

The AHSN Network

THE INNOVATORS

Transforming lives through healthcare innovation



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On creating a seamless pipeline for innovation in the NHS

LEARNING FROM EXPERIENCE:

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Foreword

Since 2013, England's 15 AHSNs have been tasked with spreading healthcare innovation across the NHS at pace and scale. This has stepped up a gear in the last year as the AHSN Network embraces a challenge unheard of anywhere else in the world — to drive a whole portfolio of national adoption and spread programmes in collaboration with every regional health and care system in the country.

The complexity of this challenge should not be underestimated, which is why I am delighted to introduce this latest AHSN Network publication, detailing some of

the impacts already beginning to emerge. Within the last year alone, the AHSNs supported over 2,500 companies with over 3,000 healthcare innovations. Not only does this benefit patients and our health system, but it also supports the economic growth of the country, particularly through the creation of nearly 700 jobs and an impressive £152 million investment leveraged into AHSN geographies.

As you'll read in the main feature, the AHSNs are gathering valuable insight and intelligence on how to gain traction and get what works across the system. This can be seen in their engagement with primary care: over 600 GP practices are working with AHSNs

to reduce prescribing errors, while over 2,000 have joined their AF programme to improve medication for those with atrial fibrillation and at risk of stroke. It's a similar picture with acute trusts, where 62% have now adopted the Emergency Laparotomy pathway and 78% of maternity trusts have implemented PRECePT to reduce cerebral palsy in preterm births.

The AHSNs play an important role in the NHS innovation landscape and I hope this publication leaves you feeling as optimistic as I am about the ability of innovation to transform health and care ■

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The AHSN Network: delivering regional and national platforms for transformation of care

Dr Séamus O'Neill, Chair of the AHSN Network

The 15 AHSNs cover the whole of England. Individually, we serve the regions and care systems within which we work, while collectively we ensure that transformative innovations become available as widely as possible, as quickly as possible. Our work drives improvements in quality of care and supports economic growth through our support for evaluation, adoption and spread of innovation.

Each AHSN has a mandate from the health, care and academic organisations within its region. This allows us to act as effective change agents locally and to horizon scan on behalf of our member organisations for innovations that address their varied needs.

The licence we have and the commissions we receive from our three central funders (NHS England, NHS Improvement and the Office for Life Sciences) allow us to support transformation within our regions and to collaborate on the national stage to identify and share best practice between AHSNs.



The innovations we support could be categorised in any number of ways. Some come from within the NHS or social care; some are products or services from industry. They could be medical devices, service improvements or digital technologies.

What is common across all the innovations we support is the objective to improve quality of care, whether through better health outcomes for individuals, safer care and fewer incidences of harm, or improved efficiency within the system.

The value of AHSN support and brokering to companies is evident in the products and services we help them develop, which then go on to contribute to health system improvements. It is also apparent through the economic growth derived from the jobs these companies create and the investment they leverage through access to NHS expertise and the ability to co-create and evaluate innovations within the NHS and social care.

While it is clear that we work within a highly complex system, we are fortunate as the AHSN Network in that we have unparalleled access to change leaders and innovations from multiple sources. This has an amplifying effect:

- As trusted agents within our local health communities, we can help establish the conditions conducive to innovation and its adoption. We can also mobilise key opinion leaders and networks of change agents across health, social care and academia in support of our work.
- Innovation, insight and skills from industry are a crucial resource for the care system as it seeks to transform, particularly in the digital space.
- In that transformation we must maintain quality of outcomes and safety and the AHSNs are able to broker the partnerships and relationships necessary to achieve this balance.

The backing of our regions for our role as trusted brokers within the system means that AHSNs can harness the power of the NHS, academia and industry within a national network of peers and a portfolio of programmes for transformation. And while we collaborate in this way, we are also constantly discovering and learning

together about our capabilities and potential as a network.

But the real magic happens when there is local pull for innovation resulting from a real and clearly identified need in the system and we work together, bringing all those with a part to play in the innovation agenda, from within the NHS, from industry and from academia, creating partnerships to find, evaluate and deploy solutions to meet that need.

We have found that addressing the quality and safety requirements of our complex, continuously changing system can only be done effectively by acknowledging that:

- Change is complex and has both regional and national dimensions.
- The change agents and networks within the system are the same people, whether the lens we use is outcomes, safety, efficiency or any other measure of quality.
- We need to get a lot better in the NHS and social care at system change and much more astute about the learning that goes with it.

We are proud of what we are achieving across our three commissions: running England's 15 Patient Safety Collaboratives; delivering national programmes to improve health outcomes and system efficiencies; and working with industry to support economic growth.

And due to our unique relationship with all the agents and beneficiaries of transformative innovation, these three commissions are mutually reinforcing each other, each stronger and more effective because of the mandate we have from our regions coupled with our commitment to collaborate nationally ■

“
As trusted agents within our local health communities, we can help establish the conditions conducive to innovation and its adoption
”



The Interview

Dr Sam Roberts

Dr Sam Roberts is NHS Director of Innovation and Life Sciences. In May 2019, Sam was announced as Chief Executive of the expanded Accelerated Access Collaborative (AAC).

Richard Stubbs, Chief Executive of the Yorkshire and Humber AHSN, caught up with Sam to find out more about the boosted role for the AAC and her vision for health innovation.

Visit www.ahsnetwork.com to read the full version of this interview.



Richard: These are exciting times for healthcare innovation. Why do you think the NHS has found it difficult to spread good innovation to date?

Sam: There are many reasons. Sometimes the funding doesn't follow the innovation, disincentivizing trusts and commissioners to adopt. And in the past it wasn't anyone's core job to identify good innovation and support its spread. That's now the AHSNs' role.

Also you can't change practice overnight. Adopting a new innovation might require changes in job roles, procurement or clinical settings. This is all hard to do and requires time and effort from clinicians and managers.

Our collective job, as we develop our innovation policies and funding for initiatives, is to eliminate those barriers one by one.

Richard: You were heavily involved in developing the NHS Long Term Plan. Are you optimistic that we can deliver everything in there around research and innovation?

Sam: I'm 100% optimistic. Last year we worked closely with the Office for Life Sciences, NICE, the AHSN Network and others to develop a common understanding of what works in the innovation landscape and what doesn't, what needs to be brought together, what needs to be bolstered. So we already had pretty detailed thinking and plans behind each of the commitments in the Long Term Plan before it was published.

Will everything have the intended consequences we anticipated? Almost certainly not and we will learn as we go, but I see it as a starting point, the bare minimum to be delivered.

Richard: You've been working with the AHSNs for the last year or so. How do you see us fitting into the wider innovation landscape?

Sam: AHSNs are a crucial part of the innovation landscape; they're the core arterial system for spreading innovation across the NHS.

With regional roots and national connections, AHSNs are uniquely positioned. They work closely with local clinicians and managers to understand their needs, make them aware of the innovations available, and support the pathway changes that are often required.

I love working with the AHSNs as they're great partners. They're challenging about what they need the policy environment to deliver, and we're challenging in return about what we need the AHSNs to deliver.

Very few countries have such a resource. We're extremely fortunate to have such a vocal and influential network with strong, local roots that can influence us centrally at NHS England. It's this dialogue between national and local that is proving so important — the grease in the wheels to achieve spread of innovation.

Richard: Where would you say this dialogue is having most impact?

Sam: The Innovation and Technology Payment (ITP) programme is a good example. Centrally we selected a number of products for spread nationally, and the AHSNs recommended various ways to improve the process, such as having a common level of evidence when selecting innovations. So with the second ITP we coalesced around the NICE MedTech or diagnostic guidance.

“
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Another example has been the seven national adoption and spread programmes commissioned by NHS England. AHSNs collectively reviewed their regional programmes and came to us with the ones that have been most successful and with most potential for national spread. They were able to articulate the proportion of the population set to benefit, as well as the clinical outcomes and cost savings. Then together the AHSNs and NHS England were able to agree them.

By working in partnership like this we can do certain things centrally and implement locally, or in other cases generate locally, fund centrally and go back and implement locally across the country.

Richard: As a healthcare system, do you think we could do more to promote innovation when it comes to the development of our staff?

Sam: Absolutely, and we're already working on that in a couple of areas. Firstly there's the Health Education England implementation of the recommendations from the Topol Review. →



And secondly, there's a lot of work starting in NHS England and Improvement under Hugh McCaughey on a single improvement offer to the system. For me there's not a million miles of difference between quality improvement and adoption of innovation. Yes, you need to do some things slightly differently; you probably need to do more horizon scanning or get involved in procurement, but a lot of the stuff around models for improvement is 100% the same.

I think there are great opportunities to weave quality improvement into innovation spread and adoption at every level – from ward to Board, as they say.

Richard: Would you agree that mainstreaming innovation into policy thinking or frontline senior leadership is a difficult task?

Sam: It can be, but for good reason: innovation isn't an end in itself. It's there to serve a purpose, answer a clinical need or generate system efficiencies. We're trying to become more demand-led when it comes to innovation. We're doing lots of work with the AHSN Network

Sam Roberts speaking at the ABPI conference in May 2019 on 'how the NHS will embrace innovation to benefit patients in the NHS Long Term Plan'

“ Innovation isn't an end in itself. We're trying to become more demand-led ”

to understand the problems that leaders of systems face that they don't have answers for and where research or innovation might help.

This is why I'm excited about the next wave of AHSN national programmes. The starting point is defining the problem we're trying to solve, whether that's about mental health or cardiovascular disease, for which the AHSNs have a basket of innovations that may help.

Richard: So let's talk about the boosted Accelerated Access Collaborative. Congratulations on your new role as chief executive.

Sam: I'm absolutely delighted to take on this role. The AAC is the umbrella organisation for innovation in health across the nation. We're led by Lord Darzi and have all the key players on the Board — the ABPI, ABHI, NICE, MHRA, AHSNs, NIHR, NHS England and Improvement, National Voices and the AMRC — so not only the big funders but also the big policy makers of innovation. It's very exciting to have that level of coordination and leadership.

We're creating a delivery unit to support the boosted AAC that's housed in NHS England and NHS Improvement that will be the engine room for delivering a common innovation agenda across all of those partners, but particularly the commitments around innovation we laid out in the NHS Long Term Plan, the government's Life Sciences Sector Deal 2 and the Health Secretary's Tech Vision.

