Innovating Together

Annual Review 2018-19

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West of England Academic Health Science Network

Foreword

Natasha Swinscoe, Chief Executive,
West of England AHSN

Welcome to our annual review for 2018-19

It's been a tremendous year for the West of England Academic Health Science Network (AHSN), and this publication provides a snapshot of some of our achievements, delivered in close partnership with colleagues from across the NHS, industry, universities and research bodies in our region, as well as patients and the public.

The challenge we've been set by our national commissioners (NHS England, NHS Improvement and the government's Office for Life Sciences) shouldn't be underestimated. England's 15 AHSNs have been collectively tasked to drive healthcare innovation across the NHS at a pace and scale unheard of in any other health system in the world.

This means one of our key roles is to drive the regional 'import and export' of proven innovation around the country: importing great ideas into our region and exporting our own solutions out to others.

Our track record is pretty impressive. The work we've been doing here in the West Country has caught the attention of the rest of the country. Many of our home-grown success stories are now being spread nationally – testament to the way we've always collaborated as a Network.

For instance, our work through our Patient Safety Collaborative to develop and support the Emergency Department Checklist and the National Early Warning Score (NEWS) is now being adopted by NHS organisations as 'business as normal' and we're delighted to be in a position to share our learning with others.

In the last year, PReCePT, our regional programme to increase use of magnesium sulphate to help prevent cerebral palsy in very premature babies has gone national and is being spread by the AHSN Network to every maternity unit in the country. In just 12 months an estimated 13 cases of cerebral palsy have been avoided by PReCePT, representing a significant £10.4 million savings in lifetime health and social care costs, let alone the potential impact on the children and their families. From a small QI project in St Michael's Hospital to a national programme, we are succeeding in changing lives.

Similarly we were one of the original AHSNs involved in the Emergency Laparotomy Collaborative, improving standards of care for patients undergoing emergency laparotomy surgery. This is now another AHSN Network national programme, which in the last year has seen a 552% increase in patients benefitting from our collective approach to support hospital trusts.

And we have been successfully 'importing' innovations into the West from the other AHSNs, as well as national programmes such as the NHS Innovation Accelerator and Innovation and Technology Payment (ITP). There's ESCAPE-pain, the rehabilitation programme for people with osteoarthritis, which we've helped to establish in 11 new sites in our region, while nearly 7,000 patients in the West are benefitting from increased support with their prescriptions through our rollout of the national Transfer of Care Around Medicines programme.

We can't do any of this alone, so we focus on building strong relationships and working with our regional health and care providers to identify needs on the ground and to match these with proven solutions. And so I have to say huge thanks to all our colleagues in our member organisations for embracing these opportunities we've been given as an AHSN.

In the coming year our work to identify, develop and test improvements and innovations regionally with the potential for national spread will step up a gear, particularly through the launch of our new Innovation Exchange and our recent challenges to both industry and the healthcare community.

Based on this track record to date, I am incredibly excited about what's in store and I hope you will join us on our continued mission to transform lives through healthcare innovation ■

In conversation

how healthcare innovation can transform lives

Innovation is at the heart of what we do as an organisation. Here two of our senior team - Kay Haughton and Nigel Harris – discuss innovation and our role in stimulating innovation in the health service.

Kay Haughton – Director of Service Transformation **Nigel Harris –** Director of Innovation and Growth

In the context of health and care, what do you understand by the word innovation?

Nigel This is something we often get asked. It's one of those questions that if you ask 10 people, you'll probably end up getting 11 different answers. For me the key is about the application of ideas or technologies to achieve change.

Kay Innovation isn't just about new devices or apps, it can also be about the application of a new pathway or new way of working. I would say our success in implementing the National Early Warning Score (see page 16) and the Emergency Department Safety Checklist (see box) across all NHS trusts in the West of England are good examples of innovation, because we were the first to achieve that level of coverage, and in doing something different at scale we made a significant impact on health outcomes.

Emergency Department (ED) Safety Checklist

The ED Safety Checklist was designed to address the shared challenge of ensuring patient safety during periods of crowding. It helps to standardise and improve the delivery of basic care in emergency departments, systemising the observations, tests and treatments that need to be completed in a certain order. It serves as an aide-memoire for busy staff, and any doctor, nurse, bank or agency staff can join the department and provide the right care by following the time-based framework of tasks.

The ED Safety Checklist was originally developed and tested by University Hospitals Bristol NHS Foundation Trust with support from the Health Foundation and the West of England AHSN through our Patient Safety Collaborative.

During your career which innovation has most impressed you?

