Special Report

Transforming patient care with remote monitoring services

inhealthcare

Setting the scene

Remote monitoring is being supported at the highest level, with the prime minister announcing in the House of Commons the new health and social levy "will enable... new digital technology so doctors can monitor patients remotely in their homes".

The COVID-19 pandemic has accelerated digital transformation throughout the NHS with many heralding the pandemic as the start of a digital revolution in healthcare.

Since the outbreak, there has been a rapid rollout of digital services and some incredible examples of the way digital has transformed the delivery of care.

We all want to see patients treated as quickly but as safely as possible and as we move into the recovery phase, we have the opportunity to build on this progress and maximise the use of technology to support more people to better self-manage their health and care at home.

This needs to be done with increased urgency to address the challenges facing the NHS.

The What Good Looks Like guidance from NHSX sets out a common vision for good digital practice to empower frontline leaders to accelerate digital transformation in their organisations.

Digital services can enable NHS@Home to support patients with a range of conditions, including heart failure, COVID-19, respiratory illnesses and hypertension, in "virtual wards".

Virtual wards offer support to people in their own homes instead of in hospital. They aim to increase capacity in the NHS by reducing pressure on clinicians, reducing hospital admissions and freeing up beds, and reducing surgery time.

The Oximetry@Home service is an excellent example of a digitally supported virtual ward. The service allows COVID-19 patients to be looked after safely at home and only admitted to hospital when necessary. They can also support the safe and earlier discharge of patients from hospital enabling patients to be monitored until their treatment is complete.

Digital solutions can also accelerate elective recovery according to Tara Donnelly, chief digital officer at NHSX. As hospitals try to catch up with the backlog of more than five million patients waiting for treatment, she has called for 'virtual wards', to be further expanded for other conditions where patients would benefit.

In this special report, Inhealthcare sets out a number of ways in which its market-leading technology can help trusts and ICSs to deploy remote monitoring services to transform patient care by supporting patients at home and deliver on the objectives of NHS England and NHSX.

The Inhealthcare approach

By digitising pathways and automating processes, we drive efficiencies in health and social care. Remote monitoring services allow patients to monitor their vital signs at home and relay readings directly to a clinician which means they don't need to travel into a clinic.

Services co-designed with the NHS

The Oximetry@Home (O@H) service demonstrates the Inhealthcare approach in action. It highlights the power of collaboration and shows how patient care can be transformed in a short space of time, without compromising safety, with team work and targeted funding.

Working alongside Wessex AHSN and NHSX, Inhealthcare launched the service for confirmed or suspected COVID-19 patients across seven ICS areas in southern England in just two months. A rapid response to the crisis that was emerging in the NHS with hospitals being overrun by COVID-19 patients.

To date it has supported more than 6,000 patients.

Pre-pandemic, the majority of remote monitoring in the home was for long term conditions but the introduction of the Covid Oximetry@Home service has changed this. Increasingly, virtual wards are being expanded and used to monitor patients with other conditions, including hypertension and respiratory illnesses.

Developing services at speed

Working with the NHS, Inhealthcare has recently repurposed the O@H service, at speed, to launch a new remote monitoring service to support respiratory patients at home and identify any early signs of deterioration.

At the end of 2020, City Health Care Partnership, Hull, (CHCP) was tasked with supporting the rollout of lateral flow tests to help identify asymptomatic frontline workers from unknowingly spreading COVID-19. The service needed to be rolled out urgently due to the pace that COVID-19 was spreading in the community.

Discussions started between CHCP and Inhealthcare at the end of November with the view to launching the service as soon as possible. It launched three weeks later, meeting all government requirements.

These are fine examples of the Inhealthcare approach and how it is possible to act quickly and embrace new ways of thinking to meet the changing needs of the NHS.

"Working with Inhealthcare, we were able to launch our Lateral Flow Testing Service in just three weeks. We were really impressed by how fast Inhealthcare was able to respond to our needs. They managed to develop and roll out the service extremely quickly. Feedback on the service from our staff was very positive."