Richard: As well as a place on the Board, how do you see the AHSNs supporting the AAC?

Sam: The primary focus of AHSNs will continue to be spreading innovation and supporting innovators through the pipeline, in

particular providing a consistency of service across the nation. These are two of the key functions of the AAC.

But really the AHSNs' support will weave through all aspects of the AAC. AHSNs are part of the AAC's single horizon scanning function, where we'll work with AHSNs to integrate the intelligence you gather through your Innovation Exchanges.

With demand signalling AHSNs have already been absolutely crucial in identifying the needs of the service and are now working even more closely with leaders and managers to identify what problems they want to solve. Then there's the real-world testing — AHSNs are already supporting many real-world validations.

Richard: Where do you see the innovation ecosystem in the NHS in say five years' time?

Sam: I'll paint you a picture of my ideal world. If you're a clinician, a manager, a system leader, one of

“ The relatively opaque, acronym-heavy innovation landscape that we have now would be a distant memory compared to a new seamless pipeline ”

the first questions you ask when you've got a problem will be, is there an innovative way of doing this? So today the first questions might be — what's the workforce challenge, what's the finance challenge. In future I'd love the next question to be, have I thought of different ways of doing this?

Secondly there will be capacity in the system to adopt the best things, building on the long tradition in healthcare of continually regenerating itself. Adoption of innovation is just part of that.

That's how I'd love it to feel within the system. Innovation helps you solve problems and it's just another part of your clinical and managerial practice.

Then if I was an innovator, I'd want it to be crystal clear what is needed of me. The rules of the game are so transparent, I'd know early if my innovation was set to fail, but should my innovation be successful in moving from prototype to multisite testing to national commissioning, then I'd know exactly what support was going to be offered, what evidence was needed, and how to reach a commercial agreement.

The relatively opaque, acronym-heavy innovation landscape that we have now would be a distant memory compared to a new, seamless pipeline.

And finally I'd love for patients and the public to be involved, not in a tokenistic way, but as the ultimate experts in their conditions, telling us the problems they need innovations to address and helping us prioritise which innovations we actively support along the development pipeline. This for me should be the ultimate pull for innovation ■



Survey reveals NHS research and innovation priorities

The findings from a major survey to identify local NHS innovation and research needs were published by the AHSN Network in May 2019.

The views of local health stakeholders, including clinical leaders, managers and directors, within each AHSN region were collected through qualitative interviews with 61 people and a questionnaire which received more than 250 responses in total. The report outlines the national findings from the survey with local health and social care stakeholders. It includes a detailed analysis of the innovation and research needs at local level across all AHSNs.

Whilst there were some differences in regional priorities, common themes emerged

which reflected wider challenges facing the NHS and align with the priorities of the NHS Long Term Plan. These include:

- a need for innovation and research addressing workforce challenges
- delivery of mental health services and providing care for patients with mental health needs, particularly in children and young people
- integrating services to provide effective care for patients with complex needs, including multimorbidity and frailty.

Professor Gary Ford, Chief Executive of Oxford AHSN, led the AHSNs' input into the survey. "The survey provides important information on the research and innovation needs of the NHS, which will shape future work of AHSNs and the research community," explains Gary.

The survey was commissioned by the AHSN Network, in partnership with NHS England and the National Institute for Health Research, to support the publication of a statement of local NHS research and innovation needs for each AHSN region — as one of the actions in the NHS England and NIHR joint paper on '12 actions to support research in the NHS'.

Further regional discussions are now taking place, involving patients, the wider public and the research community, to refine the priorities identified. This consultation will lead to each AHSN region publishing a statement of local innovation and research needs.

The survey was conducted by ComRes, an independent research agency ■

Read the full report at www.bit.ly/nhs-research-needs

Jimmy Endicott, ChatHealth

ChatHealth is a safe, secure messaging service that puts young people and the parents and carers of babies, children and young people directly in touch with healthcare professionals. First developed by school nurses at Leicestershire Partnership NHS Trust (LPT), and later adopted by health visitors, ChatHealth supports greater efficiencies by enabling nurses to provide services to more people.

NIA Fellow



Traditional ways of accessing healthcare can be stigmatised and often inconsistently available. With an 11% vacancy rate in mental health clinical posts, there are not nearly enough qualified staff to go around.

Evidence shows that young people sometimes feel more comfortable and confident relaying sensitive issues via mobile technology rather than face-to-face with a healthcare professional whilst busy parents and carers value its convenience.

Using a technology familiar to millennials, ChatHealth is a cost-effective solution that provides confidential, timely access to healthcare. People needing health advice don't need to wait to visit a nurse. The service is anonymous meaning it reaches out to often seldom-heard groups. For example, research shows that young males are twice more likely to request help by sending a message rather than attending clinic.

ChatHealth is now currently available to nearly two million young people across 40 healthcare teams in the Midlands, London, Home Counties, East of England, South Coast, South West, West Country, North West, Greater Manchester, North East and Yorkshire.

Furthermore, over the last three years, health visiting teams that support new parents have adopted ChatHealth, resulting in more convenient access to support the parents/carers of around 80,000 newborns every year.

My local AHSN has been instrumental in developing and spreading the service nationally. They supported ChatHealth by providing advice and assistance with areas such as intellectual property, marketing and commercial development, as well as sitting on our board.

As the NHS Digital Innovation Team Project Lead at LPT, I have led on the development of ChatHealth. Now with the support of the NHS Innovation Accelerator, the aim is for ChatHealth to achieve greater spread across the NHS and reach more parents/carers and young people.

Innovation is not always about breaking new scientific or medical ground. There is a lot of innovation already within the NHS that comes from simple ideas that have been very well executed.

I'd say the key to successful innovation is about being tenacious, so keep going and seek support or mentorship to help develop your ideas, whether within your own organisation or externally from organisations such as the AHSNs ■

@ChatHealthNHS
www.nhs.uk/apps-library/chathealth

Liz Ashall Payne, ORCHA

After my early years as a speech and language therapist, I have led a range of transformation projects across the NHS, including more recently across the digital health agenda.

Within the digital space, I saw that 93% of health professionals think that digital health provides some of the greatest opportunity to enhance NHS services.

But I also saw three major problems. Firstly, finding the right, effective app. With over 325,000 available health apps in app stores, how can you find the best in such a crowded space? Secondly, trust: how do you know if an app is safe to use and will not mistreat your data? Thirdly, integrating it into care. How can apps work alongside other services you use?

That is why I formed ORCHA.

ORCHA transforms the way in which health apps are reviewed. We test more apps than anyone, helping us to cover more conditions and be on top of new app releases. To date, we have reviewed and evaluated almost 5,000 apps using criteria set out by regulatory bodies across the world.

Furthermore, we are proud to host the world's only library that lets you find and compare health apps against a range of criteria including effectiveness, usability and security. This helps



NIA Fellow

professionals and patients find and recommend apps with confidence. To drive uptake of health apps and target specific communities, we provide locally branded and tailored microsites. Furthermore, our tools enable health professionals to prescribe and monitor usage of evaluated health apps, which is proven to increase take-up and self-management of conditions.

ORCHA's mission is to enable digital health, but this brings challenges. Introducing apps into healthcare pathways requires significant change and thus education; ultimately a shift in attitude and behaviour is needed.

That is where the AHSN Network and NHS Innovation Accelerator have proved invaluable. They have consistently identified and introduced ORCHA to suitable early adopter sites that have proved pivotal to our success.

For example, Lancashire Care NHS Foundation Trust provides an eating disorder service that hadn't consistently used digital solutions, but now finds and prescribes health apps using ORCHA to supplement and enhance therapy.

We now work with 20% of NHS organisations, achieving a 71% activation rate amongst patients. 200,000 consumers have signed up to our service.

So, to fellow innovators, I would say stay close to your market and work with the AHSNs to listen to the specific needs of healthcare professionals and your service users. They'll ensure your product meets real needs. Additionally, take their advice on which organisations will most benefit from your product and explore introductions ■

[@ORCHAUK](https://twitter.com/ORCHAUK)
www.orcha.co.uk



ESCAPE-pain Regaining my independence

I'm Regina Yillah and I'm 76. Before ESCAPE-pain my osteoarthritis was very bad, and I had suffered from it for over ten years.

I was in a bad place. I was in a wheelchair to start with and I couldn't walk; a journey that should take five minutes, would take me 30 minutes. The furthest I ever went was to church and going to church I had to have a carer because I didn't have the confidence to go on my own.

The pain moved gradually from my heel to my knee to my hip and now it's in my back, but now I can move more.

ESCAPE-pain has really given me my independence back, and more than anything else it has given me my confidence. It came to a point where I wouldn't dare to cross the traffic lights, and my daughter would have to drive me everywhere, because I was so scared.

Of course, getting on a bus — that was way beyond me. Now, I get on the bus on my own!

They make you feel comfortable even before you go into the class, and once you are there you meet other people who are like you, and you know that you are all in this together and that is what works more than anything else.

You learn something new every day and you go at your own pace, that's the important thing. Nobody's pushing you and nobody is holding you back.

If it's in a hospital it's like you're ill, it's something to do with getting you clinically well. But ESCAPE-pain is just like rehabilitation, getting you used to being you again.

Now, I go to gym classes, I go to ESCAPE-pain, I go to Zumba (it's a dance class), and I go to yoga.

I have made loads of friends at ESCAPE-pain, and I even go shopping with some of them.

I would recommend ESCAPE-pain because it makes you be yourself. I would recommend it to anybody, no matter what your state at the moment is! ■

● ESCAPE-pain is one of the AHSN Network's seven national adoption and spread programmes during 2018–2020.

It is a rehabilitation programme for people with chronic joint pain of the knees and/or hips, that integrates educational self-management and coping strategies with an exercise regimen individualised for each participant. It helps people understand their condition, teaches them simple things they can help themselves with, and takes them through a progressive exercise programme so they learn how to cope with pain better.

