

# OUR COVID-19 STORY

2020-2021

ANNUAL  
REPORT



**INNOVATION AGENCY**  
Academic Health Science Network  
for the North West Coast



**EUROPEAN UNION**  
European Regional Development Fund

**NORTHERN  
POWERHOUSE**

# INTRODUCTION

**Reflecting on a year like no other in health and care has been a time to re-evaluate our role in supporting our local systems, partners and national NHS commissioners.**

This annual report shows how our team responded to the pandemic and quickly adapted to provide support where it was most needed.

At the start there was an abrupt halt to some of our work and we had to rethink how we best deploy our team and resources. Some programmes became even more urgent – such as introducing best-practice tracheostomy toolkits to help staff new to caring for critically ill patients; or training care home staff in recognising the signs of deterioration.

As time went on, our important programmes were brought back on stream and delivered despite the challenges of remote working combined with acute pressures on our NHS and care partners.

I am extremely proud of our staff for doing what was necessary to help – being redeployed to local or national teams; forging alliances to handle the deluge of offers from our business community which were overwhelming local trusts; rolling up their sleeves to make deliveries of essential supplies; or simply looking after each other.

Throughout the bleakest of times our staff supported each other, external colleagues – and in many cases, their local communities. I am proud of each and every one of our team and I extend my grateful thanks to them all.

**Dr Phil Jennings**  
Chief Executive

**Dr Phil Jennings**

# MESSAGE FROM OUR CHAIR

**The last year has thrown into sharp relief the need to address inequalities in health and to ensure that our work in supporting innovation is as inclusive as possible.**

I am delighted that the Innovation Agency and our family of AHSNs are committed to increasing diversity in all aspects of our work; in our staff recruitment, in the innovators we support, and in the products we spread, ensuring they do not inadvertently increase inequalities.

We need to serve the whole of our communities, not just those parts that are easiest to reach. In the past year our staff have undergone training in unconscious bias, enabling them to reflect on personal experiences and thought processes; and our process of assessing innovations has been improved with the introduction of a health equity assessment tool.

Nationally with the AHSN Network we have formed a partnership with the LGBT Foundation, to launch a nationwide call for innovations that address health inequalities facing the LGBT+ community. This follows the AHSN Network diversity pledges which we launched two years ago and are committed to delivering; you can read these and learn about our innovator role models in the report 'Diversity and Innovation' available on the AHSN Network website.

[VIEW PDF](#)

I am proud to chair an organisation which lives its values and has stepped up to help our colleagues and local communities during the most stressful time in the history of the NHS. I extend my warmest thanks to our staff and our partners in the North West Coast region for all they have done to help our population in the last year.

**Gideon Ben-Tovim OBE**  
Chair



**Gideon Ben-Tovim OBE**

# HIGHLIGHTS

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## SUPPORTING OUR STAFF

The start of the pandemic coincided with our move to a new host trust, Liverpool Heart and Chest Hospital NHS Foundation Trust. Combined with lockdown and working from home, this prompted intense activity to switch IT systems, provide new hardware and support staff wellbeing.

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## PPE OFFERS FILTERED AND REDIRECTED

In Cheshire and Merseyside, an alliance was formed between the Innovation Agency, Alder Hey Children's Hospital, the Cheshire and Merseyside Procurement Network and the Lancashire and South Cumbria Procurement Hub to deal with the avalanche of offers of PPE at the outset of the pandemic.

In Lancashire and South Cumbria, we helped to source PPE donations from companies and colleges and help distribute them where they were most needed.

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## DIGITAL HANDS ON DECK

From day one of the pandemic crisis, our Digital Team supported digital leads by helping to source equipment and triaging the flurry of offers from small businesses eager to provide their own solutions.

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## SYSTEM SUPPORT STRENGTHENED

Our two integrated care systems benefited from new and stronger networks for research, innovation and improvement, thanks to *"the flexibility and resourcefulness of the leadership and the wider team"* according to one system leader.

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## NATIONAL TRACHEOSTOMY CARE TOOLKIT

Two of our team helped to develop the national Safe Tracheostomy Care Programme and Toolkit. A year after it was launched, 92 per cent of acute hospitals in England that cared for patients with tracheostomies had adopted these three key safety interventions.

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## BOOST TO COMBAT CARDIOVASCULAR DISEASE

Extra resources and innovations to prevent, diagnose and treat CVD were provided through collaborations in Cheshire and Merseyside which will be spread to Lancashire and South Cumbria.

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## INNOVATIONS INSIGHT IN PULMONARY REHABILITATION

Working closely with the Cheshire and Merseyside Respiratory Network we produced a Digital Insights Tool which includes a summary of digital exercise and treatment options at different stages of the patient pathway.

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## TRAINING CARE HOME STAFF

Our work with care homes was ramped up during 2020 as a dedicated team rolled out a toolkit and training in how to spot early warning signs of deterioration using the programme RESTORE2. By April 2021, 457 care home staff from 148 care homes had passed through our training.

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## POWERING THE RECOVERY

Helping to restart elective procedures and reduce long waiting lists, in particular for cancer patients; tackling the challenges of transforming outpatient appointments; and coming up with solutions to improve productivity have been a major focus for our team.

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## BOOM IN BUSINESS SUPPORT

During 2020-21 the Innovation Agency Commercial Team helped to bring in £35.3m of investment; create 112 jobs in the region; and support a total of 389 companies, compared with 345 the previous year.

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## TRAILBLAZING NEW PSYCHOLOGY CAREER ROUTE

A new psychology trainee role was created to support workforce quality and service improvements in the North West Coast, thanks to a project led by the Innovation Agency. The pilot project was enabled by £1.3 million funding from Health Education England.

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## INCREASING SMOKE-FREE PREGNANCIES

Our work with maternity and neonatal teams in Blackpool resulted in a reduction from 30 to 20 per cent of mothers registered as smokers at the time of giving birth.

[Page 29 Read more>>](#)

## REMOTE MONITORING FOR COVID-19 PATIENTS

We helped the rollout of COVID Oximetry @Home and the second phase of the programme, known as the COVID Virtual Ward; developing and delivering a weekly community of practice, linking our local systems to emerging national best practice and offering bespoke support for local implementation.

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## CULTURE CAMP

The high point of the year for our Coaching Academy was a two-day Culture Camp in March 2021, in which we explored organisational culture from the perspectives of wellbeing, equity and innovation.

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# FIRST WAVE RESPONSE

Liverpool Heart and Chest Hospital

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*Dr David Levy, Regional Medical Director at NHS England and Improvement North West, said:*

"During the COVID-19 pandemic, the Innovation Agency has played an integral role in supporting the regional effort. They are an important member of the NW Clinical Cell and have worked with local systems to successfully deliver community pulse oximetry and the virtual ward initiatives, as well as supporting wider work to embed transformative innovations."

## STEPPING UP TO HELP WHEREVER NEEDED

At the outset of the pandemic it was clear we couldn't continue some of our work and we paused programmes which weren't directly relevant to tackling COVID-19.

A total of five staff were redeployed - to the national Test and Trace Team; to the NHS North West campaign to bring former NHS staff back into service; and to the NHSX Communications Team.

Patient Safety Associate Director Mandy Townsend spent a year working with NHS England Test and Trace.



**Mandy said:** "It was an amazing experience and I was privileged to work with many passionate and committed people to support the NHS, increasing testing capacity and making sure we didn't run out of testing consumables."

"Collectively and collaboratively we increased molecular testing from around 1,000 tests a day to 100,000 tests and more each day. The aim was to make sure that patients could be tested rapidly on admission to hospital, regularly during a hospital stay, and on discharge."

[READ A BLOG BY MANDY ON OUR WEBSITE](#)

## DIGITAL TEAM PIVOTS

The first wave of the pandemic coincided with a transition for the Innovation Agency to a new host trust, Liverpool Heart and Chest Hospital NHS Foundation Trust, after being hosted by Lancashire and South Cumbria NHS Foundation Trust for seven years.

The host trust provides HR, finance and payroll services, plus IT support via Informatics Merseyside – and the timing of the move meant it was particularly challenging.

Our Digital Team, whose primary role is supporting digital transformation in local systems, stepped up to lead on an extensive programme of transformation for our own organisation. This involved moving to new systems and providing all staff with new computer hardware, headsets, phones and tablets where required, to ensure everyone was well equipped to work from home.

Soon after the IT move came the transition to using Office 365, which required training for every member of staff in a three-month programme of small group workshops.



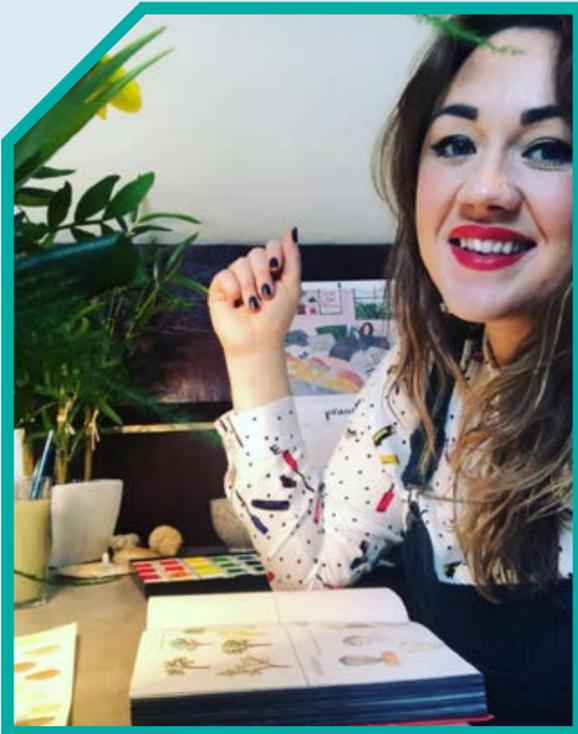
Their next project was to re-configure and equip the Innovation Agency's main office at Sci-Tech Daresbury, to become a digitally enabled centre for online and hybrid events, webinars and podcast recordings.

**Associate Director for Digital Change, Jenni West said:** "It has been an extremely demanding year, working externally to support our partners with rapidly expanding programmes such as remote monitoring – and at the same time supporting our own colleagues in the Innovation Agency."

"However, the urgency of the work has meant that everyone has been very appreciative of the support they've received which has helped them to work from home, deliver webinars, produce podcasts and engage on online platforms."

## STAFF WELLBEING SUPPORT

Coach Karla Rimaitis started delivering evening online art classes with a weekly 'Culture Club' which is still going strong for staff, family and friends. The idea grew from a series of art sessions provided for free by Karla to young people through Liverpool initiative, Neurolove.



*Karla said: "It helped me to get to know colleagues better and it gave us a chance to check in on each other and laugh along the way. It got us through some tough weeks."*

## EQUALITY, DIVERSITY AND INCLUSION

Improving how we address equality, diversity and inclusion was already an important theme for the Innovation Agency and we committed to a series of diversity pledges along with our AHSN Network colleagues, in 2019.

