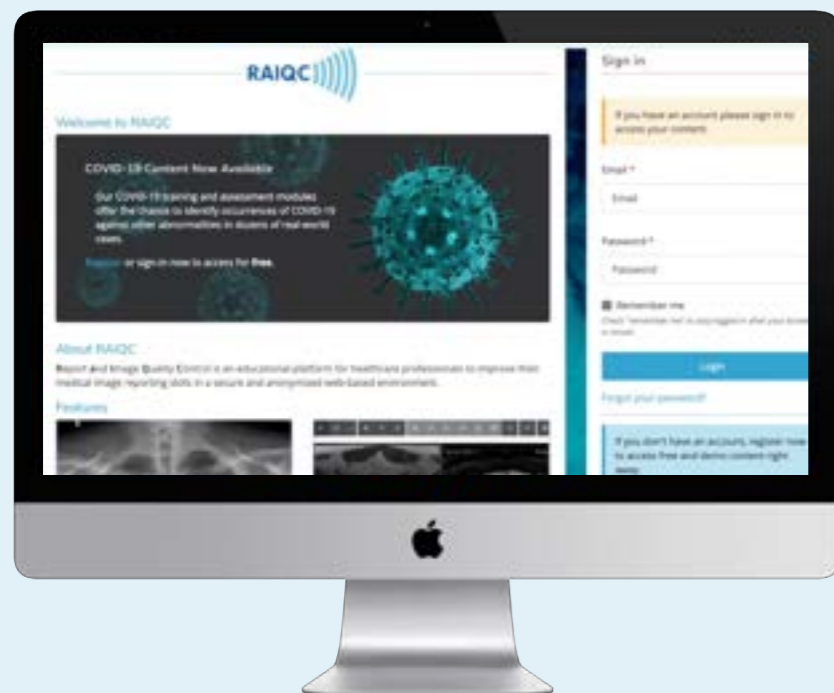
different imaging modalities, RAIQC can help relieve pressure and improve the flow through emergency departments.

In our SBRI Healthcare funded project, the team has demonstrated that ED clinicians can interpret scans 52 minutes sooner than a radiologist with 97% accuracy for detecting an acute abnormality.

Being web-based the platform is easily accessible from across the country, reducing the reliance on dedicated workstations, in line with the "Delivering a 'Net Zero' NHS" plan that identifies the importance of improving patient care whilst using digital technologies to reduce carbon footprints.

IMPACT

- Chosen by the Royal College of Radiologists as the preferred platform in response to their tender for an eLearning solution for Nasogastric Tube placement for all UK clinicians interpreting NG Tube X-rays (expected launch: Q3 2024)
- Established an ongoing collaboration with the London School of Clinical Radiology to publicly launch an "Emergency Radiology" educational resource, meant for junior or returning radiologists interpreting time-critical advanced imaging
- The RAIQC platform has been used in multiple research projects for the validation of AI algorithms, measuring the impact of AI output on clinicians' interpretation of medical images. This has helped establish a collaboration with the Thames Valley Emergency Research Network to run additional research projects
- Secured multiple contracts with large organisations such as Pfizer and GE Healthcare
- The SBRI Healthcare funding and Phase 1 & 2 projects enabled RAIQC to safeguard two FTE jobs and one PTE role, as well as to create another FTE role and two PTE roles
- Raised additional grant funding from Innovate UK and Local Enterprise Partnership to further develop the platform and offerings



"There are huge pressures on Emergency Department (ED) clinicians to assess patients and organise investigations quickly, both to enable them to treat time-critical illnesses, and to manage the enormous patient turnover of the ED efficiently. Through these SBRI Healthcare projects we have been able to explore the capabilities of ED clinicians to interpret CT scans independently, by using RAIQC to deliver online training to improve clinician skills and confidence when looking at the medical images, but also as a testing platform to facilitate the delivery of the study to measure this effect. This study will provide key data to examine the case for extended radiology skills training for ED clinicians, and provide a detailed baseline for comparison with new technologies such as AI-assisted interpretation algorithms, potentially helping speed up the management of ED patients and improving patient flow."