Lee Russell, Project manager, CHCP

Find out more at **www.inhealthcare.co.uk**

Making digital health accessible to everyone

At Inhealthcare we work hard to make our remote monitoring services as accessible as possible, meaning that people in the greatest need of healthcare can use our services, whatever their circumstances.

The digital divide is worse for those who are disadvantaged, according to the Parliamentary Office of Science and Technology. The proportion of adults who use the internet on a daily basis has fallen to 84 per cent among the disabled. People with an annual household income of £50,000 or more are 40 per cent more likely to be able to carry out basic digital tasks than those earning less than £17,499.

We offer NHS commissioners the full choice of communication channels for patients. These include email, an app and Amazon Alexa for the digitally savvy but also SMS text messages and automated phone calls for those without the digital skills or means. This means we can reach citizens without the internet as well as those without smartphones and those in rural locations.

"Inhealthcare's approach is to make digital health accessible to everybody. Nobody should be excluded from digital health because of the access they have to technology. Every individual should be provided with the opportunity to engage in digital health.

Our approach has been to provide patients with a choice about how they would like to interact with their healthcare professional, and to provide really simple, easy ways for individuals to access services without the need for a smartphone or even an internet connection."

Bryn Sage, Inhealthcare CEO

Enhancing the patient experience, increasing clinical capacity

Digital solutions should enhance services for patients and ensure they get the right care in the right place at the right time.

By enabling more care to be delivered outside of traditional settings, our digital pathways support NHS@Home and increase capacity in the NHS. They help to ease pressures on clinicians, ease waiting list pressures, and improve access to diagnostics and treatments.

Digital health is not about replacing staff but about providing them with the tools to make their day-to-day lives easier. Enabling patients and carers to input health readings at home can help to cut down paperwork, repetitive administration tasks and phone calls. It also reduces unnecessary face-to-face appointments and nurse's visits which not only saves time but also helps to reduce the risk of infection transmission.

Inhealthcare's digital health technology gives health and social care professionals the ability to remotely triage patients.

By identifying at an early stage who requires intervention, hospital admissions can be reduced. It also means that clinicians only intervene when necessary and have more time to focus on patients who need the most care.

Home monitoring enables patients to take a more active role in the management of their health, whilst remaining under the remote supervision of their care team. This increases their awareness and understanding of their condition and can help improve both their quality of life and health outcomes.

For care home residents digital technology can reduce hospital bed days by enabling care home staff to monitor residents and have the confidence the needs of residents will be met within the home.

"Self-testing makes life much easier for me. It gives me control. I can test myself at home, work and on holiday, and it has made me more able to enjoy my life, particularly on holiday. It has also helped me become more aware of my diet. My time spent in ideal therapeutic range has increased dramatically. Although there is less face-to-face contact with clinicians, I am in regular contact with them and sometimes think they know me better than I know myself!"

Steve Clarke, warfarin patient

Get in touch at **contact@inhealthcare.co.uk** or call **01423 510 520**

The real-world impact of remote monitoring

Oximetry@Home

Our Oximetry@Home service demonstrates how remote monitoring solutions make care available to the right people at the right time to improve patient outcomes and reduce the burden on frontline staff.

Patients use a pulse oximeter to monitor their oxygen saturation levels and report these readings on a regular basis to healthcare teams.

They have a choice of communication channels to submit their readings, making the service fully inclusive. If patients would prefer to speak with another person on the telephone, staff can input readings manually. Patients receive relevant health advice after submitting readings.

Clinicians can see at a glance who is in need of help. Staff view patient readings on a web-based dashboard and can see who might need intervention, supervision, support or has not submitted their reports.

Alerts are generated if readings fall out of range. Readings are stored safely and securely within NHS-approved cloud storage providers and are accessible only to relevant staff.

Patient records are updated via integration with the EMIS Web and SystmOne GP systems.

Inhealthcare provides data and analytics for clinicians, illustrating the number of patients on the service and their progress through the pathway.