In the past year this work became more urgent as we saw the pandemic have a disproportionate impact on people from ethnic minorities, those with a learning disability and on those living in deprived areas. This, combined

with events in Minnesota, USA which launched the Black Lives Matter movement, led us to undergo an in-depth reflection exercise on our unconscious bias; and to develop an action plan to improve the way we work.

We aim to improve the diversity of our staff and the innovators we support; and to assess the impact of innovations to ensure they do not increase health inequalities.

## LEADERSHIP CHANGES

Our leadership team underwent some changes during the year, with the departure of founding Chief Executive Dr Liz Mear and the appointment of former Innovation Agency Medical Director, Dr Phil Jennings to the top role. Andrew Cooper was appointed as Clinical Director; and Tony Woods joined as Operations and Digital Director.



**Dr Phil Jennings**  
Chief Executive



**Andrew Cooper**  
Clinical Director



**Tony Woods**  
Operations and  
Digital Director

## PPE AND OTHER OFFERS

**In the first few months one of the biggest challenges for our region's NHS and care providers was securing personal protective equipment (PPE) and handling the offers of visors, gowns and masks which came flooding in from businesses, universities, individuals and charities.**

The problem was the offers were being made in varying quantities and specifications to trusts whose procurement teams struggled to cope with the sheer volume and variety of enquiries.

In Cheshire and Merseyside, an alliance was quickly formed between a team at the Innovation Agency, Alder Hey Children's Hospital, the Cheshire and Merseyside Procurement Network and the Lancashire and South Cumbria Procurement Hub.

The solution was a triage system which directed all offers to a web portal where they were assessed and decisions made on what to procure and how to distribute supplies. The portal was built on an existing Alder Hey facility that was repurposed to support the supply of PPE.

The Innovation Team at Alder Hey managed the portal while procurement leads monitored needs in the system. Our staff used their commercial contacts to promote the site and signpost organisations to it.



**Angela Gaskell, Interim Collaborative Procurement Manager, Cheshire and Merseyside Radiology Imaging and Endoscopy Networks, said:**

*"The new portal was a brilliant example of creative collaboration at a time when the system was under enormous pressure.*

*"The offers of help were very welcome but were becoming unmanageable and the partnership managed to create order out of a situation that could have become chaotic.*



*Sue Brown,  
Care Support Worker,  
University Hospitals  
Morecambe Bay*

*"We were able to bring together a collaboration of experts to review each submission and help support businesses whose area shifted in the pandemic to help support hospitals across the region.*

*"The Innovation Agency used their expertise and experience in the commercial sector to direct companies to the new service and make sure we didn't overlook some important supply solutions."*

## ROLLING UP SLEEVES, CORRALLING DONATIONS

In Lancashire and South Cumbria, Innovation Agency Programme Manager Howerd Booth called on his contacts to help provide vital PPE to healthcare staff around the region.

Masks, gloves, aprons, wipes and protective covers were donated by Lancaster University, University of Central Lancashire, Nelson and Colne College, Preston's College and BAE Systems.

East Lancashire Chamber of Commerce called on their members too, which prompted more donations and South Ribble Borough Council also helped with the distribution effort.

Hospitals, including those managed by the University Hospitals of Morecambe Bay NHS Foundation Trust, Lancashire Teaching Hospitals NHS Trust, Blackpool Teaching Hospitals NHS Foundation Trust, along with St Catherine's Hospice benefitted from at least 20 car loads of care items.

**Howerd Booth said:** "As soon as the call went out, businesses and universities came together to help supply the NHS in Lancashire and Cumbria with vital PPE.

"The response was amazing and to be in the middle of this activity was truly inspiring. Collaborations like this, at a time of real need, will no doubt help keep this community together in the future and bring even more beneficial results for the region."

Gary Farrimond and Simon Bennett from the Lancashire Procurement Cluster



## SUPPORTING DIGITAL TEAMS

Jenni West and  
Adrian Quinn



**Digital Lead for Cheshire and Merseyside, Paul Charnley said:** "The team from the Innovation Agency, Jenni West and Adrian Quinn, helped us greatly through the early stages of the management of the pandemic.

"They helped us to review the massive number of possible technologies we were being offered and exploring solutions for helping with remote care and social distancing whilst we were rapidly adopting solutions which had been identified as possibly useful innovations only months before. This filtering allowed us to work out what had real potential to help and what might have been more of a gamble.

"The team are still helping us as we seek out solutions that will help us with recovery and consolidation of the digital gains we have made over the last 15 months."



**At the start of the pandemic many NHS staff suddenly switched to working from home, resulting in a huge demand for laptops and other hardware which became hard to source.**

Organisations were not digitally enabled for large-scale remote working – Microsoft Teams and Office 365 were not widely used and there was little experience of home working for many staff.

From day one, our Digital Team offered to support digital leads by helping to source equipment and triaging the flurry of offers from small businesses eager to provide their own solutions.

## NATIONALLY FUNDED COVID-19 INNOVATIONS

At the start, efforts within our region were focused on PPE supplies and maintaining services while many staff were sick or shielding. Our leadership team were part of the regular NHS North West cell meetings where the latest data was discussed and decisions made on how to deal with the ongoing crisis.

Nationally, the AHSN Network helped to organise a fund set up by NHSX to back digital innovations which would help vulnerable people affected by COVID-19. Techforce19 provided grants of up to £25,000 to test solutions which would help the elderly, vulnerable and those who were self-isolating.

One of the 18 winners was [Chanua](#) of Liverpool, a company supported by the Innovation Agency who used the funding to launch a website and interactive sessions for young people, called [NeuroLove](#).

**Chanua Chief Executive, Naomi Mwasambili said:**

*"Young people in care are often not provided with the support and love they need and deserve. Some staff work tirelessly to provide them with the nurturing they deserve but often this can fall short.*

*"Pre-lockdown, we approached our collaborators as we felt that there was an imminent situation that needed a solution.*

*"The TechForce19 fund allows us to develop this further and evaluate it more robustly. We are really happy, we have been working in this area for years and we are used to rapid turnaround and agile working, so the opportunity to create something that can have a positive impact on young people and be part of a rapid innovation process is fantastic."*



*Chanua Chief Executive,  
Naomi Mwasambili*

# LEARNING AND LEADERSHIP

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Active Cheshire's Active Minds (photo taken pre COVID-19)

## OUR COACHING ACADEMY

The Innovation Agency Coaching Academy was in more demand than ever, helping partners to adapt to the changes brought about by the pandemic and providing much-needed support and coaching to improve resilience.

They designed and delivered programmes for leaders, improvers and innovators within organisations and across wider systems.

Bespoke commissions came in from local, regional and national organisations and networks, reflecting the increased need to support the healthcare workforce.

Meanwhile learning and collaboration continued to be delivered for the Q community in the North West Coast; and our Innovation Scouts grew to more than 80 individuals taking part in regular online events.

A North West partnership to co-create learning sessions for system leaders led to the creation of NW Improvement Collaborative Masterclasses, featuring highly regarded speakers such as Professor Michael Marmot; Anita Charlesworth of the Health Foundation; Chris Hopson of NHS Providers; and author John Amaechi. View the event schedule and recordings here.

[VIEW THE EVENT SCHEDULE AND RECORDINGS](#)

## CALL FOR ACTION TO ENHANCE MENTAL HEALTH RESILIENCE

When the pandemic broke out, our Coaching Academy Associate Director Juliette Kumar facilitated an action learning set for the NHS Clinical Leaders Network, for clinicians and managers. This fed into an information gathering exercise resulting in the publication of a call for action, to improve the mental health resilience of frontline healthcare staff caring for patients during the COVID-19 pandemic, in May 2020.

'Enhancing mental health resilience and anticipating treatment provision of mental health conditions for frontline healthcare workers involved in caring for patients during the COVID-19 pandemic – a call for action'

[READ MORE](#)

Hear a podcast with Network Leaders Dr Andy Coley and Suzy Ning.

[LISTEN NOW](#)



Dr Andy Coley

## RESTORATIVE PRACTICE TRAINING

As the pandemic pressures took their toll on NHS staff, our Coaching Academy team were drafted in to support resilience and wellbeing.

Restorative practice training was delivered to the OD (organisational development) Network in Cheshire and Merseyside and direct intervention provided to several trusts.

Liverpool University Hospitals NHS Foundation Trust's OD team selected a multi-disciplinary team who agreed to pilot the process, led by the head of the Innovation Agency Coaching Academy, Jen Kohan.



**OD Practitioner, Vicky Edwards said:** "The restorative process helped participants to focus on moving forward together with an improved culture. The LUHFT OD team plan to use restorative practices as part of their toolkit of individual and team support."



Rhonda Hughes, Vicky Edwards and Catherine Turner of Liverpool University Hospitals OD Team

## DOING THINGS DIFFERENTLY

A leadership development programme was commissioned by Cheshire and Merseyside Health and Care Partnership for the nine place-based systems.

The Partnership Executive leading the programme, Dave Sweeney, asked for a collaboration of partners to work together in an integrated approach to maximise the skill set and delivery of the programme.

'Doing Things Differently' brought together cross-sector leaders to explore new ways of working in particular themed areas – CVD as cohort one; and mental health as cohort two.

It was delivered by our Coaching Academy in partnership with the NW Learning and Development Collaborative.



**Dave Sweeney said:** "The Innovation Agency played an integral role in this collaboration, working with maturity, trust and reliability which created a badge-less approach to the success of our programme.

"It is my view they totally get what collaboration means and this filters through the ranks of the organisation. Really inspiring stuff and sets a solid platform for future work."



**Lisa Gresty, Talent Leadership and OD Lead for Cheshire and Merseyside, said:** "The Innovation Agency was a flexible and proactive partner in the development of the Doing Things Differently programme and were able to respond to the changes the pandemic brought with great agility."

## AN INNOVATOR'S MINDSET

A 12-week foundation course, 'Innovator's Mindset', was launched to support individuals with innovative thinking and behaviours.

More than 120 people took part in three cohorts last year, attending weekly coaching and collaboration sessions, enjoying the chance to collaborate and develop ideas and projects.



**Rachel Hall, Head of Research, Bridgewater Community Healthcare**

**NHS Foundation Trust, said:** "I had many lightbulb moments during the course: **Moment 1:** Becoming more aware of my thinking traps; learning to embrace the power of 'yet'; practising continuous reflection. **Moment 2:** Conversation and collaboration is key to innovation; find allies to work with. **Moment 3:** Be brave – break rules, constructive deviance is good."

The course runs three times each year; more information can be found on the Innovation Agency website, click below.

[VISIT NOW](#)

## PREPARING FOR CHANGE AT NW BOROUGH'S HEALTHCARE

A 12-month 'Coaching for Culture' programme was delivered to seven teams from NW Boroughs Healthcare NHS Foundation Trust, up to April 2021. The work was in preparation for a merger with Mersey Care NHS Foundation Trust in June 2021.