[@escape_pain](https://twitter.com/escape_pain)
www.escape-pain.org

Learning from experience: how to spread healthcare innovation

By Louise Witts and Vanesther Rees



Spreeding proven innovation across the health system is challenging. Fact. There's no shortage of commentary on the subject. In recent years we've seen a number of insightful reports published, most notably by the Nuffield Trust, King's Fund, NHS Innovation Accelerator and Health Foundation.

"There is no simple or universally replicable way of implementing change at scale in a complex system," wrote Trisha Greenhalgh and Chrysanthi Papoutsis in their paper for the BMJ in May 2019. "A technology or pathway that works smoothly in setting A will operate awkwardly (or not at all) in setting B."

In the first year of its new licence, the AHSN Network has been attempting something of a first in the NHS; the coordinated and systematic spread of a portfolio of innovation programmes and products on a national level.

A year into this 'experiment', what lessons are emerging? Which approaches are working (and which aren't), how do we get all the right people on board, and what can we learn from failure?

The first thing to acknowledge is the varying levels of complexity in spreading different innovations, from embedding a single device into a single pathway through to more complicated interventions or changes to ways of working that require a strategic, multi-agency, inter-pathway approach.

The Health Foundation's 2018 report, *The Spread Challenge*, demonstrates how complexity increases rapidly as more components and interactions become necessary for an innovation to succeed.

Given this complexity, it's perhaps not surprising that no single model for the successful adoption and spread of innovation has emerged.



Dr Amanda Begley, Director of the NHS Innovation Accelerator

Adoption is not a straight road

From initial awareness of an innovation through to it being sustainably implemented, the adoption journey tends to be iterative.

"Think of it like a lock and key," explains Dr Amanda Begley, Director of the NHS Innovation Accelerator, an NHS England initiative delivered in partnership with the AHSNs, which supports the uptake and spread of high impact health innovation. →

“The innovation starts out as an uncut key which becomes embedded over time in the lock through a process of mutual shaping, negotiation and adaptation. The lock refers to the unique organisational context of the site adopting the innovation.”

Each lock (or context) may be slightly different and require the key (or innovation) to be adapted. But that’s not all, as Amanda continues.

“Push and pull factors play an important role at various points within the adoption journey. Push factors relate to the innovator and innovation, such as adaptability, availability to support the NHS site, flexibility of training offered to staff. Pull factors relate to the adopter site: recognising a need, awareness of the innovation, or having key individuals motivated to drive improvements.”

Professor Mike Hurley (NIA Fellow), the founder of ESCAPE-pain, a group rehabilitation scheme for people with knee and hip osteoarthritis and one of the AHSN Network’s national adoption and spread programmes, agrees.

“It’s certainly not linear — it’s a much more tortuous, winding route. There isn’t a recipe book that says, ‘If you do this you’ll get that. Do this, then that, this will happen and then you do this.’ Everything is contextual, and you have to be very adaptable and nimble.”

So while there’s no recipe book, we’ve spoken to people from across the AHSN Network, along with innovators, clinical leaders and large-scale change experts to get their practical insights into some of the individual ingredients that might help create a recipe for adoption and spread success.



Faye Edwards, AHSN Network National Programme Manager for Atrial Fibrillation

Context is king

Faye Edwards is the national programme manager for the AHSN Network’s work to improve care outcomes for people with atrial fibrillation (AF), the most common type of irregular heart rhythm, which puts them at risk of stroke.

“As part of our work to improve detection of AF, we’ve been supporting increased use of technology, explains Faye. “I quickly realised that for sustainable adoption at scale, I’d need to reassure frontline staff who’d be using the technology and consider the many ways the innovation might fit into primary and community care settings.”

“Understanding the local context was vital, along with providing guidance on how to fit the innovation into different ways of working.”

According to Faye, the importance of managing concerns and providing assurance to staff when introducing new technology shouldn’t be underestimated.

“Associated changes to workflow and personnel can create huge resistance and must be considered,” says Faye. “Clear communication, expectation setting and listening to feedback is essential, especially for those who feel anxious about their current role.”

Innovators are also aware of this need to factor in the local context.

Melissa Morris is an NHS Innovation Accelerator fellow and chief executive of Lantum, a cloud-based tool to help NHS providers build virtual clinical staff banks and fill empty shifts in rotas.

“As an innovator in the NHS, you must be open to changing your process,” says Melissa. “It is tempting sometimes to think you have cracked it, that you have the process of adoption all sorted, but the NHS is so diverse and there’s not a ‘one size fits all’ approach.”

“Each NHS organisation has different stakeholders, different histories, different politics, different patient populations and different priorities. It is therefore important to be flexible to feedback and adapt your approach.”

Working with patients and the public to genuinely understand local context is a powerful approach to help ensure both the innovation itself and the plan for spread will work in a real-world setting.

Many AHSNs have established patient and public senates or panels, often providing training in areas such as quality



Melissa Morris, Chief Executive of Lantum (NIA Fellow)

improvement (QI), to work alongside health and care professionals, innovators and AHSN teams to improve innovation development and spread.

“There is nothing quite like contributing to those ‘lightbulb’ moments when innovators and researchers, working in true partnership with patients and carers, suddenly see their proposals in a whole new light and start to plan changes as a result, says patient and carer Annette Swinkels, member of the QI Patient Panel in the South West.

“I feel truly privileged to be working with such inspirational, decent and remarkable people; fellow panellists with a wealth of experience as patients and carers and hard-working dedicated professionals, all focused on trying to make a positive difference.”

Clinical leadership and champions

Karen Luyt also cites clinical leadership as an essential element of the PReCePT model when it was first piloted, and which continues to be at the heart of the national rollout.

“Having a network of clinical champions across all 152 maternity units and 15 regions has been a vital factor in the successful spread and adoption of PReCePT across England,” explains Karen.

Investing in clinical leaders and giving them headspace to innovate is key.

“We’ve found this approach ensures we can communicate consistent messages swiftly and accurately,” explains Karen, “while helping us to establish an energised perinatal QI community with a real sense of belonging to and driving a national movement.”

Dr Sarah Rodgers is Principal Research Fellow at the University of Nottingham. She agrees that getting the right champions involved has been incredibly important for the wider rollout of PInCER, a national AHSN programme to reduce medication errors.

“We’ve put a lot of effort into working with people like heads of medicines management in the individual CCGs to bring them on board, recalls Sarah. “They then played a key role in acting as our champions going forward.”

She also points out that academic leadership can be as important as leadership within the system: “During our evaluation, people told us they trusted PInCER because of the academic team who led the study.”

Proactively searching out champions is an approach taken by the DigitalHealth.London →

What’s the evidence?

Although insufficient on its own, credible evidence is critical.

“The level of evidence needed depends on, for example, how the innovation is to be used, its cost, its theory of change, the extent of its promise, and so on,” says Amanda Begley of the NHS Innovation Accelerator. “Evidence can reduce risk for the user by answering pertinent questions on safety, clinical effectiveness, patient or user-centredness, timeliness, efficiency, equitability.

“However, evidence gaps aren’t always a reason not to use an innovation. Many NHS sites choose to participate in strengthening the evidence base if they see the value of an innovation, and can manage any risks to its use.”

This real-world validation is a critical step in building the will for people to adopt innovation. This year alone, the AHSN Network has supported 139 local real-world validations.

That’s borne out in the story of PReCePT, one of the seven national programmes funded by NHS England and delivered by the 15 AHSNs, who are working with all maternity hospitals to increase the use of magnesium sulphate to help prevent cerebral palsy in very premature births.

Dr Karen Luyt is a neonatologist from University Hospitals Bristol and clinical lead for the PReCePT programme.

Karen points to strong clinical evidence as the starting point for PReCePT, but warns that evidence

on its own doesn’t automatically mean an innovation gets adopted.

“NICE guidelines in 2015 recommended administration of magnesium sulphate in very preterm deliveries as a core part of maternity care to substantially reduce the risk of cerebral palsy by 30%,” says Karen. “However I was frustrated that the uptake of the drug in the UK remained relatively low compared with the rest of the developed world.

“We were able to shine a spotlight on this evidence through the rollout of PReCePT, which has gone a long way to support engagement and buy-in. People’s response is always that it’s ‘a no brainer’; all the evidence shows this clinical pathway should be standard in every unit. Our programme is essentially accelerating the adoption of this best practice.”

Accelerator, a partnership including the three London AHSNs.

“We’ve found that what sets NHS organisations that embrace and partner with innovators apart from those who don’t, or can’t, are champions,” says Programme Director, Jenny Thomas.

“These NHS staff members are passionate about addressing a challenge or making a step change improvement in their organisation. They come from all backgrounds and areas of an organisation to drive forward the uptake of specific innovations, advocating their benefits to both on-the-ground colleagues and leadership.”

Building trust

Many mention building relationships as being central to the successful spread of innovation, such as Tony Doyle, managing director of Qbtech, developers of an objective computer test that enables more effective diagnosis of attention deficit hyperactivity disorder (ADHD) called the QbTest.



Tony Doyle, Managing Director of Qbtech

“With innovation people generally don’t want to be the first,” observes Tony. “Many don’t even want to be the 100th. But they’re more likely to want to take something up if they have faith in what they’re hearing and that will come much more readily from an AHSN than any commercial provider who are seen as inherently biased.

“That’s been one of our biggest gains in working with the AHSNs, helping us to achieve a level of trust and credibility with new organisations.”

Dr Sarah Rodgers agrees that the AHSNs are well placed for this: “It’s because they’re working at a local level and building those relationships that lead to trust. That’s really helped facilitate the rollout of Pincer.”

Neville Young, director of enterprise and innovation for the Yorkshire and Humber AHSN, recognises the value of being a neutral partner in NHS England’s Innovation and Technology Payment programme.

“Where the AHSN is able to help create an environment where this trust exists,” says Neville, “we can see commitment from all parties to take the risks required to work to adapt both NHS pathways and commercial innovations to drive the adoption of great products in the NHS.”

Building innovation capability

In Tony Doyle’s experience, even with strong evidence it can be a struggle to see new technologies adopted sustainably and on a wide scale.

“I think there’s generally more interest in creating a new pilot than in encouragement for rapid uptake of proven solutions. That’s where the AHSNs really come in and make a big difference.”

The trust engaged with partners early and has found support from many, including NHS Improvement and the Care Quality Commission (CQC).