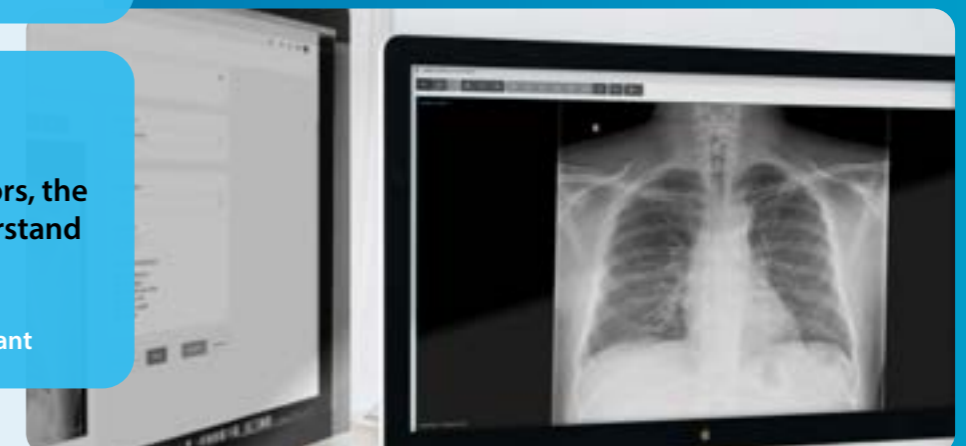
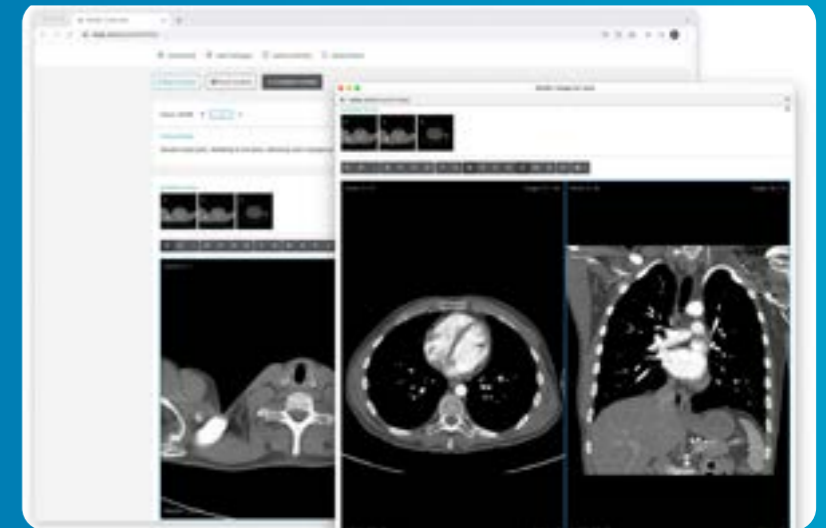
Prof Alex Novak, RCEM Associate Professor in Emergency Medicine at Oxford University Hospitals NHS Foundation Trust, Chief Investigator for the Simulation Training in Emergency Department Imaging 2 (STEDI2) Trial

"This SBRI Healthcare award enabled us to unlock independent real-world economic validation, which is essential in proving our digital solutions' effectiveness in the NHS. The combined effort of all partners has resulted in beneficial results for the NHS, local trusts and ICS which wouldn't be possible without support of public funding."

Dr Sarim Ather, Co-founder & CEO, RAIQC

"RAIQC gave us, as A&E doctors, the power to interpret and understand radiology better."

Junior Doctor, Study participant





The capsule sponge test transforms patient outcomes from oesophageal cancer by finding people at risk earlier and faster.



An estimated 9,300 patients are diagnosed with oesophageal cancer in the UK each year. Unfortunately, 7 in 10 patients are diagnosed at a late stage, when only ~20% of patients survive the year. By contrast, when detected at the pre-cancerous Barrett's oesophagus stage, patients can be monitored for signs of cancer and receive prompt treatment, increasing survival to 80%.

Over 90% of ~1.5 million individuals with Barrett's oesophagus have not yet been diagnosed so cannot be proactively monitored or treated. It is estimated that 4,000 patients with oesophageal cancer have been missed, as a likely consequence of 14,800 missed upper gastrointestinal (GI) referrals during the pandemic.