The change ideas being developed by the teams were based on their SCORE surveys – about safety, communication, operational risk, resilience and reliability, and engagement.

**Lorna Pink, Assistant Clinical Director for Warrington Borough at NW Boroughs Healthcare, said:** "The SCORE survey gave the teams a really clear starting point to understand and celebrate all their assets and to also recognise where to focus their change ideas for improvement."

# COACHING FOR MENTAL HEALTH AND WELLBEING INNOVATORS

A coaching programme focused on innovations in mental health and wellbeing in the workplace. Many were fully fledged businesses while others were at the earlier stages of planning and set-up.

The innovators took part in a series of workshops with online learning and also received tailored coaching to help tackle complex challenges, while enjoying the support and camaraderie of fellow innovators.



**Sarah Harvey of Students in Mind said:** "The programme has been invaluable in its structured approach towards identifying stakeholders, understanding business models and honing

pitching skills. This in turn has enabled me to refine my programme approach, fine-tune the details offered to potential clients and understand the benefits of a sleek pitch."

Their stories are captured in a download on the Innovation Agency website.

DOWNLOAD

# CULTURE CAMP

The high point of the year for our Coaching Academy was a two-day Culture Camp in March 2021, in which we explored organisational culture from the perspectives of wellbeing, equity and innovation.

The Culture Camp examined ways in which shaping culture can increase staff engagement, reduce absence, improve productivity and patient outcomes. Speakers included system leaders from national and regional organisations, such as Jacqueline Davies of NHS England and Improvement; Helen Bevan of NHS Horizons; and Joe

Rafferty of Mersey Care NHS FT.

The event was attended by around 200 people and gained overwhelmingly positive feedback. There are plans to repeat it in 2022.



**Helen Bevan, NHS Horizons Chief Transformation Officer, said:** "If we have learnt anything during the pandemic, it is about the importance of a positive culture as a foundation for making change happen. We can see how much more quickly those organisations in health and care that had strong, trusting relationships and open cultures moved forward. The Culture Camp was fantastic.

"It was the right thing to do at the right time, with exceptional speakers and an engaged audience".

Read a blog about the event by Associate Director for Coaching Juliette Kumar; and find videos of the sessions on the website. [www.innovationagencynwc.nhs.uk/news/blogs/Culture-Camp-Learning-to-live-with-friction-and-discomfort](http://www.innovationagencynwc.nhs.uk/news/blogs/Culture-Camp-Learning-to-live-with-friction-and-discomfort)

A series of podcasts linked to the Culture Camp featured leaders and trailblazers in creating a healthy workplace culture. Search on any mainstream podcast channel for Innovation Agency.

*Dr Terry Loughlin, Staff Wellbeing Pioneer and Emergency Consultant at Liverpool University Hospitals*



# CAPTURING AND SHARING LEARNING

From an early stage of the pandemic we captured the experiences of staff, patients and partner organisations, to learn what changes and innovations worked best and how some of the more successful transformations could be sustained.

We were part of the AHSN Network and NHS Confederation Reset Campaign, facilitating webinars and contributing experiences from our region to a comprehensive report published in summer 2021.

[DOWNLOAD HERE](#)



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## IDENTIFYING THE BEST COVID-19 INNOVATIONS

Regionally and nationally with the AHSN Network we assessed new products and programmes and these were brought together by a **Beneficial Changes Network**. A year after the pandemic started, some of these products are being systematically adopted and spread through new programmes of work.

## PERSONAL STORIES OF DIGITAL TRANSFORMATION

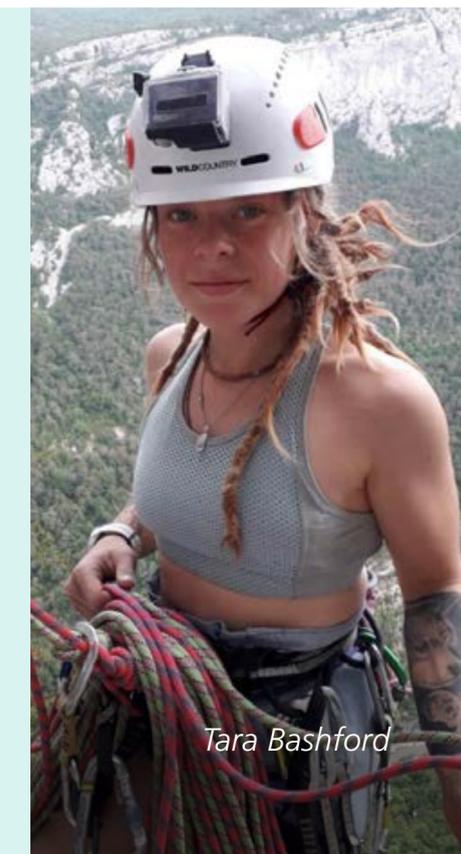
A series of first-hand accounts of digital transformation at speed was curated by our Communications Team between April and July 2020.

These included stories from Blackburn with Darwen Council Head of Digital; a leading psychologist; GP; psychosexual therapist; transplant patient; telehealth pioneers; and several innovators. Read a summary of lessons learned in this blog.

A webinar shared the experiences of three paediatricians and the NHS England/Improvement digital lead for the North West, about using the Attend Anywhere platform for video consultations with patients. Watch a recording here.

[READ NOW](#)

[WATCH NOW](#)



Tara Bashford

# PROGRAMMES WE RAMPED UP

University Hospitals Morecambe Bay

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*Heather Pritchard, Senior Programmes Lead for Improvement at NHS England and Improvement, said:*

“During the COVID-19 pandemic, leadership has never been more important. The team at the Innovation Agency provided excellent leadership to support the delivery of the National Patient Safety COVID-19 Response Programme.”

# TRACHEOSTOMY TOOLKIT

**While some work programmes were paused, others became more urgent in the battle with COVID-19.**

In March 2020 we were seeing an increase in the number of patients requiring a tracheostomy and there was potential that such patients could be cared for by healthcare staff who were relatively unfamiliar with tracheostomy management.

The Innovation Agency's Andrew Cooper and Katie Whittle were asked to co-lead a national programme of work to support these staff, in partnership with colleagues from Health Innovation Manchester and the National Patient Safety Improvement team.

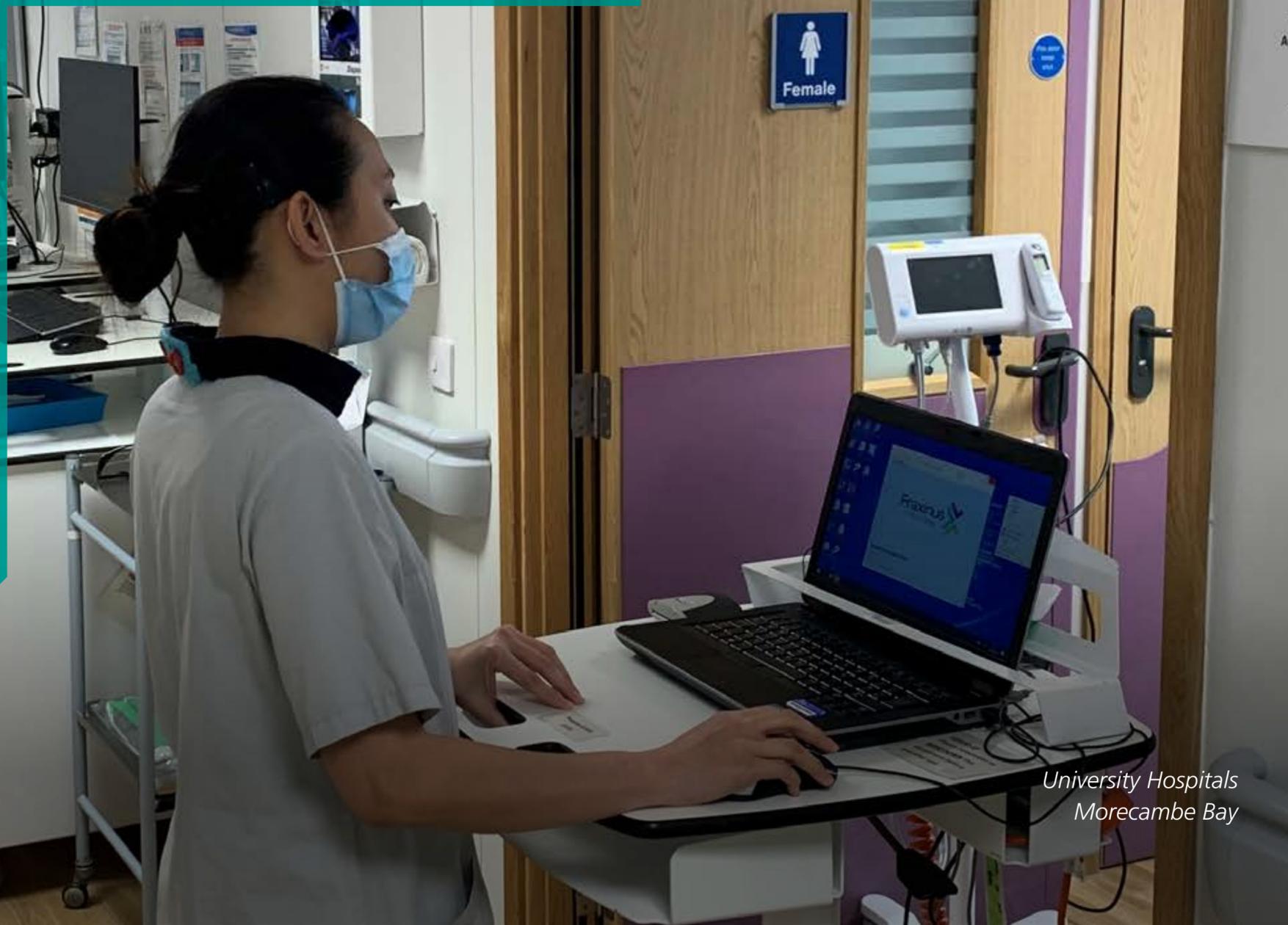
A key element of this programme was the creation of a toolkit, in collaboration with Dr Brendan McGrath, Clinical Lead for the National Tracheostomy Safety Project, to support healthcare staff looking after this very vulnerable group of patients.

A national programme of work was developed to support the adoption and spread of the three proven key safety interventions identified in the report, **'Shine 2014: Implementing the Global Tracheostomy Collaborative quality improvement project'**, which would help frontline staff to provide high-quality and consistently safe care as the pandemic continued.

In just two weeks the National Safe Tracheostomy Care Programme was launched, of which the key safety interventions would go on to be adopted by 192 acute sites in critical care units, cohort wards and temporary critical care areas.

Bed head signs to clearly identify patients with a tracheostomy or laryngectomy; standardised 'bedside' tracheostomy emergency equipment; and using a daily care bundle were the main recommendations.