“AHSN support has been crucial,” adds Mike, “giving the organisation the courage, credibility, vision and challenge to succeed — far more important than money.”

However, this kind of work takes time. It took this NHS trust around eight years to reach the point where innovation is an integral part of the organisation.

AHSNs are working alongside the NHS to help organisations build capability in quality improvement (QI) techniques and to reflect on their culture.

Jo Pendray, Patient Safety Lead at South West AHSN, says: “A healthy organisational culture contributes to the ability of individuals and teams to work successfully together, to improve, make change and adopt new ways of working.

“Key to this is the presence of psychological safety, so that people feel able to ask questions, ask for feedback, try new things and to embrace learning whether this is from when things are going well and from error and failure.”



Jo Pendray, Patient Safety Lead for South West AHSN

For AHSNs, developing the leadership, culture and understanding of QI within NHS organisations is an important aspect to creating fertile soil for new innovation.

Boots on the ground

‘Boots on the ground’ is a phrase coined by Ben Collins, author of the King’s Fund report on adoption and spread of innovation in the NHS, published in 2018.

Almost all of the AHSN case studies featured in the report highlighted the importance of putting boots on

the ground: senior clinicians able to spend substantial time convincing colleagues of the benefits of innovations, experienced project teams to help providers implement innovations, and continued support for providers in evaluating the impact of changes and sharing learning.

Spread of innovation does not happen as a result of a policy manual. It requires getting out into the field and working alongside those implementing the change. This takes time, the right people and personal commitment.

“No one person can do all the work needed to spread innovations, there’s just too much to do and lots of different skillsets are needed,” remarks Mike Hurley, founder of ESCAPE-pain.

“Having a good team around you is essential. You need to be very local to get to the people you need to involve, and at the same time you also need a good central team backing you up.”

So where next?

These are exciting times for increasing the widespread uptake of innovation in the NHS. The AHSN Network is the first of its kind anywhere in the world with a remit to systematically spread healthcare innovation across an entire country.

“Adoption of innovation into the NHS at pace and scale is possible; we know this from the success of the Innovation and Technology Payment (ITP) programme,” says Neville Young, Director of Enterprise and Innovation for the Yorkshire and Humber AHSN.

“The NHS is up for it and the AHSN role is to harness that enthusiasm and translate it into language that commercial innovators understand. Similarly, most innovators are keen



Neville Young, Director of Enterprise and Innovation for Yorkshire and Humber AHSN

to see the NHS thrive and improve, and again the AHSN role is to translate this passion into practical language the NHS understands.

“Adoption rarely happens without some local adaptation, but this is not a barrier when all parties understand each other’s needs,” continues Neville. It is the AHSNs’ role to help create an environment where all parties feel they have something to gain by adapting and adopting innovation that will benefit patients, the NHS at large and innovators.”

The AHSNs have embraced the complexity of spreading innovation over the last few years, and are building a toolkit of strategies and a community of champions, partners and leaders all keen to drive change together.

As Ian Dodge, NHS National Director for Strategy and Innovation, said at the Health and Care Innovation Expo in 2017, the role of AHSNs is to “work together as a single national network of networks, helping to destroy NHS ‘not invented here’ syndrome.”

Not proclaiming to have all the answers, the AHSN Network aspires instead to be a learning organisation, nurturing trust within its own member and partner organisations to know the right questions to ask, as well as understanding the careful balance between innovation and improvement, adoption and adaptation ■

Preventing prescribing errors

Around one in 25 hospital admissions in the UK is the result of hazardous prescribing, contributing to 1,708 deaths per year.

PINCER (**P**harmacist-led **I**nformation technology intervention for **R**educing **C**linically **I**mportant **E**rrors) is helping to tackle high risk prescribing in the community. PINCER was developed by the University of Nottingham and is available to GP practices from PRIMIS via the AHSN national roll out.

One of the AHSN Network's seven national adoption and spread programmes, the PINCER intervention searches a GP practice's computer system and identifies patients being prescribed medicines commonly associated with medication errors. This is followed up by investigation and intervention by a specially-trained pharmacist.

At West Hampshire Clinical Commissioning Group (CCG), the pharmacy team has been rolling out PINCER with the help of their local AHSN. The team has found that PINCER is invaluable in planning and prioritising medication reviews.

Sam Truscott, Medicines Optimisation Pharmacist

Using PINCER has helped us reduce the prescribing of high-risk medicines and improve the safety of our patients. It has also helped us build strong working relationships with our GPs and



improve multi-disciplinary patient care within the practice. We ran the initial searches and filtered the data. We then recommended medications were stopped or reviewed in many of the patients.

In some cases more complex clinical medication reviews were needed, particularly if there was significant polypharmacy or frailty. We worked closely with our GPs, providing them with evidence for our recommendations.

In many cases, we contacted the patients directly to discuss why we were stopping medications or starting additional medicines. This helped to avoid an increase in GP workload. However, the GPs sometimes saw patients to discuss alternatives, and to explain the risks and benefits.

Some of the intervention searches have not just resulted in medication changes. For example, a practice team took a new look at their coding.

By running PINCER twice a year we have seen new patients appear. This has helped us have additional discussions with prescribers to prevent the numbers increasing

in the future. We also realised root cause analysis work would be helpful to support this, so additional training is being organised for our team by our AHSN.

Jayne Haigh, Medicines Optimisation Technician

As a technician covering several practices across West Hampshire, I've been running PINCER for a year now. It's easy to run with the pre-set filters and the information generated means a short manageable spreadsheet identifying 'at-risk' patients.

I've carried out simple reviews, which is great for my own personal development, identifying patients who were no longer at-risk from their medicines, and providing a more targeted list of patients for the pharmacists with whom I work to review. I also worked with practice staff to resolve read-coding issues.

Clinicians have engaged with the tool because it is safety-focused, and the outcomes are positive, resulting in improved patient care ■

www.nottingham.ac.uk/primis

The AHSN Network

The AHSN Network in numbers

Since the 15 AHSNs were first established in 2013, our collective impact has been significant.

In 2018/19 the AHSN Network has delivered national programmes for:

- NHS England
- NHS Improvement
- The Office for Life Sciences.

Read on for a snap shot of our achievements over the last year →

2018–19

£54 million
potential savings

to the NHS through the Transfer of Care Around Medicines programme*

* based on economic evaluation in the Newcastle study, *BMJ Open*, October 2016

17
mental health trusts

implementing Serenity Integrated Mentoring (SIM), supporting

141
high-intensity users

4,309
people with osteoarthritis

participated in ESCAPE-pain across

154
sites – the number of sites has tripled since the start of the year

£700,000
savings

to the NHS through use of HeartFlow software through the ITP programme, helping to diagnose patients with suspected Coronary Heart Disease – with numbers of scans increasing from

86 to 3,289
in 12 months

3,319
organisations

using mobile ECG devices to detect atrial fibrillation (AF) as part of the AHSN Network national rollout

78%
of England's maternity trusts

implemented the AHSNs' PReCePT programme to reduce cerebral palsy in preterm births

More than
230,000
people

benefited from innovations on the Innovation and Technology Tariff and Payment programmes (ITT and ITP)

103
hospital trusts

adopted the Emergency Laparotomy pathway, representing

62%
of all hospital trusts in England

4,709
patients

undergoing emergency surgery benefited from the work of the AHSN Network's Emergency Laparotomy Collaborative

135
real-world validations

of innovations supported by the AHSNs

Over
628
GP practices

adopted PINCER to help reduce to prevent medication errors

At least
4,381
clinical teams

are actively using innovations through AHSN adoption and spread programmes

92
sites

purchased SecurAcath, a device to secure catheters, an increase of

67%
as a result of the AHSNs supporting the ITP programme

72%

of eligible sites adopted the Endocuff device, improving colorectal examinations for patients undergoing bowel cancer tests with units sold increasing from **1,500 to 39,000** in 12 months

SUPPORTING ECONOMIC GROWTH



£152 million

of inward investment has been leveraged, **£144 million** by AHSNs and £8 million by the NHS Innovation Accelerator



188 jobs

have been safeguarded, **170** by companies supported by AHSNs and 18 by the NHS Innovation Accelerator



691 jobs

have been created, **558** by companies supported by AHSNs and 133 by the NHS Innovation Accelerator



2,605

companies have been supported by AHSNs with **3,630** innovations

IMPROVING PATIENT SAFETY



131

acute trusts across all 15 PSCs now have a policy for the management of acute deterioration



100%

of ambulance trusts and **95%** of acute trusts are using NEWS2 in all or part of their organisation

The AHSN Network's national collaborations

We are achieving collective impact through collaborations with regional and national partners in the following areas:

NHS England adoption and spread programmes

In 2018–20, the AHSNs are delivering seven national adoption and spread programmes, commissioned by NHS England:

- **Atrial fibrillation (AF)**
Sharing learning and spreading best practice across the 15 AHSNs to reduce AF-related strokes
- **Emergency laparotomy**
A collaborative approach to improving standards of care for patients undergoing emergency laparotomy surgery
- **ESCAPE-pain**
A group rehabilitation programme for people with osteoarthritis, providing self-management support in the community
- **PINCER**
Supporting pharmacists and GPs to identify patients at risk from their medications and taking the right action
- **PReCePT**
Working with maternity hospitals to use magnesium sulphate to prevent cerebral palsy in very premature babies
- **Serenity Integrated Mentoring (SIM)**
Bringing together police and healthcare professionals to make a positive difference to the lives of people with complex mental health needs

- **Transfer of Care Around Medicines**
Help for patients who need extra support with prescribed medicines when they leave hospital

Work has now started to select the AHSN Network's next set of national adoption and spread programmes, due to start in 2020. Applying the learning from our current programmes, key areas of focus will include innovations to support mental health and cardiovascular disease (CVD).

The Office for Life Sciences: supporting economic growth

AHSNs support the regional 'import and export' of healthcare innovation through our Innovation Exchange.

The Innovation Exchange is an AHSN coordinated approach to identify, select and support the adoption of innovations that improve our economy and patients' lives. The AHSNs offer a consistent and coordinated support offer to innovators wherever they are in the country and at all stages of the innovation pathway, which includes signposting to initiatives such as the NHS Innovation Accelerator and SBRI Healthcare.