Nigel The biggest innovation in my time has been in medical imaging. When I was at college the only way to look inside somebody's head was through the use of isotopes. Then the use of computerised tomography (CT) scans and magnetic resonance imaging (MRI) revolutionised this. They are examples of a revolutionary technology being matched to an unmet need, and having a huge impact.

Kay For me it was robotic surgery. As an anaesthetic nurse I remember talking to conscious patients during neurosurgery so that surgeons could monitor any changes to their brain function. This level of precision would have been unthinkable when I was student nurse starting out, and seeing the impact it had at close range made a huge impression on me.

PINCER

PINCER is a proven 'Pharmacist-led INformation technology intervention for reducing Clinically important Errors'. It allows GPs to review patient records and identify patients who are being prescribed medicines that are commonly and consistently associated with medication errors. GPs can then take action to reduce the risk of these errors occurring.

It was originally developed by the PRIMIS team, part of the School of Medicine at the University of Nottingham. Since then it has been tested in GP practices across Wessex and during 2019 we shall be adopting the approach in the West of England.

What do you see as the role of technology in innovation?

Nigel This is a really interesting area. I see technology primarily as an enabler. We should always start with the problem we are trying to fix, and look for the technologies that might help.

Kay And technology doesn't have to be employed to fix or cure physical issues. It could be used to overhaul systems in doctors surgeries like PINCER (see box above), or it could be a diagnostic tool.

Nigel What often doesn't work so well are the examples we find of 'technology push' – somebody inventing a cool new gadget and then trying to find a use for it. It can sound exciting, but is normally far from ideal. It's fundamentally better to start with the clinical need.

And do you think technology has a role to play in responding to workforce pressures in the NHS?

Kay Health is always going to be a human business. However, technology and innovation can certainly help to support the people working in healthcare.

Nigel Yes, I agree, this isn't necessarily a technology challenge, it's just a challenge, to which technology may, or may not, help provide the answer.

Kay So do you think I will eventually be able to have real consultations with my GP online with access to tools that allow diagnosis, not just a conversation?

Nigel Well that can already happen to an extent. Smartwatches can provide increasingly sophisticated biometric data - our phones have remarkable imaging and processing capabilities. But I know my clinical colleagues would say that there is no substitute for clinical acumen being applied face to face, when you can feel the pulse, feel the abdomen and asses the patient in person. →

What do you think makes for a successful innovator?

Nigel I think there are a number of factors, from a willingness to listen and collaborate (and use tools like hyvr – see page 21) and continually refine and focus their proposition (see HIP on page 14). Ultimately though, one characteristic that nearly all the successful innovators share is persistence; a single-minded drive to pursue their idea until they find a solution.

Kay That sounds like Andrew Bastawrous who presented at our EXPO event at UWE last year. He designed a smart phone app that can perform retinal screening in developing countries – a cost-effective solution to delivering eye care for people who don't live near eye health facilities or can't access treatment. They were even innovative by using of a piece of string to place patients the correct distance from the phone to enable scanning.

But as we said before, it's not all about technology. Take Karen Luyt at University Hospital Bristol. PReCePT (see box below) was such a simple concept, but she was the one that grasped it, gathered evidence and then worked with us to spread it. It was based on NICE guidance that hadn't been implemented. It goes to show that just because something is evidence based, it doesn't mean it will automatically be carried out. Finding a way, creating a pathway takes imagination and persistence – just as Andrew and Karen have shown.

PReCePT

● PReCePT started life as a West of England project five years ago. Today it is a national programme and a powerful example of how we, as part of the AHSN Network, can rapidly put evidence into practice to improve healthcare for the nation. Through PReCePT, women going into early labour under 30 weeks are offered magnesium sulphate, which helps to protect their babies' brains. As a result fewer babies are likely to develop cerebral palsy, improving quality of life for both preterm babies and their families.

What do you think are some of the challenges we have in front of us?

Nigel As humans, particularly in the medical profession, we are inherently cautious and it takes quite a bit to encourage us to try something new, even as individuals, let alone in something as complex as rolling out a new clinical pathway. Overcoming that barrier is one of the key skills of any innovator working in this area.

Kay I think we need to find ways to move further into the prevention space, be that genomics or independent blood sugar monitoring – enabling people to understand what challenges they face and helping them to deal with them, to reduce the demand on clinicians.

Nigel Yes, but we have to consider that behaviour change doesn't always follow from access to information. People don't necessarily change behaviour now to avoid a potential problem in five or 10 years' time. It can also be harder to demonstrate return on investment for innovations in the prevention space.