A year after it was launched, 92 per cent of acute hospitals in England that cared for patients with tracheostomies had adopted these three key safety interventions.



University Hospitals  
Morecambe Bay

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# INNOVATIONS IN PULMONARY REHABILITATION



*Dr Sarah Sibley, Respiratory Clinical Lead for Cheshire and Merseyside Strategic Clinical Network, said:*

“The Innovation Agency did an excellent job of helping teams to see the benefits of adding digital platforms as an option for patients to use as a part of a pulmonary rehabilitation programme.

“In the face of the huge challenge posed by the pandemic, they have enabled care for patients to continue while face-to-face treatments were not possible.

“This work has changed pulmonary rehabilitation forever, allowing teams to embrace a new way of working that will have a lasting positive effect.”

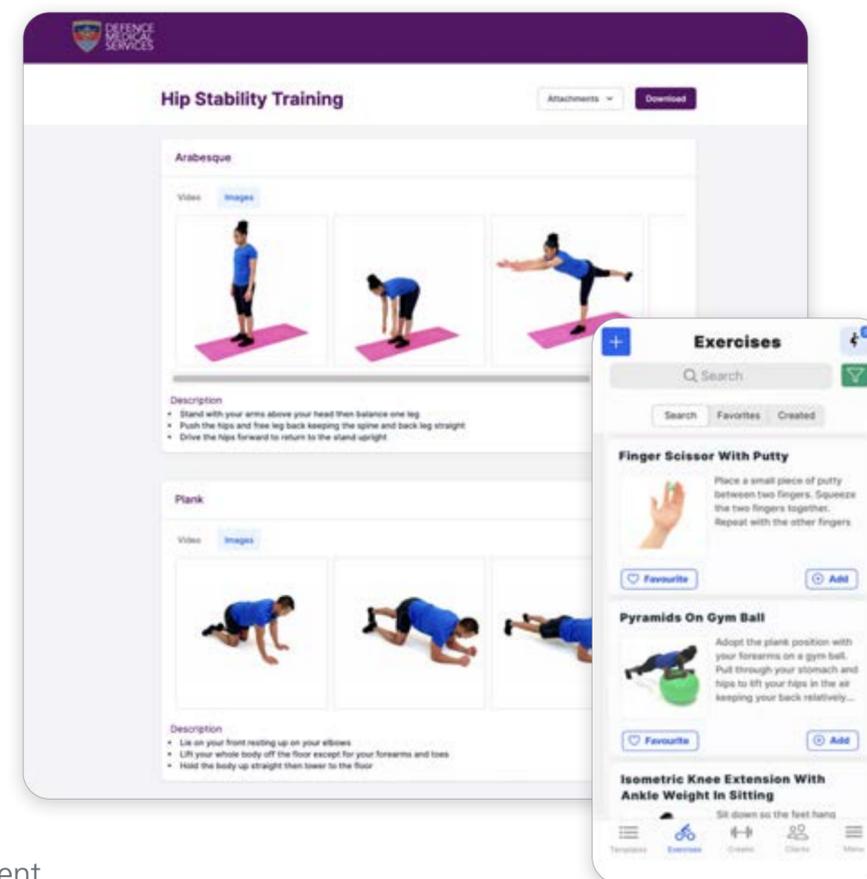
We supported a system-wide quality improvement programme to develop a pathway for pulmonary rehab patients who could not be seen face-to-face due to the pandemic.

Working closely with the Cheshire and Merseyside Respiratory Network we produced a Digital Insights tool which includes a summary of digital exercise and treatment options at different stages of the patient pathway; it can be viewed on the Innovation Agency website.

<https://www.innovationagencynwc.nhs.uk/innovation-insight-pulmonary-rehabilitation>

These innovations have the potential to increase the engagement of respiratory patients and reduce the likelihood of hospital admissions, readmissions and the deterioration of the patient.

The Insights Tool helped the group to select Rehab Guru, a home exercise prescribing platform, which will be adapted for use by pulmonary rehab specialists in Cheshire and Merseyside.



Evaluation has been commissioned to assess the health economics and impacts of new digital ways of working.

Funding was gained from the Local Workforce Advisory Board to develop and deliver a coaching programme for staff.

Additional funding was gained from the Cheshire and Merseyside Digital First Programme to support the development of patient education and a programme to improve digital literacy.

Work then followed to support Lancashire and South Cumbria with quality improvement.

## COVID OXIMETRY AT HOME

During the pandemic, keeping patients out of hospital became a top priority.

**To do this, the rollout of digital technology, already under way, was accelerated to enable an expansion of telehealth.**

Monitoring the health of patients, especially those with respiratory conditions, was made easier thanks to a system which allowed remote monitoring to take place.

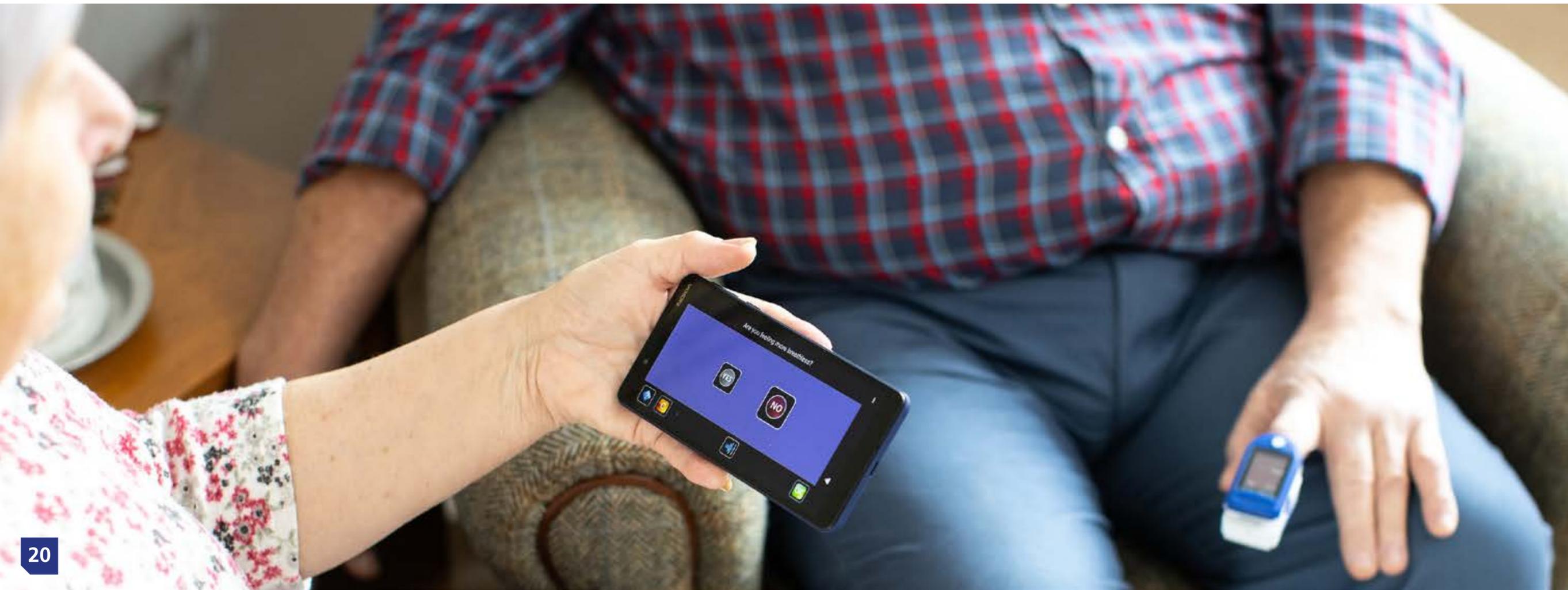
Known as 'COVID Oximetry at Home', patients were assessed and given a pulse oximeter to monitor oxygen saturation levels. An app on their smart phone or tablet meant they were able to feed information into a digital dashboard allowing GPs and other health professionals to monitor their condition. In Cheshire and Merseyside,

eight of the nine CCGs built on a well-established telehealth 'hub' model in Liverpool to rapidly expand COVID Oximetry at Home services using the Docobo platform.

The telehealth hub, made up of nurses and healthcare assistants, monitored the progress of 2,200 patients who were assigned the digital kit. Using the information received they were able to offer advice and coach patients; and use video technology to assess them further if required.

In Lancashire and South Cumbria a similar process involving GPs saw over 2,000 patients make use of the system since it was introduced in the region in November 2020.

Our Patient Safety Team were actively involved in supporting the rollout of COVID Oximetry @Home and the second phase of the programme, known as the COVID Virtual Ward; developing and delivering a weekly community of practice, linking our local systems to emerging national best practice and offering bespoke support for local implementation.



## NHSX FUNDING FOR REMOTE MONITORING

The use of digital technology to enable the expansion of telehealth was boosted by £3.5m from NHSX. The Innovation Agency's Director of Digital and Operations, Tony Woods, led the funding bid on behalf of the North West region, co-ordinating three integrated care system proposals and acting as programme lead for the North West.

NHSX has also been working with the AHSN Network to deliver the Innovation Collaborative to enable regional teams to accelerate deployment and share learning and best practice.

## 'BREATH OF FRESH AIR'

Debbie Lentell, from East Lancashire, made use of the Docobo system after a pulse oximeter and patient diary were sent to her home.

*"The virtual ward was a breath of fresh air," she said. "It's been so reassuring knowing I can ring someone up if I start feeling worse. The COVID virtual ward saved me a trip to the hospital."*



**Steve Tingle, Director for Digitisation in Regulated Care, Lancashire and South Cumbria Integrated Care System, said:**

"We learnt quickly from the COVID Oximetry @Home rollout that people are the real drivers for any change in working processes and so as we expand telehealth solutions out into social care, we are recruiting 'experts with experience' - change ambassadors who are passionate about transforming care for vulnerable residents.

"By tapping into their energy and enthusiasm, we're using them as agents of change to encourage and support frontline care and support staff to embrace technologies for the benefit of residents."

# SUPPORTING CARE HOMES



care home  
staff trained

*Megan Owen,  
Prospect House, Malpas*

## TRAINING CARE HOME STAFF

Our work with care homes started long before the pandemic and this ramped up during 2020 as a dedicated team rolled out a toolkit and training in how to spot early warning signs of deterioration using the programme RESTORE2.

This followed the successful national rollout of NEWS2, the updated national early warning score now used by all acute and ambulance trusts in the North West and around the country, thanks to an initiative led by the AHSN Network and NHS England and Improvement.

RESTORE2 uses nationally recognised methods to alert care staff to changes in residents' health, similar to the NEWS2 system used in secondary care. The system enables carers to identify when a resident may be at risk of deteriorating, map out a plan to protect and manage their condition through recording observations and chart the action taken.

This early warning system has been invaluable during the pandemic when care staff were under pressure to deal with the impact of the relatively unknown virus.

By April 2021, 457 care home staff had passed through our training, from a total of 148 homes.