The Innovation Exchange identifies innovations for the Accelerated Access Collaborative and for local adoption.

NHS Improvement — supporting the national patient safety strategy

We support the 15 Patient Safety Collaboratives as the vehicle to deliver many of the objectives outlined in the national patient safety strategy, and to horizon scan for future safety initiatives and innovations.

Our main national work programmes focus on safer care for deteriorating patients, maternal and neonatal health, and raising awareness of the impact culture has on safety.

NHS Innovation Accelerator (NIA)

An NHS England initiative delivered in partnership with the AHSNs, this national accelerator has a unique dual focus on personal development for individuals ('Fellows') and bespoke support to spread an innovation. To date the NIA has successfully supported 49 Fellows representing 52 innovations.

Innovation and Technology Payment

Through the ITP, NHS organisations are supported to adopt innovative products and technologies by removing the financial or procurement barriers. This NHS England scheme is delivered in partnership with the AHSNs, sponsors, and national and international experts ■

David Fry, Brain in Hand

The original concept for Brain in Hand came from the clinical director of an autism diagnostic research centre and a father, whose son has autism and anxiety. They spotted the need to provide responsive, low cost, user-led support to help people on their journey to greater independence. This would also help the care system by accelerating step down from support and providing effective early intervention to those who are waiting for, or cannot get support.

Brain in Hand has a unique approach, blending technology with human support. The technology gives users access to detailed personalised support from their smartphone. Always available, it gives easy access to patients' own reminders, notes and coping strategies. The human touch is added in one-to-one set-up sessions and connecting users with their circle of care and a team of professionals 24/7.

A control panel also gives providers operational advantages, such as seeing all users' anxiety levels at all times, consistency across staff in understanding a user, holding an accurate understanding of how a user is coping for planning sessions and spotting cohort-wide issues.

Working closely within social care providers and charities, we systematically developed and tested the technology over three years, and were asked



to extend its application to conditions, like generalised anxiety disorder, obsessive compulsive disorder (OCD), attention deficit hyperactivity disorder (ADHD), and acquired brain injury (ABI).

Five years on, and we've supported more than 4,000 people and work with 30 local authorities to improve client independence. We have documented savings of £6,500 per person each year. Recognised by the Department for Education, we've seen exponential take-up by university students across the UK with autism or mental health conditions. Our deployments within secure mental health settings are showing dramatic results.

With the importance placed on mental health and autism in the Long Term Plan, the NHS has been a priority and challenge for us. Having been selected as part of our local AHSN's Digital Accelerator, we are finding the right clinical pathways to site our system and demonstrate to

practitioners that a disruptive technology can make life easier for them and be better for patients.

We are now working with three clinical commissioning groups (CCGs). With the Accelerator's help, we hope to replicate the success seen in social care, and engage with more CCGs and mental health service providers to enhance their service pathways in autism, ABI and mental health.

My advice to other healthcare innovators would be: make sure you understand the problem for which your innovation is the solution; don't just 'digitise' current processes but develop your innovation totally around the patient; and lastly, develop a basic product to see if your customers are willing to buy — don't try to create the perfect product before testing if it will be used in practice ■

[@brain_in_hand](https://twitter.com/brain_in_hand)
www.braininhand.co.uk

Supporting economic growth: why health and wealth go hand in hand

By Ruth Lawson



With a clear emphasis placed on research and innovation in the recently published NHS Long Term Plan, the AHSN Network's invaluable role as a catalyst for collaboration and driving force for innovation is more important than ever.

This is at the heart of what AHSNs do — facilitating change across whole health and social care economies. A fundamental part of this includes supporting the NHS to deliver a step-change in the rapid identification, adoption and spread of best practice, clinical innovations and new technologies, so that proven and affordable innovations reach patients faster.

The NHS and care sectors bring significant value to the UK economy through invention, evaluation and adoption of

products and services. The AHSN Network plays a pivotal role in helping to mobilise the assets within the NHS to stimulate economic growth.

Supporting health innovators and companies to grow has a direct impact on the economy, both regionally and nationally. The country benefits from the creation of new jobs, investment leveraged, and contracts secured.

The AHSNs act as a broker between industry, academia and local NHS partners to encourage partnerships and speed up the innovation process.

These collaborations are essential to the development of new treatments and pathways and to maintaining a strong life sciences ecosystem.

The country's 15 AHSNs are deeply embedded and trusted within their regional health

landscapes, allowing them to understand the diverse needs and the challenges faced locally. This insight enables them to facilitate the development of innovative solutions that will have the most impact on local services, while also collaborating across England to take what works best and quickly spread it nationally.

By bridging the gap between health providers, commissioners and industry, the AHSNs are ideally positioned to develop an innovation pipeline from research and development through to commercialisation.

The NHS and its patients are benefitting from these transformative technologies, as well as the wider life sciences economy. A primary strand of the AHSNs work is to stimulate economic growth by engaging with industry innovators to make it easier for them to do business with the NHS.

Multimillion-pound investment secured

In the last year, the AHSN Network supported 2,605 companies with 3,630 innovations. A recent survey showed that AHSN Network support resulted in an estimated £96.1 million investment secured and this has contributed to the creation of 636 jobs and safeguarded a further 186.

Mike Hannay, East Midlands AHSN Managing Director and national AHSN lead for economic growth, said: "AHSNs have a unique capability to bring together the NHS and industry to make sure that we address the needs of the healthcare system. By identifying, developing and implementing innovative solutions we can improve clinical outcomes for patients, drive down the cost of care and also drive economic growth."

"Health and wealth go hand in hand. We live in a time when the demand on healthcare is exceeding the ability of society to pay. We can't go on doing what we've already done so we have to find innovative ways of doing things, and only by finding these will we be able to cope with the challenges faced by an ageing population. It's those innovations that will stimulate economic growth as well as addressing the healthcare needs."

"The innovations we support cover everything from digital applications through to medicines, surgical instruments, improvements in healthcare provision and everything in between."

Supporting SMEs to meet health and social care needs

An initiative spearheaded by the Oxford AHSN is a prime example of how AHSNs are bringing together expertise from across the NHS, industry and research to meet local healthcare needs and boost regional economies.

Bucks HSC Ventures is a support programme for entrepreneurs in health and social care, underpinned by a partnership of NHS, local government and university leaders in Buckinghamshire, along with major industry collaborators Johnson & Johnson/Janssen and GE Healthcare. The programme, which has received funding from the EU and the Buckinghamshire Thames Valley Local Enterprise Partnership (BTVLEP), is at the heart of an investment of more than £4 million into the county.

Ian Barham, BTVLEP Partnership Manager, said: "We firmly believe having now established a solid foundation that the team will extend the positive impact on the health and social care industry in the county and beyond."

Nadine Frisk, Head of Bucks HSC Ventures, said: "The AHSN has played a crucial role in bringing this partnership together and establishing the programme. The AHSN's networks and skills in partnership working, real-world evidence generation and securing adoption and spread of innovations in the NHS will help SMEs meet NHS needs and further strengthen the culture of innovation in Buckinghamshire and further afield."

The programme includes expert masterclasses and prototyping

facilities, as well as vital access to health and social care providers, clinicians and commissioners to support the development of new products to ensure they meet the needs of patients and service users. Six SMEs have completed the first six-month programme. More will join a summer series covering human-centred design and 'Lean Strategyzer' workshops focused around prevention and care for the young and old. A second six-month programme will follow.

The Oxford AHSN is facilitating start-up workshops for each SME, and advises on all aspects of the innovation pathway from concept to commercialisation, utilising its successful Digital Health Roadmap.



Bill Palmer, Consentricare

Bill Palmer, of Consentricare, an SME which has completed the programme, said: "First and foremost, it has given us access to people we have otherwise had difficulties accessing and points of view we needed to hear." →



Emma Luddington, Living Well at Home

Emma Luddington, of Living Well at Home, another SME to benefit from Bucks HSC Ventures, said: "This collaborative forum has allowed us to understand the drivers and challenges of the partner organisations.

"I am convinced that it has brought us several steps closer to establishing longer term relationships with our local health and social care authorities, and that together we can develop something very special."

The Innovation Exchange

Gaining access to the NHS and social care markets can be a difficult and daunting prospect for innovators. This is why the AHSNs work to simplify the process for both industry and the NHS.

AHSNs support the regional 'import and export' of healthcare innovation through the Innovation Exchange programme, which aims to quickly identify, select and support the adoption of innovations with potential to stimulate the economy and transform the lives of patients.

Funded by the government's Office for Life Sciences, the AHSNs deliver the programme regionally while also collaborating with colleagues across the country to form a wider national network, which enables spread and adoption to progress quickly.

The support provided spans from identifying unmet needs across the NHS, such as signposting innovators and real-world validation.

Innovators receive bespoke assistance from AHSNs at every stage of the innovation lifecycle via their Innovation Pathway initiative. This provides access to a range of expert support services across the health and care sectors to realise the commercial and economic potential of their ideas.

"It is an exciting time within the life sciences industry where we are seeing new and promising innovations coming from companies across the country," comments Rox Smith, Deputy Director of the Office for Life Sciences.

"The challenge lies in how we ensure the most promising innovations reach patients as quickly as possible. This is where the AHSNs' position within the regional health and social care infrastructure proves invaluable. Through the Innovation Exchange initiative, the AHSNs foster partnership working to drive the rapid uptake of health innovation, and we are already seeing the significant economic impact of their work both regionally and nationally."

in turn supporting the adoption and spread of technologies into the NHS. Through a partnership MoU and several joint initiatives, the past year has seen ABHI and the AHSNs work closer than ever before, further strengthening the HealthTech industry's relationship with the AHSN Network. The recent Landscape Review was an excellent example of this enhanced collaboration."

The MedTech Landscape Review was launched in March 2019 with the Association of British HealthTech Industries (ABHI).

Richard Phillips, Director, Healthcare Policy, at ABHI, said: "The AHSNs play a critical role in bringing together industry, academia and NHS to accelerate great ideas. Their work adds value to companies and stimulates the wider economy,

Adding value to companies

The AHSN Network is continually striving to simplify processes for innovative companies wishing to access the NHS market, whether through direct support or signposting key industry trends in reports such as the recently published review of the MedTech landscape.