Research shared by Dr Matt Inada-Kim, national clinical director for deterioration at NHS England, shows the service "considerably improved patient outcomes" by reducing mortality, length of hospital stay, intensive care admissions and re-admissions.

Hospital length of stay was reduced by an average of **6.3** days for COVID Oximetry@Home (CO@H) patients in comparison to non-CO@H patients.

Only **3.6%** of CO@H patients were admitted to ICU compared with **8.2%** for non-CO@H, and **5.8%** of CO@H patients died within within 30 days compared to **20.5%** of non-CO@H patients.

" Having the ability to view all of our COVID-19 patients on a single dashboard has meant patients are safer, they are receiving the right care at the right time and the burden on our clinical teams has reduced; physically and emotionally. We know our patients are receiving optimum remote care 24/7."

Sarah Kearney - Lead Respiratory Clinical Nurse Specialist & Covid Lead, Isle of Wight NHS Trust

BP@Home

In England, there are over eight million people diagnosed with hypertension. Home blood pressure monitoring has been identified as a priority for cardiovascular disease management as the NHS recovers from the COVID-19 pandemic.

Our Blood Pressure @home (BP@Home) monitoring service enables patients with hypertension to measure and share their blood pressure readings with their GP from their home, reducing the need to attend GP appointments.

A local trial with Surrey Heartlands Clinical Commissioning Group found that the remote monitoring BP@Home digital service helped 60 per cent of users move from high to low threshold blood pressure within five months.

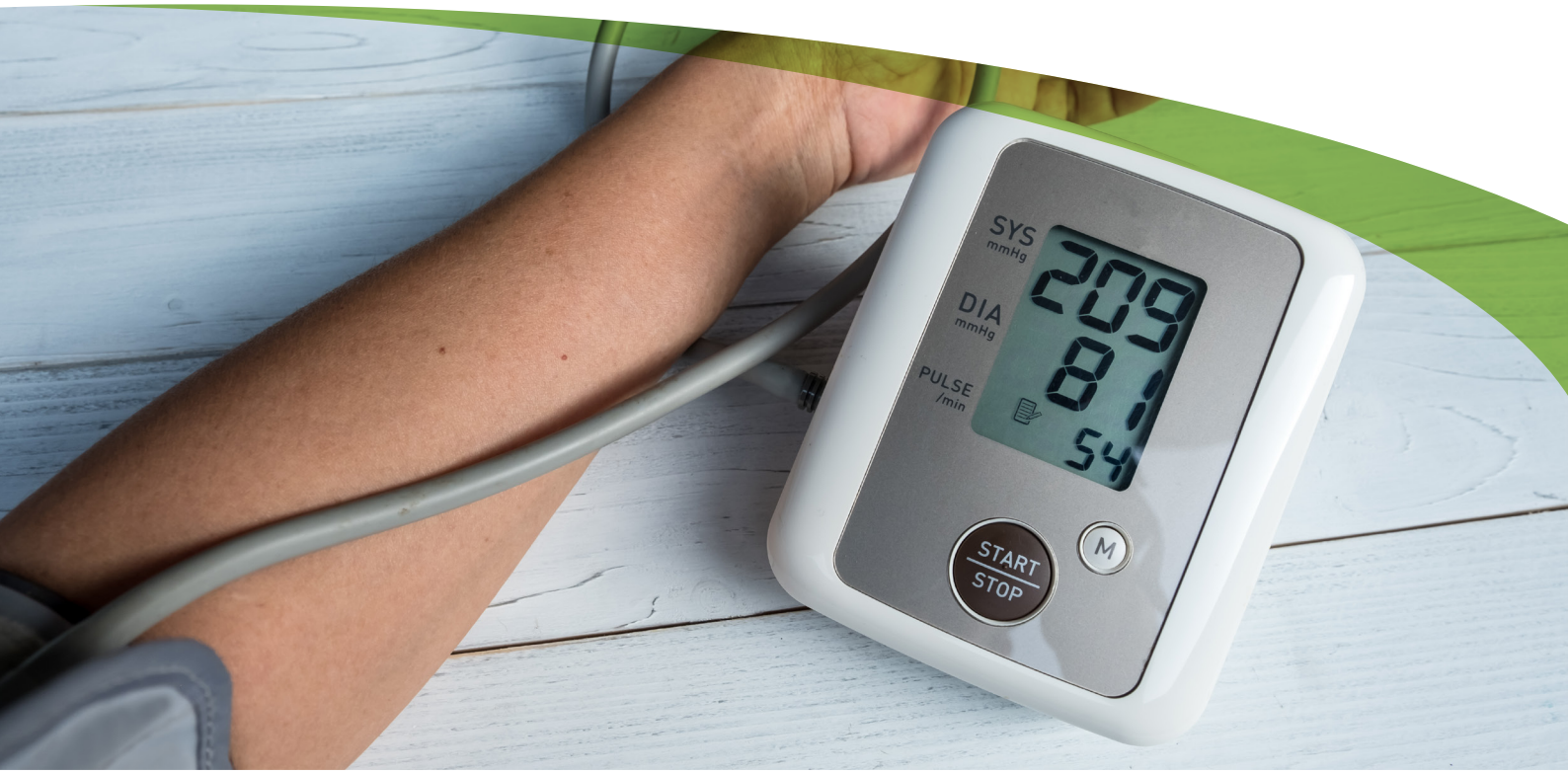
Inhealthcare has now helped the CCG to roll out the service for NHS patients to manage high blood pressure at home and reduce emergency hospital attendances and admissions.