*Megan Owen, Deputy Manager of Prospect House in Malpas, Cheshire, said:*

"Our nurses and senior staff completed RESTORE2 training and this has been used at Prospect House.

"We are currently recording observations on paper, however we do have the electronic version which we plan to start using shortly. Our staff began using the tool immediately and feedback has been really positive."



## COLLABORATING IN ST HELENS

*Helen Newton, Head of Quality and Designated Nurse Safeguarding Adults at St Helens CCG, said:* "We initially focused our attention on our nursing homes, before beginning to rollout RESTORE2 (mini) to our residential homes.

"This will be followed by offering training to our supported living providers. Our aim is to empower our nursing and care staff to feel confident in their knowledge of service users, to identify signs of deterioration and to communicate concerns in a confident and articulate manner.

"As an additional benefit, we identified the opportunity to use RESTORE2 as the platform to review our approach to advance care planning in St Helens and we are working closely with both health and social care colleagues to implement a new process that is aligned with our frailty model.

"We are now working with the Innovation Agency to support the rollout of safety huddles in our nursing homes."

## MEDICINES SAFETY

A programme to test changes to improve the safe administration of medication and reduce medication errors in care homes was launched in March 2020.

A small number of homes were engaged to test a series of changes including Safety Champions, interventions to improve learning from events, reduce interruptions in medication rounds and improve communication between care homes, GP practices and community pharmacies with the overall aim of improving safety culture.



**Innovation Agency  
Senior Programme  
Manager, Connie  
Sharrock said:**

*"The care home landscape is complex and the impact of the pandemic on staff has been significant. The regional chief pharmacist and medicines and pharmacy*

*cell have developed several 'what good looks like' best practice documents during the pandemic which we will promote in the programme for the North West Coast.*

*"This new programme offers the kind of support they need right now in terms of building capacity and capability for quality improvement, teamworking and leadership."*



*Cardiology and respiratory staff  
at Liverpool University Hospitals*

## TACKLING THE CVD CHALLENGE

**The start of the pandemic brought a halt to CVD prevention measures such as blood pressure checks, pulse and cholesterol level tests, which usually happen in face-to-face appointments.**

Simultaneously, fewer people were presenting with signs of heart attack or stroke as well as other symptoms; and concern grew nationally at the growing scale of hidden problems.

It became clear that maintaining momentum with CVD prevention work should be a COVID-19 priority for the Innovation Agency.

## THE SOLUTION

A CVD implementation group was set up with partners from the Cheshire and Merseyside Health and Care Partnership; Cheshire and Merseyside Public Health Partnership; Public Health England and the Innovation Agency.

The group delivered a campaign to raise awareness of good heart health and invested in extra resources for professionals and public.

## OUTCOMES OF OUR COLLABORATIONS

- More than 50 Kardia pulse testing devices were distributed to primary care practices
- A business case was produced to establish a clinic for patients with the genetic condition familial hypercholesterolemia (FH) in Cheshire and Merseyside
- The CVD prevention website Happy Hearts was expanded <https://www.happy-hearts.co.uk/> and traffic to Happy Hearts was increased during a campaign on Facebook, with over 200 website visitors per day
- In partnership with the Stroke Network, we supported all nine stroke teams in Cheshire and Merseyside to be given access to pulse testing app Fibrichck and a remote continuous monitoring system Ziopatch, to help identify patients with AF post-stroke
- A new role was developed and co-funded with the Cheshire and Merseyside Public Health Partnership (Champs) to support the ongoing development of CVD prevention
- The Health Care Partnership have asked the Innovation Agency to host a new post focused on CVD prevention to ensure that the momentum of our work is not lost



The following educational webinars can be found on the Innovation Agency YouTube channel:

**ATRIAL FIBRILLATION**

**BLOOD PRESSURE**

**CHOLESTEROL**

# RESTART

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The Clatterbridge Cancer Centre  
NHS Foundation Trust

## ADDRESSING PRIORITIES

Helping to restart elective procedures and reduce long waiting lists, in particular for cancer patients; tackling the challenges of transforming outpatient appointments; and coming up with solutions to improve productivity have been a major focus for our team.

Working closely with the system's Cancer Alliance and Endoscopy Network in Cheshire and Merseyside, we assessed local needs and curated the most promising innovations to improve productivity in cancer pathways including endoscopies. The work was urgent as there were worryingly high waiting lists due to a pause in procedures during the pandemic.

Selected products have included artificial intelligence and machine learning tools, assessed by our staff. This work has aligned with the North West Adopt and Adapt programme, selecting products helpful in planning future ways of working.

## THRIVE

Thrive is a software tool for the efficient planning of endoscopy lists that maximises the number of patients seen within existing resources. Using deeper analytics, Thrive facilitates prompt list start and finish times and efficient room utilisation. It also reduces turnaround times and helps to reduce overrunning.

**Programme Manager, Ed Millensted said:** "Thrive digs into the reasons why lists may start late and enables more patients to be seen; it sweats the assets and maximises potential."

**Dr Ash Bassi, Endoscopy Lead for the Cheshire and Merseyside Network, said:** "The Cheshire and Merseyside Endoscopy Network are meeting regularly with colleagues from the Innovation Agency to discuss innovation in endoscopy, to improve outcomes for our patients. Together, the teams are exploring potential areas to support patients being directed to the correct pathways in gastroscopy and sharing good practice across the region."

## PILL ON A STRING

The Cytosponge is a tiny capsule on a string which is swallowed by the patient; after a few minutes the capsule dissolves and the sponge expands in the stomach. The string is then gently pulled to remove the sponge. As it's removed, the sponge collects cells from the entire length of the oesophagus.

A national pilot of Cytosponge is being funded by NHS England and Improvement and project management support has been secured by the Innovation Agency from the company Medtronic, to introduce the innovation in Countess of Chester and St Helens and Knowsley hospitals from April 2021, with an evaluation to follow.

[READ MORE](#)

**Dave Mckinlay, Associate Director of Cheshire and Merseyside Cancer Alliance, said:** "During the COVID-19 pandemic, the Innovation Agency has supported the Cancer Alliance and clinical teams to identify innovations and approaches to support diagnostic services, particularly in endoscopy. Most recently the team have created and facilitated a series of conversations between Alliances and experts in machine learning to explore how this technology could be used to predict an individual's risk of cancer and ultimately find and treat cancer earlier.

"These discussions have developed into a promising opportunity to pilot this approach. The Cancer Alliance has a strong working relationship with the Innovation Agency and we look forward to continuing to work with their outstanding team to transform cancer services."



## OUTPATIENTS TRANSFORMATION

**Our team supported the Outpatients Transformation Network in Cheshire and Merseyside in exploring best practice in providing virtual consultations and avoiding visits to hospital during the pandemic.**

This involved helping to shape discussions on new patient pathways and the potential for innovation. Useful products were identified and an Innovation Insight report produced, highlighting innovations at different points of the pathway.

On behalf of the North West NHS England Adopt and Adapt programme our team led an appreciative enquiry exercise across the North West Coast. Enquiry scoping work started during March 2021, talking to clinical service teams to find out how best to deliver remote consultations. The aim is to produce guidance on best practice and to increase uptake of virtual appointments.

# IN SPITE OF COVID-19

## MENTAL HEALTH JOINED-UP CRISIS SUPPORT

**Across the country, mental health and emergency services sometimes struggle to manage a small number of repeat callers with complex mental health needs.**

While every call is answered, there has been concern that more could be done to provide effective care for individuals with unmet needs who frequently experience mental health crisis.

When in crisis these patients are often taken by emergency services to accident and emergency departments as places of safety, further impacting on services already under pressure.

The need to develop an improved model of care for those patients with unmet needs was agreed by all partners in the Lancashire and South Cumbria Integrated Care System and changes put in place in 2020.

Combining the skills of police and mental health workers was recognised as a way of not only making a real difference to patients in crisis, but also reducing the significant expense linked to these cases, as the individuals were often frequent users of emergency services.

In late 2018, Innovation Agency Project Manager Val Tarbath began to establish formal links with key stakeholders including police and other emergency service colleagues, as well as social care and mental health teams in Lancashire and South Cumbria as part of a national improvement programme.

The aim was to avoid mental health crises where possible and work together to support patients when a crisis happened.

Patients worked with their mental health practitioners and police and agreed a personalised plan of care, including actions to follow should they experience a mental health crisis.

**Neil Smith, Senior Advisor and Mental Health Lead, Lancashire and South Cumbria ICS, said:** *“Without this programme we’d all be spending time trying to help people yet knowing that the effect was potentially only short-term.*

*“As a former police officer, I know the amount of time spent and the frustration experienced by colleagues in the past when they can’t do more to help. This programme of work means that we are able to work together to make a real difference. I’m excited that the programme implemented locally, with the support of Val and the team, will continue to change people’s lives.”*

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Photo by Fusion Medical Animation on Unsplash

# MATERNITY AND NEONATAL SAFETY IMPROVEMENT PROGRAMME

The national maternity and neonatal safety improvement programme (MatNeoSIP) is led by the Innovation Agency in the North West Coast.

Over the last four years a successful whole-system approach has brought together frontline staff with our Local Maternity Systems, Maternity Clinical Network and Neonatal Operational Delivery Network, in local learning sets.

The aim is to improve maternal and neonatal care by reducing unwarranted variation, contributing to the Better Births ambition of reducing the number of stillbirths, neonatal deaths and brain injuries occurring during or soon after birth by 50 per cent before 2026.

Our work at system level focused initially on smoke-free pregnancies and over 2018-2020 we worked with partners to support women to stop smoking and so reduce the risk of harm to their babies. We paused face-to-face work during the pandemic and the campaign to increase the proportion of smoke-free pregnancies was relaunched in February 2021.

**Innovation Agency Project Manager Paul Brain, who organised a series of awareness raising events with midwives, said:** "I'm delighted to see that in Blackpool there has been a reduction from 30 to 20 per cent in the number of mothers registered as smokers at the time of giving birth. Our challenge is to reduce this still further."



Another main driver to reduce harm is to decrease the pre-term birth rate from eight to six per cent nationally. This is a challenge for us locally, with some areas over eight per cent.

We launched our work to improve the care of pre-term infants in November 2020, building on a joint workshop about premature babies and the Maternity Clinical Network's regional guidelines for diagnosis and management of preterm infants; and a baseline developed with the North West Operational Delivery Network earlier in the year.

One of the improvements being promoted is the move to delayed cord clamping at birth. During premature birth, delayed cord clamping allows for increased placental transfusion which is associated with significant neonatal benefits.

Lisa Juniper, a mum from Lindale in Cartmel, Cumbria, shared the experience of her son Theo's pre-term birth in the launch webinar. Her moving story can be viewed in the webinar recording on the Innovation Agency YouTube channel.