Instrumental in spread of digital innovation

Healthcare Communications, which offers a range of software solutions for the management of outpatient appointments, has recently reaped the benefits of AHSN support.

Following engagement with the Yorkshire and Humber AHSN, the company has implemented its solutions into a number of new hospital trusts, added to services provided to existing customers and has established a new office in Leeds, leading to an inward investment to the region's economy valued at £50,000.

The AHSN's support focused on increasing exposure of Healthcare Communications' patient portal and digital appointment letter systems across the region. They arranged a dedicated engagement event with the company and outpatient managers from eight trusts across the region, as well as a number of speaking opportunities at key regional events.

Kenny Bloxham, Managing Director of Healthcare Communications, commented: "Our AHSN is an amazing support and have been instrumental in helping spread our digital innovation within the region. The whole team are so proactive, positive and fantastic to work with. They continually provide us with opportunities to attend and present at events to our key audience, which in turn has led to several commercial meetings about our solution."



Kenny Bloxham, Healthcare Communications

Healthcare Communications offer a series of solutions addressing areas where there is potential to streamline processes, and create efficiencies. Its outpatient management and digital letter services reduce missed appointments and make savings through lower stationary and postal costs.

The AHSN Network has supported hundreds of innovators in the last 12 months alone, ranging from early advice and signposting right through to establishing strategic partnerships. The benefits of these innovations are already being felt by patients, the NHS, regional and national economies.

Mike Hannay, national AHSN lead for economic growth, said: "As we look to the future, our focus will be on building on the great foundations we have laid across the country. It's crucial that we continue to strengthen our national connectivity to ensure we spread the great innovations that we are working on across the country, as quickly as we can." ■

Jonathan Abraham, Healum



Back in late 2014, I was having the exasperating issue of having to speak to innumerable healthcare professionals about managing my obesity, and repeating the same story over and over again to each one of them. I wanted to bring in all the teams looking after me together and allow them to collaborate and support me in a more joined-up way.

Just a few months later, I met my co-founder Anuj Saboo who shared my vision of a world where teams of healthcare professionals could support individuals with long-term conditions to understand all aspects of their physical and mental health. Together, we decided to create a digital platform to do just this.

In 2016, after two years of research, we began developing the Healum platform. The starting years were quite challenging, as the HealthTech market in the UK is competitive, and it was not easy to differentiate what we were trying to achieve. However, we were firm on our vision. It has been an absolutely rollercoaster ride so far with many highs and lows, but we have come a long way from where we began.

I must say, there are lots of organisations and individuals within and outside the NHS willing to support organisations trying to make an impact on the lives of people. We received substantial support from the National Institute

for Health Research (NIHR) and also received an SBRI Healthcare grant to test our product, which was incredibly helpful as we started out.

We were also one of the fortunate 21 start-ups selected for the 2018–19 cohort of the DigitalHealth. London Accelerator, and the support we are still receiving from them has been fantastic.

Healum is currently operating both in the NHS and the private sector in the UK. Our NHS Test Bed project, You & Type 2, has given us good exposure to work with practices and patients to co-create some of the features. We can proudly say that our solution helps the NHS not just save time and cost, but also improve the quality of life for those living with long-term conditions.

With the feedback from patient co-creation sessions we have now created a strong digital offering for healthcare professionals that allows them to share and collaborate around patient management pathways. We have now begun on our next milestone to create a strong AI underpinning to the system that is derived from clinicians' own collective inputs. We want to create a system which incorporates the wisdom of all and is trusted by all.

To all aspiring HealthTech entrepreneurs, from my experience in HealthTech in the UK so far, I can just say: keep going, don't stop and make every step count ■

 @HealumLtd
 www.healum.com

When it comes to the spread and adoption of innovation in health and care there is the good news and the not-so-good news.

If you've been reading the rest of this publication, then the not-so-good news won't come as a surprise: there is no magic bullet for the adoption of innovation into the NHS.

There is no one methodology you can follow so that if you dot all the i's and cross all the t's then your innovation or improvement will be adopted. There is no turn of phrase that will accelerate the engagement of hearts and minds. And there is no simple way to recognise an innovative organisation; comparing them is rarely helpful — no two are the same, despite many assumptions around similarities.

The good news is that the not-so-good news is also the good news.

As you'll hear in the feature on page 15, there are a multitude of reasons for the successful adoption and spread of innovation. One size can never fit all. This is because no two organisations are the same and no two individuals are the same. Yes, there are similarities of course, but organisations and people have different personalities, varied cultures and different situations.

The fact that there is no magic bullet and not one spread methodology is a benefit — it means that methods can be locally adapted to fit the needs of the situation. →



Magic bullet or golden thread?

By Kate Hall, Director of Capability Development at UCLPartners and Director of Implementation and Adoption, West Midlands AHSN

“ We want to create a system which incorporates the wisdom of all and is trusted by all ”



The nearest thing to the magic bullet is willingness of people



The nearest thing to the magic bullet is willingness of people. How comfortable are they with managing risk? How keen are they to try something different? Or how keen are they to support implementation of an innovation or improvement?

Maybe it's less a magic bullet and more a golden thread. And, whether you class the work of AHSNs as innovation or improvement or perhaps both, the golden thread that runs through all successful programmes in my mind is people. People who can lead.

Leadership qualities are found within all disciplines, in all types of organisations and at all levels. I'm not talking just about executive leadership, far from it. I mean doctors, nurses, physios and other clinicians; leadership by managers and supervisors; leadership qualities demonstrated daily by porters, healthcare assistants, call centre staff and more. Leadership by national bodies, think tanks and politicians at a national level is also important, but sometimes I think we wait for permission when really, we didn't need to.

I am fascinated by leadership. I'm fascinated by the discussion about whether it is a learnt skill or a skill you're born with. I'm fascinated by the debate between the differences between leadership and management. Most of all I am fascinated by all the various styles of leadership; all the different personalities of leaders and methods of leading.

All these questions aside, more seems possible in teams, departments and organisations with great leaders.

There are several publications by reputable bodies and some tried and tested textbooks that we've all read at some stage or another that

define leadership. These often get quite complex and I'm not really a framework sort of person, tending to work much more on intuition and learned experience.

I recall a Guardian article from several years ago where Ruth Carnell the last Chief Executive of NHS London, outlined several leadership maxims she aspired to (and sometimes failed at), based on her 37 years in the NHS. I remember thinking how simple these were and how the health service does like a policy and how, when it comes to it, most of our day-to-day work is really about people, behaviour and courage.

So if there is a golden thread running through the successful spread of innovation and improvement, it's the very thing that, in turn, causes complexities to adoption, and that is people.

I sit through many discussions about successes and barriers to sustainable innovation and each time think we are really talking about hearts and minds. Yes, of course evidence is crucial and funding or financial incentives help, but experience shows that these alone, however compelling, are not enough for innovation to take root.

My personal experience of implementing any innovation or working on any aspect of change, at almost any level of complexity and in almost any situation, is that it's predominantly about behaviour and people.

As to whether it's a technical innovation or a pathway improvement, well that's secondary. A well-known turn of phrase currently is 'barrier to innovation'. I'm not sure that is helpful. Most of the time, people don't realise they are blocking things (OK,



some definitely do); they don't understand or perhaps are fearful of consequences working within a highly regulatory environment; lack experience working with industry (if the innovation is a device for example); or simply have no capacity to consider doing something different. Chances are, they also work in an organisation where trying new things is not promoted, nor perhaps are they supported to try new things.

Policy has its place of course and there are currently several innovation incentives coming from the centre. I think this can both benefit and hinder the adoption of innovation and improvement.

Sometimes it feels like innovation is the latest catchphrase amongst NHS leaders, but it's been a popular term for decades.

Arguably the NHS itself is our most daring innovation. There are interesting parallels with the words of Aneurin Bevan from The Lancet in 1948:

"On 5 July we start together, the new National Health Service. It has not had an altogether trouble-free gestation. There have been understandable anxieties, inevitable in so great and novel an undertaking. Nor will there be overnight any miraculous removal of our more serious shortages of nurses and others and of modern re planned buildings and equipment. But the sooner we start, the sooner we can try to see these things and to secure the improvements we all want.

"My job is to give you all the facilities, resources and help I can, and then to leave you alone as

professional men and women to use your skills and judgement without hindrance. Let us try to develop that partnership from now on."

I think it's safe to say that there are still anxieties and shortages of key personnel and some crumbling buildings, but we are all still focused on the improvements we all so desperately wish to see — improvements where innovation definitely has a significant role to play.

But let's not make innovation the new buzzword, the next 'thing' that can become divisive between believers and disbelievers. The moment something becomes a 'thing' means some people feel they don't understand it fully.

The goal of innovation is user adoption: we want people to use innovations in a way that positively impacts their lives. The human factors in innovation are often forgotten or neglected, possibly because it's so hard. And yet the human factor is the most important factor.

When I first started in the health service, people would talk about these so-called soft factors that impact on healthcare and I remember always being bemused by this. From nursery school to university, to work, to family life, to retirement — relationships with people are both hard and joyous in equal measure; no amount of text books, qualifications or job titles can ever eliminate this.

When thoughts change, attitudes change. When attitudes change, behaviours change. When behaviours change, actions change. When actions change, results change. When results change, patients benefit.

This is why we innovate. And this is how we spread innovation ■

How a £1 drug can prevent cerebral palsy in premature babies

The NHS is driving up the use of a cheap and simple intervention that cuts the chances of premature babies developing cerebral palsy as part of the NHS Long Term Plan to improve care from the very start of life.

Through the AHSNs' PReCePT programme, NHS England is accelerating the uptake of magnesium sulphate, so that all maternity services across England can make the drug available to mothers who go into labour at less than 30 weeks.

When magnesium sulphate is given to mothers via an intravenous drip within 24 hours of delivering their preterm baby, it can reduce the chances of their babies developing cerebral palsy by 30%.

The simple drug, which costs the NHS around £1 per dose, is a neuroprotector. This means that it can offer a baby's brain some protection when the medical team know there is a strong chance that the baby may be born early.