The capsule sponge test detects early oesophageal cancer and Barrett's oesophagus with high sensitivity and specificity (over 90%, Ross-Innes 2015; Ross-Innes 2017; Pilonis et al 2022), increasing the number of

Barrett's cases diagnosed by more than 10-times when offered to individuals with chronic reflux compared to usual care (Fitzgerald 2020). Randomised clinical trials involving over 4,000 individuals across three continents, and real-world implementation involving over 15,000 individuals across the UK, have demonstrated the test's clinical effectiveness, cost effectiveness as a case finding tool for Barrett's oesophagus, falling below the NICE threshold (Swart 2021), and shown that it is more tolerable for patients than endoscopy.

The test is minimally invasive and can be delivered by a single trained healthcare professional in an office setting in under 20 minutes, making it ideally suited to primary care. The sample is sent to the Cyted laboratory for processing and analysis by Cyted's team of consultant pathologists. Here, a positive result for intestinal metaplasia or atypia and dysplasia biomarkers indicates Barrett's oesophagus or

early oesophageal cancer respectively, fast-tracking the right patients for endoscopy and treatment.

Cyted works closely with NHS organisations across the UK, with the Health Innovation Network and Cancer Alliances, as well as patient advocacy group Heartburn Cancer UK.

Since its introduction to the NHS in 2020 in response to the Covid-19 pandemic, and development through SBRI Healthcare 'Competition 19 - NHS Reset and Recovery and New Ways of Working', the capsule sponge test has helped recover endoscopy backlogs and improve operational efficiencies in endoscopy units. For example, for the North West Coast, GP-based clinics reduced the number of patients waiting over 6 weeks from referral to procedure by 31% and delivered a positive return on investment within 12 months, releasing a projected £3.86 million and £1.20 returned for every £1 spent when implemented at an ICS level over 5 years (unpublished, data from Lancashire & South Cumbria Cancer Alliance).



"Our first reaction was: Why hasn't anyone thought of this before? Our patients' reactions were overwhelmingly positive when we offered capsule sponge test as an alternative procedure."

Stephanie Driver, Practice Manager,
Oswald Medical Centre, Lancashire

Watch the video

IMPACT

- The capsule sponge test is available in over 60 hospitals and 15 GP clinics across the UK
- An independent evaluation by Unity Insights of a pilot (November 2023) as part of SBRI Healthcare 'Competition 19 - NHS Reset and Recovery and New Ways of Working' found that capsule sponge could clear NHS endoscopy waiting lists by over 75%
- Cyted is expanding into the US and testing outside the UK
- The ongoing NHS Cancer Programme Innovation Open Call implementation in primary care is being led by three Cancer Alliances: East of England, Lancashire and South Cumbria, and Wessex
- Featured in the UK's Digital Health Playbook 2023
- The national implementation of capsule sponge testing for NHS Scotland has improved endoscopy waiting times and detection rates of oesophageal cancer



Empowering healthcare providers worldwide to deliver efficient, sustainable, data-driven care and improve health outcomes by creating synergistic digital healthcare.



In the UK, there are around 156,000 non-melanoma and 16,700 malignant melanoma cases annually, projected to rise by 9%. Limited dermatologists and patient access create challenges in meeting faster diagnostic standards, causing delays in treatment. Early diagnosis is crucial for skin cancer.

eDerma is an award-winning, cloud-based digital solution designed for dermatology service coordination, developed by NHS clinicians in collaboration with dermatologists and patients. It is flexible and seamlessly integrates into existing workflows, catering to specific community needs. This adaptability efficiently addresses the resource constraints in UK dermatology, making the most of limited time and resources. For instance East Kent Hospitals University NHS Foundation Trust reduced unnecessary face to face appointments by 85.8% and 93.6% of patients were diagnosed

or given a decision to treat at telederm assessment. 15% of patients were booked for a diagnostic biopsy directly following dermoscopy review, bypassing an initial clinic waiting list and likely shortening the time to diagnosis.

eDerma includes a patient questionnaire co-designed with both dermatologists and patients, enhancing patient accessibility and understanding to improve referral quality and patient assessments. By integrating with legacy and modern hospital systems, it ensures continuous care, minimising fragmentation.