[SEE HER STORY](#)

**Dr Amitava Sur, consultant neonatologist at the Lancashire Women and Newborn Centre at East Lancashire Hospitals, said:** "We considered a 'bundle approach' towards optimising perinatal care for preterm infants born at less than 32 weeks, with three key drivers: delaying clamping the cord for at least 60 seconds; administering the PEEP\* method of ventilation at delivery to all infants; and optimal thermal management.

"We have consistently been able to optimally manage the cord delay-clamping for more than 75 per cent of deliveries and have managed to PEEP all preterm infants immediately after birth.

"Our aim is to sustain this good practice and consider a more physiology-based cord clamping for two minutes or more; and transition more infants to Neonatal Intensive Care on CPAP (continuous positive airway pressure)."

\*PEEP 'positive end expiratory pressure,' a mode of therapy used in conjunction with mechanical ventilation to maintain a patient's airway."



## TRAILBLAZING NEW PSYCHOLOGY CAREER ROUTE



**A new psychology trainee role has been created to support workforce quality and service improvements in the North West Coast, thanks to a project led by the Innovation Agency.**

The 50 trainee associate psychology practitioners (TAPPs) offer early stage mental health support – while studying for a postgraduate diploma delivered by the University of Central Lancashire.

This pioneering project was enabled by £1.3 million funding from Health Education England, who commissioned the Innovation Agency to explore new career routes for psychology professions. The project identified a bottleneck for graduates to enter the NHS, at the same time as a shortage of skilled staff in NHS psychology services.

The funding covered the study, qualifications and project evaluation as well as support for the roles within the provider organisations.

Half of the posts are in acute and mental health trusts, with the remainder in primary care networks.

**TAPP Eleanor Newton, who started her role at Bay Medical Group in March 2021, said:** “I see this role as an incredible opportunity; to gain experience in delivering quality, personalised interventions; to promote psychological wellbeing within the broader community; and to play an active role in the transformation of our societal approach to mental illness and psychological wellbeing.

“This scheme will not only benefit my own personal and career development as a psychological professional, it has the potential to play a significant role in transforming mental health provision within the NHS and our local communities. For any prospective applicants, I cannot recommend the role highly enough.”

**Innovation Agency Director of Transformation Carole Spencer, who led the project, said:**

“We have worked closely with our partners to build a new role that we hope will provide the foundation for increased workforce supply into all psychological professions in the North West Coast, with ambition to spread nationally. This will narrow the significant gaps we have in workforce in this area.”



The partners in developing the new role alongside the Innovation Agency were: UCLan; Health Education England North West; People Boards in Cheshire and Merseyside and Lancashire and South Cumbria; Psychological Professions Network North West.

Read a case study about the 25 TAPPs in primary care on the Innovation Agency website.

[READ THE CASE STUDY](#)

## PATIENT AND PUBLIC INVOLVEMENT

Monthly meetings of our Patient Involvement and Engagement Senate continued online, with members trained in using Zoom and attending from across the North West Coast.

Focus groups continued to be organised with patient representatives, to give feedback on products developed by businesses from our region and further afield, including a workshop for patients with implanted cardiac devices.

More than 130 people with atrial fibrillation were recruited to a project to develop a patient insights toolkit, analysing behaviour and engagement patterns.

When the lockdown lifted our team resumed some face-to-face events, including pulse testing to raise awareness of heart health.

The Innovation Agency Public and Patient Involvement Team are part of our patient safety improvement programmes and offer the perspective of different patient groups to developing and delivering all workstreams.



*Pulse testing on the streets of Kendal*

## EVENTS

Our normally full calendar of events delivering different programmes of work and supporting our local systems came to a sudden halt in March 2020.

However these quickly shifted to webinars, initially using Zoom, a platform familiar to the Innovation Agency as we had been using it for internal meetings for staff based at different locations in the North West Coast.

MS Teams soon became the platform of choice for public sector partners and it wasn't long before colleagues adapted to video conferencing and screen meetings became the norm.

A total of 137 webinars and other events were held online in the last year and our Events Team also provided training to system partners in using online meeting and collaboration tools.



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## NHS IN THE NORTH EXCELLENCE IN SUPPLY AWARDS

Our annual awards to recognise great partnerships between the NHS and suppliers became a virtual event, livestreamed through YouTube with announcements and celebrations shared on Twitter.

The live videos received more than 300 views and continued to be watched in the days to follow, with a total of 800 views within a week. The awards were organised by the Innovation Agency in partnership with the Northern Customer Board and sponsored by Health Innovation Manchester and Yorkshire and Humber AHSN.

### THE WINNERS

FIGHTING THE VIRUS WINNER: **PATCHWORK HEALTH** with 'Supporting Liverpool Primary Care Networks through COVID-19 with the implementation of innovative technology'

SUPPORTING THE SYSTEM WINNER: **DOCOBO** with 'Telehealth: a rapid reaction'

NHS PROCUREMENT HEROES WINNER: **SHEFFIELD TEACHING HOSPITALS NHS FT PROCUREMENT AND LOGISTICS TEAM** with 'Keeping patients and staff safe'

# SYSTEM PARTNERSHIPS

## COLLABORATING ON INNOVATIONS AND IMPROVEMENTS

**In the past year our strategic partnerships with health and care organisations and system leaders have focused on innovations and improvement programmes relevant to the pandemic.**

We have continued to build networks across a broad system, developing partnerships and supporting the system to stay connected and move forward, for example with Integrated Care Partnerships and transformation programmes.

### THIS INCLUDES:

- Commissioned programmes from our Coaching Academy
- Partnership work with integrated care system (ICS) core teams to develop innovations for place-based care
- Working within transformation programmes to identify innovative solutions that meet operational requirements
- Offering strategic innovation support to trusts developing innovation services and hubs
- Hosting the Innovation Agency Exchange portal and coordinating an innovation pipeline on behalf of the system
- Regulated care digital transformation (including care homes)

*Executive Director of Partnerships at Cheshire and Merseyside Health and Care Partnership, Dave Sweeney said:*

“We value the knowledge and skills of the Innovation Agency in connecting us with innovations which help transformation. But most of all we value the flexibility and resourcefulness of the leadership and the wider team, making connections locally, nationally and internationally, and collaborating to tackle health inequalities.”



# STRENGTHENING COLLABORATION IN LANCASHIRE AND SOUTH CUMBRIA

Support was provided by Innovation Agency Programme Manager Howerd Booth to organise a Research and Innovation Leads Group with the region's five acute trusts, which started under the auspices of the SEED (Social Environmental and Economic Determinants) Health Alliance.



**Paul Brown, Head of Research and Innovation at Lancashire Teaching Hospital, said:** "The Innovation Agency has successfully brokered and set up a group of research and innovation leads who have been working together in a more cohesive way.

"For the first time, we have taken part in some effective mapping of research and innovation skills capacity in each of the five research-active trusts. This bodes well for working together and attracting more work to the region through research and innovation."

Next steps include reviewing cancer research across the region and how to plan and achieve more together; organising a regional showcase event which includes primary care; and adding all four local universities to the skills and capacity map.

As all ICS designations are required to have a research strategy it is hoped this group will provide operational support to this and help advise and guide the research and innovation aspects of the New Hospitals Project in Lancashire and South Cumbria.

A project commissioned by SEED exploring learning from experiences during the first phase of the pandemic, involved the voluntary, community and faith sector, universities, local authorities and patient groups and led to the report '**Learning from Covid Phase One**'.

# MOVING ALONG THE PIPELINE

We have developed a North West Coast Innovation Pipeline to facilitate and standardise the progression of healthcare innovation from discovery to development and, ultimately, to deployment.

The innovation pipeline allows us to track innovative products, research and services across the region, reducing duplication and boosting opportunities for collaboration.

Jointly with the NIHR ARC North West Coast, we have underpinned the process with an evaluation framework, bringing a consistency to our approach and resource allocation.

The methodology was pioneered by Health Innovation Manchester and has now been adopted by all AHSNs, giving a picture of the national innovation landscape.

Our **Innovation Agency Exchange** website supports the pipeline process. Here, innovations have been curated which match our systems' priorities.

By April 2021, more than 300 innovations were published and more than 2,000 members were actively using the platform.



## ON THE PIPELINE – CRISIS MANAGEMENT TOOL MAST

**A system being pioneered in the North West Coast aims to reduce the number of mental health patients requiring inpatient beds by identifying people at risk of crisis.**

The Management and Supervision Tool (MaST) is a powerful and easy to use dashboard which uses predictive analytics to identify those people who are most likely to require crisis services such as A&E, community crisis services or inpatient care.

The Innovation Agency supported a collaboration between Mersey Care NHS Foundation Trust and data science and health tech company Holmusk to develop a system that brings data into a single place.

Well before the pandemic, MaST was trialled as part of Mersey Care's wider transformation programme, before being embedded into normal ways of working.

The Innovation Agency Pipeline process, which assesses solutions to health and care challenges, selected MaST as an innovation to accelerate evidence generation and funding was provided for detailed economic evaluation.



***Caroline Gadd from Holmusk said:***

“As a small company we’d be unable to commission the kind of detailed economic evaluation provided by the Innovation Agency.

“Throughout, there has been real value in working with the Innovation Agency. The programme would not have happened as fast without their support, encouragement and advice.”

*Caroline Gadd is an NHS Innovation Accelerator Fellow*

# ECONOMIC GROWTH IN THE PANDEMIC

## HEALTHY NUMBERS FOR BUSINESSES WE SUPPORT

Many health and care businesses in the North West Coast continued to thrive during the pandemic, according to our research.

During 2020-21 the Innovation Agency Commercial Team helped to bring in **£35.3m of investment**, compared with £18.3m in the previous year.

We also helped businesses to create **112 jobs** in the region, the same number as in 2019-20; and **safeguarded a further 56**. The team **supported a total of 389 companies**, compared with 345 the previous year.

The number of interactions with companies – occasions when we offered advice or support – rose from 500 to **862**.

The team supports small and medium-sized companies with a range of services and helps them gain a foothold in the health and care system. This work is backed by funding from ERDF through our Health Matters programme.

*Lorna Green, Director of Enterprise and Growth at the Innovation Agency, said:*

“The healthcare system has adopted innovations to deal with some of the issues presented by the pandemic. This has allowed us to accelerate the spread of products which otherwise may have taken longer to introduce.

“The figures are remarkable. We’ve always known there’s a wealth of creativity and innovation in the small business sector in the North West Coast, and we’re really pleased and proud to have helped so many companies fulfil their potential. They’ve gained a foothold in the healthcare sector and helped our colleagues in the system as a result.”



## REHAB IN VIRTUAL REALITY

**Patients with cardiac and lung conditions are benefiting from the latest developments in virtual reality – thanks to a project backed by the Innovation Agency.**

Cumbrian company Concept Health has developed a system that allows patients with conditions such as chronic obstructive pulmonary disorder (COPD) to continue their pulmonary rehabilitation (PR) despite the pandemic.