If magnesium sulphate were given to all eligible mothers nationally it could prevent several hundred cases of cerebral palsy for the 4,000 to 5,000 babies that are born before 30 weeks' in England each year. It has been estimated that the average lifetime health and social care cost for an individual with cerebral palsy is £800,000.



The programme is also included as part of the new Saving Babies Lives Care Bundle, which has seen 20% fewer babies dying at birth since 2015, and is now being rolled out across the country as part of the Long Term Plan for the health service.

Dr Matthew Jolly, national clinical lead for maternity and women's health at NHS England, said: "Significant progress has been made in recent years to improve NHS maternity care for example by reducing stillbirth rates to a historical low.

"Expectant parents want the NHS to use all its means to ensure their new babies are as well cared for as possible, by using this simple intervention the NHS will make a massive difference to the lives of hundreds of babies every year.

"Through the NHS Long Term Plan we have built on the excellent work across the country to make maternity services in England among the safest in the world."

The PReCePT intervention was developed at University Hospitals Bristol. Consultant neonatologist Dr Karen Luyt led the pilot at St Michael's Hospital in Bristol, which saw an increase in usage from 8% of eligible mothers in 2012 to 93% in 2018. The intervention was then adopted by all five maternity units in the West of England.

Dr Karen Luyt, National Clinical Lead for the AHSN Network's PReCePT programme commented: "This simple intervention can make such a difference to the lives of children and their families.

"I'm immensely proud of what our maternity, neonatal and quality

improvement teams, advised by service users, have achieved together and we're all working hard to ensure every preterm baby delivered by the NHS can have the very best chance in life."

PReCePT is one of the AHSN Network's seven national adoption and spread programmes during 2018–2020.

The aim of the programme is to ensure at least 85% of all eligible mothers are receiving magnesium sulphate across all maternity units in England by 2020.

A year into the programme, three-quarters of maternity units have already adopted PReCePT, while the remainder are about to start. Early indications show that of those units now actively implementing PReCePT, the average uptake of magnesium sulphate is already around the 80% mark.

In 2018–19, 511 additional mothers in England received magnesium sulphate as a result of PReCePT. This means around 13 cases of cerebral palsy were avoided, representing a saving of approximately £10.4 million in lifetime health and social care costs.

Through its Scaling Up programme, the Health Foundation is also funding research into the best methods to achieve rapid adoption of this life altering treatment by every maternity unit in the country.

The focus of the PReCePT Study is for evaluative research to compare the effect of different levels of funding and quality improvement involvement on magnesium sulphate uptake rates. This is a key element of important learning to understand how to maximise the effectiveness in the adoption and spread of good practice ■

“Around 13 cases of cerebral palsy were avoided in 2018–19, representing a saving of approximately £10.4 million in lifetime health and social care costs”

One family's story of how PReCePT is making a difference

● Jennie went into very premature labour with her twin boys at Oxford University Hospitals, where she was offered a dose of magnesium sulphate to help protect her unborn babies from damage.

"I'm definitely pleased that I went ahead with the magnesium sulphate," says Jennie, "because one of the things that we put down to the fact that our miracle boys have survived is the delivery.

"The delivery went really well. They were born within a minute of each other and without the magnesium sulphate, I don't know — I'll never know, but we

never had any bleeds on the brain, and the fact that it all went really well, the magnesium sulphate may have contributed to that.

"It was absolutely the right thing to do amongst many other decisions that were made during the last 20 odd weeks that gave us a marginal gain in terms of helping our boys' survival.

"We're now a week away from taking our little boys out of the hospital, 158 days we'll have been here, and they look like and are healthy term babies and we're really excited to be taking them home next week."



A collaborative approach to tackling atrial fibrillation

Atrial fibrillation (AF) is the most common type of irregular heart rhythm and causes one in five strokes.

Most often found in people over 65, the likelihood of a person having AF increases with age. It can be symptomless and so many people with AF are unaware they have the condition.

Anticoagulation therapy reduces the risk of a stroke in someone with AF by two-thirds, however not everyone with known AF receives optimal anticoagulation therapy, resulting in avoidable strokes.

There are significant gains to be achieved for patients, the NHS and social care by improving the detection and management of people with AF. This is why the AHSNs have collectively identified best practice in AF stroke prevention and are working

to disseminate this across the national network.

Since 2016 the AHSN Network, in collaboration with partners in the NHS and social care, have helped to deliver an increase in AF diagnosis of over 130,000 people and provided lifesaving anticoagulation therapy to 150,000 more people with AF who are at high risk of a stroke.

The AHSNs' unique national programme spans the whole patient pathway for AF (detect, protect and perfect), crosses organisational boundaries, and improves communication and collaboration between primary and secondary care organisations.

Increasing detection

The AHSNs have distributed more than 6,000 mobile electrocardiogram devices to GP practices, pharmacies and NHS community clinics across England, enabling staff to more quickly identify and refer patients with AF.

They also promote the importance of the use of manual pulse checks at every opportunity.

Offering therapy

Ensuring people diagnosed with AF are offered the most suitable anticoagulation therapy, the AHSNs are now assisting clinical commissioning groups (CCGs) to deliver a new model of care, highlighted in the NHS Long Term Plan, where specialist anticoagulant pharmacists provide bespoke education and support to primary care prescribers on use of anticoagulation therapy.

Looking ahead

By 2020 the AHSNs' ambition is for 85% of people with AF to have been diagnosed, and for 80% of CCGs to provide anticoagulation for 84% of those diagnosed with AF and at risk of stroke ■



And for those who may be nervous after being tested, she advised: "Go ahead — very simple — initial treatment should be non-traumatic and may avoid long-term problems after a stroke."

Now Wendy has become an AF Ambassador with her local AHSN — using mobile ECG devices to test people's pulses in her community.

She also finds it useful for emailing her own ECGs to her consultant's secretary. Wendy said: "The experience has shown me that it's even more important to pick cases up early."

● After suffering from a stroke, Wendy Westoby is the first to encourage people to get their pulses tested.

77-year-old Wendy from Wigan had been suffering from an irregular heart rate since 2000. She suffered a stroke in 2009 and but despite many consultations with cardiologists, her symptoms "wouldn't appear to order" so she wasn't diagnosed with atrial fibrillation (AF) until 2011.

Dr Elliot Street, Inovus Medical

I was a medical student when I first met my future business partner Jordan Van Flute at a party. He was a psychology student and was finding it difficult accessing the equipment he required for his research.

Jordan was studying psychomotor testing predicting operator performance in laparoscopic surgery. He was refused access to laparoscopic surgery simulators, which were available only through university and hospital labs. So we set about designing and building a simulator in my university bedroom, soon moving into a family member's garage.

We decided we could produce more affordable laparoscopic devices by producing the parts ourselves. In the beginning we were bending pieces of plastic with rudimentary jigs; now we use thermo forming, CNC machining, laser cutting, 3D printing and silicone injection moulding.

We soon moved to a unit in St Helens and after a few years secured funding from different sources, including privately raised capital and £80,000 from the MSIF Northern Powerhouse Investment Fund.

I continued to train as a doctor and became one of the NHS Clinical Entrepreneurs, a brilliant concept led by Dr Tony Young, who is now a strong mentor and Inovus supporter. Last year I was introduced to my local AHSN, and their support has been invaluable in helping to accelerate our growth.

We were told about SBRI Healthcare funding and the AHSN assisted our application. They also supported our bid to the European Institute of Innovation and Technology Health's Headstart competition, resulting in us receiving £100,000 and €50,000, which was fantastic, followed by further funding from the Northern Powerhouse Investment Fund and an angel investor.

Inovus Medical now has an expanding range of healthcare simulators on the market and our original turnkey laparoscopic simulator is sold in over 65 countries worldwide and used by nearly 100 hospitals.

We now employ 12 people at a larger plant in St Helens — and we have won several business awards.

Our aim is to level the playing field by introducing affordable and accessible devices. We are now developing augmented reality and virtual reality simulation products — and we want to become the number one choice in surgical simulation globally.

It has been an incredibly hard slog to get to the point when doors began to open and funding started to flow and we have had to be incredibly resilient to push through some difficult times. But we know we have great, affordable products that are helping more surgeons to learn about keyhole surgery through highly realistic simulation, which is good for the NHS and good for patients ■

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“Our aim is to level the playing field by introducing affordable and accessible devices”



Patient Safety Collaboratives: strengthening local connections to achieve national impact

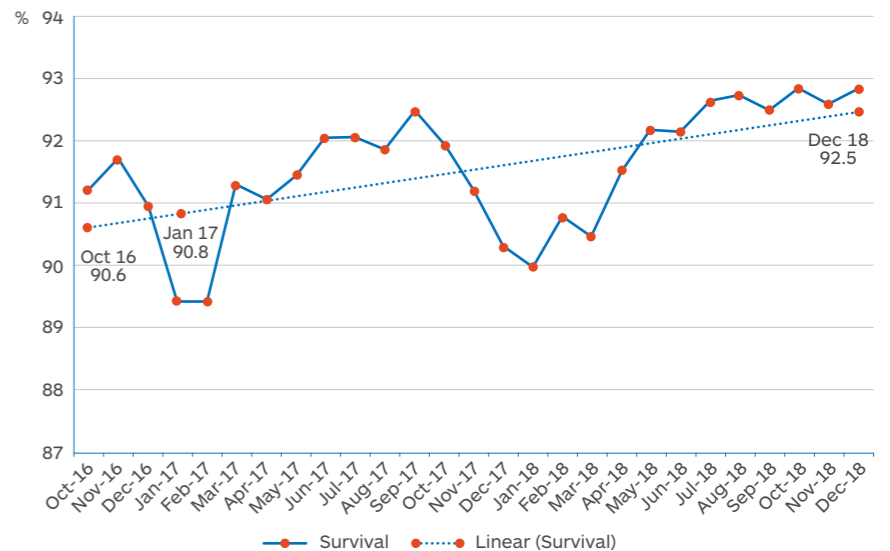
By Bernard Allen

When Paul Churchill walked into Brockway Medical Centre in North Somerset for a routine leg dressing, he knew he wasn't feeling quite right. He saw GP Jonathan Rees who had recently been to a talk about the National Early Warning Score (NEWS) and suspecting sepsis from cellulitis, assessed Paul's score. It was seven, showing

he was at significant risk of worsening quickly. When the ambulance arrived, paramedics recorded a score of eight and by the time he reached the emergency department in Bristol, it was nine. NEWS is a well-established tool to assess risk of deterioration, making handovers quicker and more effective. As ED Consultant Emma Redfern later said, without it they may well have missed the signs in someone who looked

otherwise well. Instead Paul was appropriately treated within hours and made a full recovery. NEWS is one example of the many patient safety improvements supported by the 15 Patient Safety Collaboratives (PSCs) across England. Commissioned by NHS Improvement and hosted by the AHSNs, they are an important bridge between frontline staff, system leaders, commissioners, researchers and innovators.