The patient uses a blood pressure device and, using a choice of communication channels, relays the readings back to the clinician. If readings breach personalised thresholds, clinicians are notified and can step in as necessary with medical intervention.

There is a substantial evidence base supporting the use of home blood pressure monitoring.

It has been shown to:

- give a better reflection of blood pressure. Studies have suggested that 'white coat syndrome' is real, showing blood pressure measurements taken by a doctor are fifty per cent less accurate than when taken at home.
- allow patients to monitor their condition on an on-going, long-term basis rather than as a "one-off"
- reduce the incidence of clinical events such as death, heart attack or stroke, over five years, According to the NHS@Home website, regular home blood pressure monitoring across a population of 50,000 patients could prevent up to 500 heart attacks and 745 strokes over five years.
- save GP time by shifting care from doctors to other members of the multidisciplinary team
- be cost effective.



Heart failure

Our self-testing service for patients who have recently experienced heart failure improves quality of life for patients, and frees up hospital beds and surgery time.

Patients are monitored to ensure their vital signs are within safe range. The service can also be used for patients who have chronic obstructive pulmonary disease.

Norfolk Community Health and Care NHS Trust deployed the Inhealthcare Heart Failure monitoring pathway and its outcomes demonstrate how it can support the NHS:

- **88%** reduction in bed days
- **89%** reduction in A&E admissions
- **65%** reduction in GP visits
- **45%** reduction in Out of Hours appointments

The analysis also showed a similar trend for patients who stayed on the normal service, suggesting that nurses were able to spend more time with patients who needed care the most.

" We have the automated call every day at 11am and I provide readings for weight, blood pressure, oxygen saturation and pulse.

It provides great peace if mind and lots of people say how well I seem.

Some people might be afraid of trying out new technology, but I try to advise them how good it is."

Tony Robinson, 83, patient

About Inhealthcare

Inhealthcare is a UK market leader in digital health and remote patient monitoring.

More than 20 million people across the UK can now access technologies developed by the company in partnership with the NHS.

The underlying technology platform and its associated patient and clinician-facing applications are registered with the MHRA as a Medical Device.

Inhealthcare has integrated the platform with NHS login, making it even quicker and easier for patients to use its digital health services.

Inhealthcare is based in Harrogate, North Yorkshire and is led by CEO, Bryn Sage (Pictured right).

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