The company, based in Barrow-in-Furness, uses its PR-in-VR system to deliver PR via a headset and a remote monitoring device like a wristwatch.

The equipment puts patients into a virtual reality environment where they undergo a six-week programme which is monitored by a remote dashboard. The system allows a single therapist to monitor

hundreds of patients who are spared unnecessary journeys to clinics.

During spring and summer 2020, Concept Health received nearly 100 referrals from GPs and other healthcare providers over a six-week period. And 90 per cent of patients participating in PR-in-VR in a trial staged by the company in Cumbria satisfactorily completed the programme, compared to 40-60 per cent for face-to-face treatment.

The Innovation Agency helped secure £50,000 for a clinical trial that allowed the company to publish a paper and promote the service to clinical providers.



***Dr Farhan Amin, a GP partner in Cumbria and Founder and CEO of Concept Health, said:***

“PR-in-VR saved patients from exposure to COVID-19, and the majority of them were shielding at the time. All face-to-face pulmonary rehabilitation services were shut during this period and PR-in-VR was the only scalable and supervised model of PR available.

“The system gives patients their independence back. They can do the activities in their own homes while the clinician retains oversight.”

## TWO BUSINESSES SECURE SBRI FUNDING

Two organisations supported by the Innovation Agency received national funding to develop their healthcare innovations.

**Liverpool cloud services provider AIMES and digital healthcare company Brain in Hand each received £700,000 through the Small Business Research Initiative (SBRI) Healthcare.**

The fund is an NHS England and Improvement initiative which is supported by the AHSN Network and promotes economic growth while tackling health challenges. The Innovation Agency supported their funding applications.

For Brain in Hand there was double cause for celebration in the past year as their self-management system for people with autistic spectrum disorder was chosen to join the NHS Innovation Accelerator (NIA).

**AIMES, in partnership with University College London and Barts Health NHS Trust, developed the OpenCARE platform which uses Artificial Intelligence (AI) to improve cardiovascular care.**

Cardiologists rely on images to diagnose and treat heart disease, and the OpenCARE platform interprets them using advanced AI with a degree of precision beyond human capability. This improves decision-making, and, by automating time-consuming measurement processes, clinicians can be freed up to spend more time with patients.

**AIMES Chief Executive Officer, Dr Dennis Kehoe**

**said:** “The Innovation Agency were fundamental to our success in phase one of SBRI funding. We’ve worked closely with the Innovation Agency since OpenCARE’s inception. The team have helped us articulate its purpose in terms of health economics: why it’s good, and what makes it special.”



**BRAIN IN HAND** is a digital self-management system combining digital and human support to help people live more independently. It is designed for people with autistic spectrum disorder, individuals with learning difficulties, and those with mental health challenges.

It operates in around 60 locations in the UK, including Knowsley, Liverpool and Warrington, and there is at least one user in every university in the country.

Its selection by the NIA means it will be scaled up throughout the health and care system. The NIA selects an innovation and an associated Fellow, in this case Brain in Hand Director of Strategic Partnerships Heather Cook, who has strong links with the North West Coast.

Stockport-based Heather started working in collaboration with the Innovation Agency when Brain in Hand was a fledgling company.



**Heather Cook said:** “The Innovation Agency has been with us right from the start of our journey seven years ago. As far as the NIA fellowship is concerned, the Innovation Agency team encouraged us to apply, reviewed our application, and has helped us think about alignment with the NHS Long Term Plan and the needs of the health and care system during COVID-19.”

# TECH DELIVERS COMMUNICATION BREAKTHROUGH

**A Lancashire trust spearheaded a technology breakthrough that supports patients who have lost the ability to speak.**

Lancashire Teaching Hospitals NHS Foundation Trust formed a partnership with Liopa to develop the company's speech recognition technology, which is particularly helpful for patients recovering from a tracheostomy.

Backed by the Innovation Agency, Liopa was able to develop SRAVI – speech recognition for the voice-impaired – with which patients mouth words into a mobile phone camera. The information is referred to a library of common phrases and the correct phrase is sent back to the phone which then 'speaks' it.

The partnership was set in motion when intensive care consultant Dr Shondipon Laha searched for speech recognition technology and discovered Liopa, whose system did not then have a health application.

SRAVI uses artificial intelligence and its library of phrases has been expanded and refined as part of a trial at the trust. It has proved particularly helpful to patients who have had a tracheostomy as part of their treatment for COVID-19.

Nathan Armstrong, from Oswaldtwistle, has suffered from paralysis of the vocal cords since childhood and underwent a recent tracheostomy at the trust.

**Nathan said:** "I am very satisfied with how accurately SRAVI returned the phrases I was communicating while I was in the intensive care unit. If you have been on a ventilator you will have been asleep for a week or maybe longer – the last thing you want to do is pick up a pen and try to communicate."

Dr Laha said the Innovation Agency had given the company guidance on National Institute for Health and Care Excellence regulations that would have an impact on product development; and directed them towards funding for AI projects.



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## INTERNATIONAL SUPPORT

**Our international commercial team continues to forge links with innovative companies and has, despite the pandemic and the UK's exit from the EU, expanded its portfolio of overseas businesses.**

The Innovation Agency takes part in EIT Health's Bridgehead programme which offers funding to outstanding SMEs to buy bespoke packages of business support. The programme's focus is on European start-ups aiming to expand beyond their home markets.

One of the outstanding successes of the programme this year was our collaboration with Israeli innovators Voiceitt, who specialise in speech recognition technology for people with speech disabilities or disorders.

Our Commercial Team brokered a partnership between the company and Oldham-based charity the Ace Centre, which specialises in supporting people with communications problems.

This cross-AHSN collaboration and partnership with Voiceitt will help validate the app and bring it to market, while £50,000 has been awarded by our neighbouring AHSN, Health Innovation Manchester, through its Momentum Fund.

**Sara Smolley, Head of Partnerships and Alliances at Voiceitt, said:** "The Bridgehead programme opened opportunities to partner and collaborate with institutions and key opinion leaders who can support and propel our UK market entry. The Innovation Agency team has provided its experience and contacts to help us do that."

# SPREAD OF NATIONAL INNOVATIONS

## NATIONALLY FUNDED PROGRAMMES DELIVERED IN THE NORTH WEST COAST

For the past three years, the Innovation Agency and fellow AHSNs have been supporting the NHS to adopt a number of innovations through two successive programmes – Innovation and Technology Tariff (ITT) and Innovation Technology Payment (ITP).

These programmes address some of the financial and procurement barriers to introducing new technologies. At the start of 2021, a new NHS England policy, MedTech Funding Mandate, was launched. This policy asks local systems to sustainably adopt four of these products which have shown high levels of clinical and financial effectiveness. The four products are: Placental Growth Factor, HeartFlow, GammaCore, SecurAcath.

These AHSN Network-backed innovations are now widely used throughout the North West Coast, as shown in the infographics.

**Placental Growth Factor (PIGF)** – test to help rule out pre-eclampsia quickly so that pregnant women receive the most appropriate care

USED IN **ALL**  
NWC MATERNITY  
UNITS

**£1.8M**  
NHS SAVINGS  
IN NWC

**HeartFlow** – analysis which creates a 3D model of the coronary arteries to help clinicians to rapidly diagnose patients with suspected coronary artery disease from coronary CT angiography

USED BY **7 OF 8**  
ELIGIBLE  
PROVIDERS

SAVING  
**£391**  
PER PATIENT

**GammaCore** – non-invasive vagus nerve stimulation therapy for the treatment of cluster migraine

**£90K**  
SAVINGS TO NHS

AVAILABLE TO  
**EVERYONE**  
WHO IS ELIGIBLE  
IN NWC

**SpaceOAR** – an absorbable spacer to reduce rectum radiation exposure during prostate radiation therapy

**102** PEOPLE  
BENEFITED

**Non-Injectable Arterial Connector (NIC)** – an arterial connecting system to reduce bacterial contamination and the accidental administration of medication

**36,000**  
NICS IN NWC

**SecurAcath** – a device to secure catheters for patients with a peripherally inserted central catheter

USED IN  
**— 14 —**  
NWC PROVIDERS

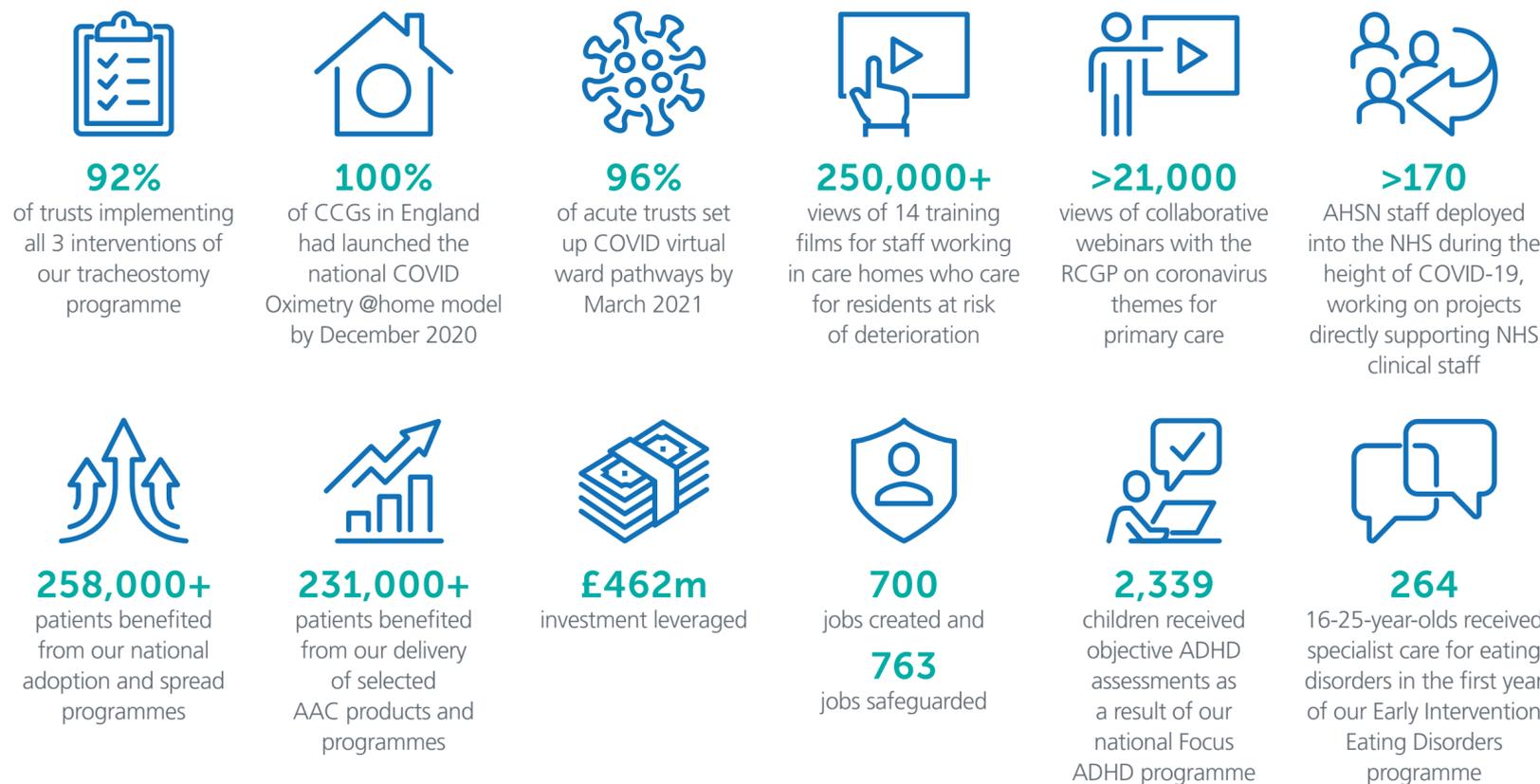
**£270**  
NHS SAVING  
PER USE

**Endocuff Vision** – a medical device which attaches to the distal end of an endoscope and improves colorectal examination for patients undergoing bowel cancer tests