Referral to assessment time is frequently under one week with 99% of patients first seen within two weeks. Following our support, one organisation which was extremely pressured, with waiting times of 8 to 10 weeks, was able to reduce this to 5.6 days less than a month after launch.

Assessments took on average approximately 5.5 minutes, up to 4 times faster than face to face appointments, saving dermatologist time and thus increasing capacity.

85% of patients surveyed believe our innovation saves time, and 87% think that it is a good way of managing their skin lesion concerns. 87% of patients favoured our teledermatology service and patient reported experience measures demonstrate high acceptability particularly for patients from deprived areas. Data also suggests that the eDerma teledermatology model is reaching communities that are otherwise not accessing skin cancer care, addressing healthcare inequalities.

IMPACT

- eDerma currently serves 8.8 million individuals over 10 care organisations
- Initial health economic assessment has shown that use of eDerma is £32 cheaper per person than face-to-face consultations
- With Surrey and Sussex Healthcare NHS Trust, winner of the 'Green NHS Initiative of the Year' in the Integrated Health Awards 2023 and 'Most Pioneering Digital Healthcare Company 2023 - UK & Ireland' in the UK Enterprise Awards 2023
- Supported by the NHS Innovation Accelerator
- Featured in the UK's Digital Health Playbook 2023

Watch the video



Watch the video

Revolution-ZERO has two projects funded by SBRI Healthcare. The first is developing a resilient, sustainable and reusable solution to displace single-use surgical textiles from operating theatres.

30-40 years ago, the NHS reprocessed their in-house stock of sterile surgical drapes, gowns and other operating theatre garments (textiles) with support from commercial suppliers. However recent years and the PPE shortages experienced during the Coronavirus pandemic, have highlighted long-standing issues with disposable medical textiles relating to supply chain resilience, quality control, monetary and environmental costs. Revolution-ZERO uses modern approaches and quality assurance processes to empower the NHS to have increased control over its textile supply chain, quality, costs and environmental impact.

Universal adoption of Revolution-ZERO across NHS UK surgical pathways would result in financial benefits of £50 million in direct cost savings. The environmental benefits include at least 100,000 tonnes of carbon, 4 billion litres of water and 25,000 tonnes of waste related savings equating to more than £33 million. The emissions savings are equivalent to 0.4% of the NHS total and Revolution-ZERO plan to tackle a further 1.6% of total healthcare emissions and scale up the offering into other countries and territories.

The second project focuses on removing the requirement for high

temperature decontamination of medical textiles through validation, assurance and control.

The need to heat water for washing is a barrier to net zero. Heating generates 60% of the CO2e emissions from healthcare laundry costing >£40 million and 268,000 tonnes of CO2e emissions per year for the UK. The environmental cost of heating water for medical textile washing is contributing 2% of direct hospital carbon emissions (Kellera et al., 2021).

Revolution-ZERO have developed a healthcare decontamination process using low temperature washing that meets all regulatory requirements, and a validation process that can be adopted and utilised by NHS and independent laundries.

The direct impact of switching to use of low temperature washing for sterile surgical gowns and drapes alone equates to 17,000 tonnes of CO2e emissions across the UK NHS per year.

In cutting emissions Revolution-ZERO are mitigating the negative impacts of climate change on inequalities, and are utilising local supply chains, stimulating employment. Fabric lasts longer which lowers costs, reduces cycles and reduces microfibre shedding.

Revolution-ZERO's work also provides direct clinical benefit, with the more effective removal of contaminants from healthcare textiles decreasing the likelihood of biofilm generation, improving safety for patients and staff.

Displacing single use medical textiles with more effective, economic and sustainable alternatives.

IMPACT

- State-of-the-art cleanroom decontamination facility built delivering sterile surgical textiles for large joint replacement operations
- Advanced procurement discussions with 8 NHS Trusts/Boards. On the National Procurement Framework and full certification as a B Corp

- 7 jobs created

- Bupa eco-Disruptive Circular Economy Partnership

Wider impact relating to the surgery textile project:

- £1.1 million in investor funding
- 3 pending patents, 40 registered designs and enhanced trademark protection, ISO13485 Certification pending and EN14065 Compliant

Wider impact relating to the low temperature project:

- Co-development with UK supply partners of minimally impactful chemicals for healthcare laundry
- Development partner for Danish Health Authority (tender won)
- 2 pending patents and 5 registered designs



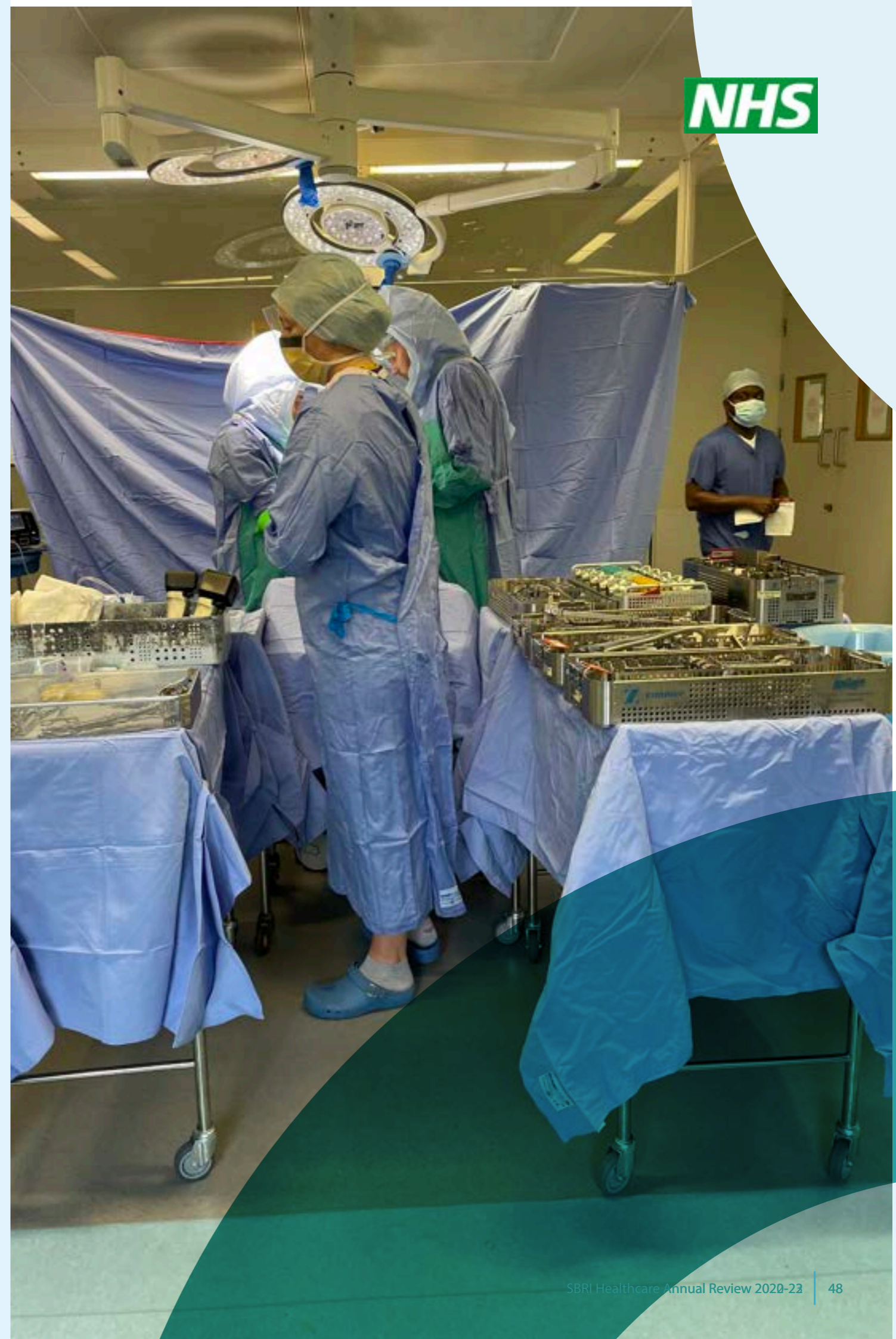
"Sustainability is extremely important and it's great to see that there is a company making these reusable drapes that will reduce the carbon footprint of surgery."

Orthopaedic Registrar, St Michael's Hospital, Royal Cornwall Hospitals NHS Trust



"I have really enjoyed the drapes and gowns. There is no difference. If anything, they are more comfortable and absorbent than the single use."