An example of how the SOS Insights Dashboard can be used for QI interventions, here showing a run chart of survival rates for people admitted with suspicion of sepsis or sepsis in Wessex



The result has been a strong focus on quality improvement (QI) and culture work in the PSC's first five years and there is no doubt they have developed deep, local connections. As well as myriad projects, PSCs have trained around 20,000 people in QI and recruited over 3,000 patient safety champions and QI experts.

Matt Inada-Kim is national clinical lead for deterioration. For him, the key is improving communication to reduce variation.

"Tools like NEWS2 mean one single language to quickly get across how unwell a patient is," says Matt. "Deterioration currently accounts for roughly two-thirds of avoidable deaths in the NHS, so if we can reduce the risk even slightly we can save lives."

"What AHSNs and PSCs are able to do is spread innovations like this to people working across different health and care settings," Matt continues. "They've successfully built relationships with ambulance trusts, general practice, acute hospitals and care homes to ensure system-wide recognition, response and escalation of sepsis which saves lives. We're one of the first

healthcare systems in the world that's been able to achieve this."

No wonder that all ambulance trusts in England now use NEWS2 and almost all acute hospitals are using the tool or planning to implement it. Extending the principle to care homes is also showing promising outcomes: five AHSNs have cut 999 calls by 20–30% in their areas.

Part of the power of the AHSNs' patient safety work lies in its ability to tackle a problem from different angles.

Realising the lack of data available to clinicians on the frontline led one of the London AHSNs Imperial College Health Partners to create a Suspicions of Sepsis Insights Dashboard — a simple, web-based tool available for anyone to access. The dashboard provides information such as length of stay and survival rates by infection type, nationally down to individual trust level.

"We wanted to develop a tool that would allow clinicians to track the impact of their QI interventions and that could help with seasonal and long-term planning," explains programme director for patient safety Kenny Ajayi. "The relationships we've built with clinicians, data analysts and health economists have opened up new avenues for collaboration we didn't know existed."

Another of NHS Improvement's national PSC programme workstreams is focusing on maternal and neonatal safety. →



In the Thames Valley, PSCs have been improving the life-chances of extremely premature babies. They are more likely to survive if they are born in a 'level 3' hospital unit where the whole range of medical and neonatal care can be provided, yet an audit in 2015 revealed this was the case for only 50% of premature babies. By working across all the maternity units — raising awareness, training staff and developing a region-wide referral pathway — they have managed to increase this to almost 80%, and the project is now spreading to Eastern England.

Katherine Edwards, Director of Patient Safety and Clinical Improvement at Oxford AHSN, explains: "Although not always possible due to the unpredictable nature of preterm delivery, transfer rates of women with signs of premature labour can be improved where there is consistency and cooperation between maternity units. Often premature babies would be transferred to a level 3 unit anyway, but the risk is greater."

Giving mothers magnesium sulphate in preterm labour reduces the risk of their baby developing cerebral palsy by as much as 30 per cent. To make it available to more mums, a programme called PReCePT was first rolled out by the West of England AHSN and University Hospitals Bristol in 2016.

PReCePT is now bringing together the whole perinatal community in England as one of the seven programmes being adopted and spread across the country by all 15 AHSNs, funded by NHS England. It has the potential to prevent several hundred cases of cerebral palsy each year.

International patient safety expert Don Berwick has publically praised the PSCs as an example for making patient care safer around the world. It was Berwick's 2013 report, *A promise to learn — a commitment to act*, that originally led to the creation of the national PSC programme.

Has that momentum been maintained five years on? The King's Fund recently published its own take on the work of PSCs. It noted some promising results achieved by the programme so far and talks of a 'tipping point' where a small number of outstanding health systems globally have invested enough resources and worked to create more attractive and stable careers in quality improvement.

Natasha Swinscoe is the AHSN Network's lead chief officer for patient safety. She admits there is still some way to go to match this level in England.

"We have come an enormous distance from a standing start five years ago," says Natasha. "What is really encouraging is that we are seeing a shift from supporting the progress of individual services to improving how different services work together in local systems."

The AHSN Network has developed its new strategy for patient safety, which presents many possible areas for future collaboration including mental ill-health, medicines safety, reducing never events and infection prevention and control. It's something Natasha Swinscoe believes can only be achieved by AHSNs and PSCs working more closely.

"It's about practising what we preach," Natasha says. "The more closely we all work together towards these shared goals, the more confident NHS patients can be that they're being cared for in one of the safest healthcare systems in the world."

To find out more about the PSCs and get involved in their work, visit www.ahsnnetwork.com and find the contact details for your regional AHSN ■

MEET THE INNOVATOR

Amy Manning, S12 Solutions

A Mental Health Act 1983 (MHA) assessment is used to assess whether someone should be detained under the MHA to receive treatment for mental health disorder.

As an approved Mental Health Professional (AMHP), I take into consideration the person, their circumstances and the legal framework; depriving someone of their liberty and providing treatment without consent is a last resort, and I must be certain that detention is the right thing to do.

It's also my job to arrange two doctors, with appropriate training and skills, to attend assessments with me. I make calls using my list of doctor contact details; I don't know where they are or if they're available, so this can take hours. Sometimes doctors can't be found, and the assessment is passed to the next shift, potentially leaving the person waiting distressed and at risk, and police, ambulance and place of safety resources held up during the delay. Assessments are time sensitive, and any delay puts pressure on the entire system.

I was convinced that technology could help. I researched the problem and found an investor before commissioning a mobile application and website that allowed AMHPs to search for available, local doctors. Our two pilot sites experienced assessments happening sooner than expected, more assessments completed within the shift that received the referral, and more

doctors agreeing to take part in this work. Both sites went on to commission the platform.

We're planning to implement S12 Solutions later this year in Southampton, Hampshire, Surrey, Peterborough and Cambridgeshire, and our in-house development team is working on improvements based on pilot feedback and research. The next iteration will include data capture and reporting, which we hope will help crisis care providers make evidence-based improvements to their services.

A key challenge is supporting behaviour change for people who find technology difficult. To make sure those people are supported we've added a customer service manager and national account manager to our implementation team. They will stay with sites post-implementation to make sure everyone is getting the best from the platform.

Finding the right commissioners to talk to is another ongoing challenge. The AHSNs have been really helpful here, introducing us to the right people and opportunities that we wouldn't have pursued otherwise. An AHSN encouraged us to apply for the NHS Innovation Accelerator, and earlier this year we were announced as one of its innovations.

I encourage innovators to arrange free of charge pilots, where possible. We learned so much from these and generated compelling evidence that helped us open doors with other organisations.



NIA Fellow

“Healthcare innovation demands your time, energy and money — make sure that you're solving a problem that other people are motivated and financed to solve”

Healthcare innovation demands your time, energy and money — make sure that you're solving a problem that other people are motivated and financed to solve ■

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www.S12solutions.com

Dr Chris Evans, Little Journey

Every year 600,000 children undergo day surgery in NHS operating theatres and up to 75% of them show signs of fear and significant anxiety, leading to worse surgical outcomes.

As an anaesthetist, I've witnessed the impact of children feeling distressed about receiving a general anaesthetic and helped to deal with the consequences. When I discovered they were given information leaflets designed for adults, I was determined to find another way — particularly when the literature stated that anxious children need more analgesia, take longer to recover after surgery and face a higher risk of hospital admission.

So, I devised Little Journey, an interactive smartphone app for children to use from the comfort and safety of their own home, which aims to reduce apprehension and improve physical and mental outcomes, all while creating a rapidly scalable intervention across the NHS.

Co-designed with healthcare professionals and families, the app and headset enable children to take a virtual tour of the hospital, play games and watch animations, all designed to help them understand the hospital experience. There's tailored information for parents too.

The intervention has transformed hospital visits for patients like three-year-old Alexander. He



used to get upset even before leaving home, but with the app his dad Matt says, "The effect was transformational. Alexander was excited instead of scared about his 'big adventure'. Little Journey meant that he was very familiar with the process of what to expect, so nothing fazed him.

"Not only did this make his experience infinitely better, but it made our experience as parents that much better seeing him happy. If there were any tears, it was when I tried to take the virtual reality headset off him!"

Launched in 2017 as part of a University College London Hospital research study, Little Journey was successfully adopted for patients at Princess Alexandra Hospital, Harlow and more recently at Ipswich Hospital after an AHSN innovation exchange event.

With AHSN funding we have improved the app's usability, added new functionality, including animations for children undergoing radiotherapy, and become compliant with data protection requirements.

To date, the app has been tailored to over 30 UK hospitals with another 10 at different stages of set-up, and is being used in 24 countries. At present rates, we'll prepare 6,000 children for operations in 2019, rising to an estimated 30,000 with hospitals adopting it for standard operating procedure and the adoption at new sites, including Addenbrooke's Hospital, Cambridge, and Norfolk and Norwich Hospital.

It has received plaudits at the highest level with Dr Jacqueline Cornish, NHS England National Clinical Director for Children, Young People and Transition to Adulthood, saying, "The Little Sparks Hospital innovations are outstanding and a perfect example of patient-centred healthcare design."

As with any innovation, finding early adopters and support, both financial and advisory, from overarching bodies is taxing. AHSN support has been integral to our success ■

www.littlesparkshospital.com

The AHSN Network



Find details for your regional AHSN at www.ahsnnetwork.com

For case studies on innovations supported by the AHSNs visit our Atlas of Solutions in Healthcare at atlas.ahsnnetwork.com

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