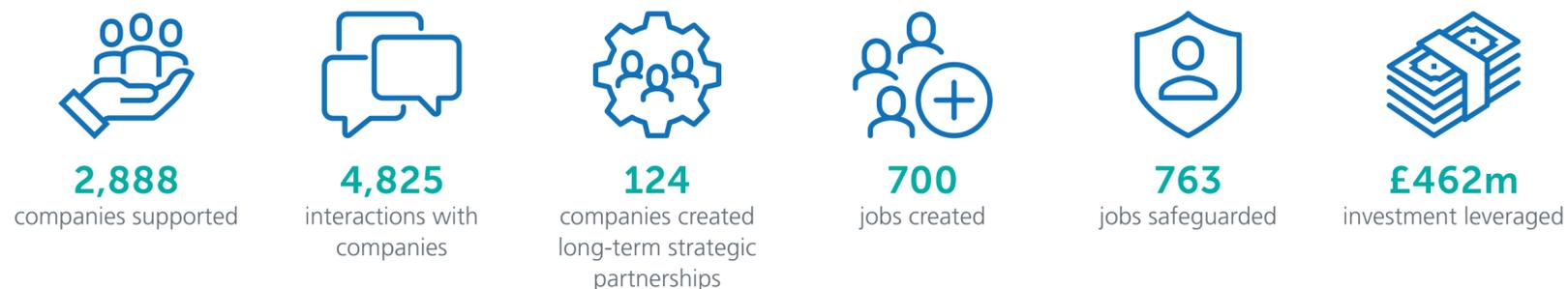
**10,300**  
ENDOCUFFS IN NWC

# IMPACTS OF NATIONAL PROGRAMMES

## AHSN NETWORK NATIONAL IMPACTS 20-21



## AHSN NETWORK INDUSTRY AND ECONOMIC GROWTH IMPACTS 20-21



# HEARTFLOW REDUCES COSTS, TIME AND ANXIETY

A system which produces 3D images of hearts from CT scans is saving time and money for the NHS and reducing anxiety and improving care for patients.

HeartFlow was first used in the UK by Liverpool Heart and Chest Hospital NHS Foundation Trust, after consultant cardiologist Dr Tim Fairbairn accepted an offer to use the system in a research study, in 2016.

Now, it is being used across the country and is expected to be used by 100,000 patients over three years. It is included in the MedTech Funding Mandate and has been one of the NHS Accelerated Access Collaborative Rapid Uptake Products.



**Tim said:** "By using HeartFlow we know we save money because we reduce the number of tests; and a quick diagnosis lessens anxiety for patients and puts them on the right path for treatment, quicker."

*It also means that we can treat more patients, reducing waiting time which is good for the hospital as well as the patients."*

## SECURACATH – IMPROVING PATIENT SAFETY AND EXPERIENCE

More than 100 NHS trusts in England have adopted SecurAcath, a device that secures central venous catheters without requiring sutures or adhesives, improving patient safety and experience.

Carol McCormick, Clinical Interventions Lead Nurse at the Clatterbridge Cancer Centre NHS Foundation Trust, was one of the first practitioners in the UK to adopt SecurAcath in 2012.

The trust went from 31 patients with PICCs (peripherally inserted central catheters) in 2007 to almost 1,500 in 2020.

Annual savings across the NHS in England from using SecurAcath are estimated to be a minimum of £4.2 million based on data reviewed by the NICE Advisory Committee.

*Carol said: “When we first considered SecurAcath, we undertook a trial with 30 patients using the device for six weeks to test the reliability of the line staying in the same place. For a line to be optimal and in the safest position it needs to stay in place, as close to the heart as possible without it migrating out bit by bit.*

*“Immediately we found that the lines weren’t being pulled out or migrating. As it sits at the skin edge and you know you aren’t going to pull the line out, our nurses were able to clean 360 degrees around the device, which contributed to the reduction of line infections.*

*“The cost savings are quite noticeable and come from reducing the need to replace lines and no longer needing to double-dress the area. The reliability and the impact this has had on patient care is the most important factor, which is why I’m such an advocate.”*



## NEW NATIONAL PROGRAMMES UNDER WAY

In 2020-21, we started to deliver our new national adoption and spread programmes, which are:

- Focus ADHD
- Early intervention eating disorders
- Lipid management and Familial Hypercholesterolaemia

We set up a collaboration with the Strategic Clinical Network to develop a mental health programme across the North West Coast.

This includes supporting mental health teams to speed up diagnosis and treatment of eating disorders in young people, using FREED – First Episode Rapid Early intervention for Eating Disorders, a model

developed by South London and Maudsley NHS FT and King’s College London and widely used in the AHSN Network.

We were successful in securing NHS England funding for a clinical champion for North West Boroughs Healthcare NHS FT, to implement FREED.

We are working with mental health trusts and community paediatric services to improve the assessment process for Attention Deficit Hyperactivity Disorder (ADHD), using an objective assessment tool, QbTest.

The number of sites adopting QbTest and the FREED programme during 20/21 has increased despite the

constraints of the pandemic and we have exceeded our patient benefit targets for use of QbTest.

Our System Partnerships Team is helping to integrate the national programme for ADHD into local ADHD pathway transformation work focused on adults and children transitioning into adult services.

Lipid management and Familial Hypercholesterolaemia is a national programme delivered as part of our North West Coast CVD workstream.

# FINANCE REPORT

THIS CHART SHOWS  
INCOME SOURCES  
FOR THE INNOVATION  
AGENCY IN 2020-2021.

**49%** NHS ENGLAND  
PROGRAMMES FUNDING £2,875K

**9%** NHSI PSC £490K

**15%** OFFICE FOR LIFE SCIENCES £894K

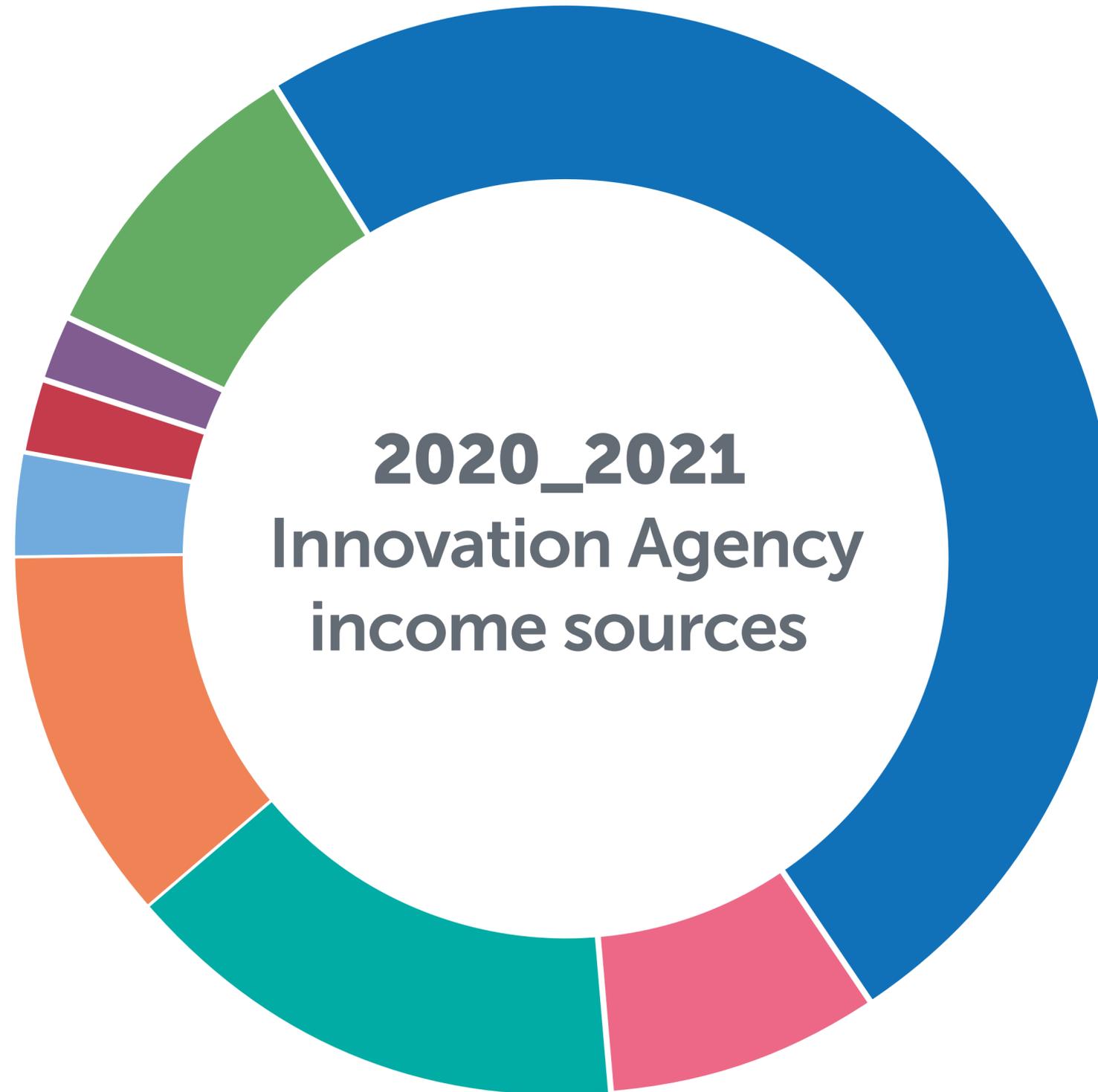
**11%** ERDF £676K

**3%** HEE £150K

**2%** TCAM £111K

**3%** EUROPEAN PARTNERS £147K

**9%** OTHER £543K





**INNOVATION AGENCY**  
Academic Health Science Network  
for the North West Coast

2020-2021

**ANNUAL  
REPORT**

# CONTACT US

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