Orthopaedic Registrar, St Michael's Hospital, Royal Cornwall Hospitals NHS Trust





A healthcare specific engagement tool that empowers NHS staff to reduce their carbon footprints.

For the NHS to achieve net zero, its 1.4 million staff must make a multitude of small changes to the way they work. Jump estimate that, of all emission reductions that need to happen on the NHS Net Zero pathway, 19.7% are directly influenced by staff behaviour.

Jump delivers programmes to empower all NHS staff to reduce their carbon emissions by making informed choices both at work and in their personal lives. Features include personalisation of actions based on the employee's role, a carbon calculator which allows staff to calculate their carbon footprint at work and at home, and impact reporting, providing NHS Trusts with measurable data for employee actions.

This data can then be aligned to greenhouse gas (GHG) emissions, Sustainable Development Goals, and the specific priorities within their individual Green Plans, for an entirely

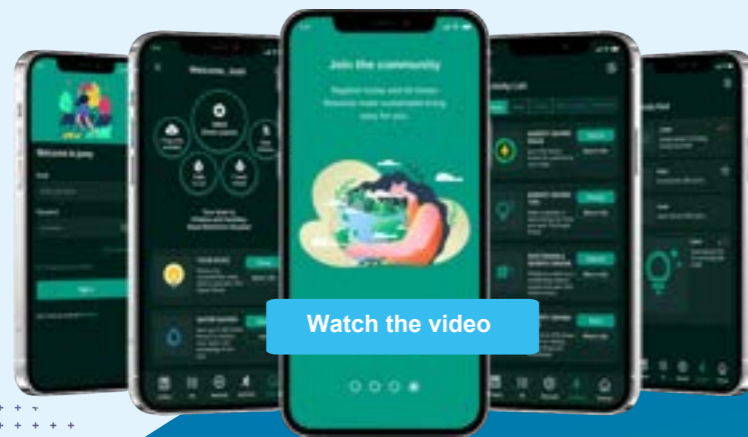
personalised approach to employee-led sustainability.

Feedback has been very positive. In response to Jump's 'behaviour change in action' survey 2022, of 1,900 respondents, 85% agreed that they understood more about the impact of their actions on the environment, 84% are more conscious about their energy usage and how to take action to reduce it, and 97% said they had implemented new sustainability habits into their daily and weekly routine. More than 718,000 actions have been completed by participating NHS staff.

In 2022, across all its programmes (private, public and third sector) Jump recorded 3.6 million+ positive actions. Projections suggest that these actions have helped avoid over 5.0 million kg CO2e, saved over 1.8 million kWhs of energy, and enabled over 3.3 million miles of sustainable travel.

IMPACT

- Working with 25 NHS Trusts
- More than 718,000 actions have been completed by participating NHS staff
- Projected 1.8 million kg CO2e avoided as a result of employee actions
- 438 kg average CO2e avoided per user per year across Jump's NHS programmes
- Working with a total of 65 clients across the private, public and third sector
- More than 80,000 total users registered across all programmes
- Employed 15 people
- Accepted onto London & Partners' Grow London programme



Watch the video



"Working with Jump on our SHINE Rewards programme enables us to bring our people on our journey to Net Zero. It's fantastic to see their commitment and practical actions - in the last 12 months, our staff have logged almost 40,000 positive actions, both at work and home, to reduce their carbon footprint."

Laura Middlemass, Sustainability Manager, Newcastle Hospitals NHS Foundation Trust

"Working with Jump on our digital engagement platform, I've seen how effective the platform is in motivating staff to make those small but necessary changes. This has saved the Trust over 3,000 tons of carbon, which represents 5% of our total carbon footprint, so some significant carbon savings have been achieved."

Libby Sutherland, Leeds Teaching Hospitals NHS Foundation Trust

"I think it is a great way of highlighting environmental issues and giving small, manageable changes we can make to help."

Staff member from Leeds Teaching Hospitals NHS Foundation Trust

"There are always new initiatives and so much information to keep me informed. I have recommended it to my colleagues."

Staff member from Newcastle Hospitals NHS Foundation Trust

NHS

Notes