That is a fundamental challenge: how do we find money for an intervention that requires investment now, but will yield a saving in a few years' time? There is some interesting work going on in a few pockets where outcomes are being commissioned, not just activity.

What is our role as an AHSN in helping our members, innovators and the wider community explore what can be achieved?

Nigel For me, a central part of our role is around culture and helping our members do things differently. We are working with them to find ways to innovate, to deliver the health and social care we all want to see.

Kay But we have to recognise that some healthcare organisations just don't have the workforce capacity to do this currently, so this is a pressing need. Technology has progressed, but the stress people work under is creating a different workplace environment.

Nigel Yes, it feels that sometimes there are unrealistic expectations of what individuals can deliver. If we are to get the best out of people we have to create space for compassion, and time to think about doing things differently to allow for innovation.

Kay I agree that it's important to look at civility and kindness at work, not just productivity. We must never forget we are working with people, both staff and patients, and we have to consider how they respond to change. The success we've had in the quality improvement area has been about helping to change mindsets. I think we can learn from this and apply that learning to help our members develop and adopt innovation. It's something we are looking to develop over the coming year through our Innovation Academy ■

Innovation Academy

● Working with innovators, to help them understand the NHS and how their ideas and products might be adopted is a key part of what we do. Another, sometimes overlooked, aspect of our work is helping the health and care system understand, foster and adopt innovation. To bring a new level of focus to this work we are developing an Innovation Academy.

The aims of the Academy will be to develop the understanding of innovation within our member institutions; to help innovation be seen as part of everybody's business. We have learnt from our successful Quality Improvement Academy that ongoing training and support and the fostering of an active network can contribute to a significant cultural shift. Helping our members build a vibrant innovation culture is our next ambition.

Putting the Long Term Plan into action

The NHS Long Term Plan, launched at the start of 2019 has been heralded as the blueprint to make the NHS fit for the future. It highlights investment in latest technology, digital health and cutting edge treatments, coupled with early detection and a renewed focus on prevention to stop an estimated 85,000 premature deaths every year.

It also lays out plans for a more integrated, person-centred service, where health organisations come together across primary, community and mental health to provide better, joined-up care in partnership with local government. There is a lot in the plan that highlights work already being planned and undertaken by the West of England AHSN. Here some of our medical leads highlight how our work is helping our meber organisations respond to the Long Term Plan.

Anne Pullyblank – Chief Medical Officer

The role of innovation

The Long Term Plan sets out a simpler, clearer innovation system with a key role for AHSNs. The aim is to speed up the development pipeline in the NHS, so that proven and affordable innovations get to patients faster. This is one of our key roles.

Our Innovation Exchange (see page 20) will help innovators locate funding and resources in our region, and connect them with other innovators. Our business advisers provide support to innovators from development to adoption and spread. They can signpost companies to clinicians who can help refine products, and they run brilliant free 'bootcamps' to develop business ideas (see HIP page 14).

Making innovation work for the health service is not just about developing products; it's also about helping to define the need. We work with our members to develop challenges that stimulate innovation in the areas where it is most needed. Recent examples include our calls on the topics of 'keeping people healthy at home' and 'young people's mental health'.

We know we don't have a monopoly on good ideas so a core part of our role is also encouraging the spread and adoption of products and solutions developed and tested elsewhere. However, we want to ensure that innovation remains at the heart of healthcare in the West of England so we are developing our Academy to help healthcare professionals across the region understand the role and potential of innovation. Learning from our work in developing a vibrant and exciting quality improvement culture in our region, we will foster the growth of our innovation ecosystem.

Ann Remmers – Maternal and Neonatal Clinical Lead

Supporting mothers and babies

We've made great strides in the West of England in supporting safer care for mothers and babies and we are fully focused on supporting the continuous improvement work that has been at the heart of our success. Responding to the Long Term Plan, and meeting the ambitious targets of reducing still births, brain injury and maternal deaths by 50% over the next 10 years will require continued system-level learning.

I've been so impressed with the collaborative, supportive approach in the Maternal and Neonatal Health Safety Collaborative. They have embraced a quality improvement approach and supported learning both within organisations and across the region as whole.

Our focus on evidence-based care and improvement led to the development of PReCePT. This is now rolling out to all maternity units across the country and is embedded in the new Saving Babies' Lives Care Bundle, which includes guidance to administer magnesium sulphate to women in very pre-term labour to prevent their babies developing cerebral palsy.

PReCePT is a fantastic example of how we can put evidence into practice using QI methodology to test and refine it, before spreading a proven approach nationally. I look forward to working with our members to continue improving care for mothers and babies.

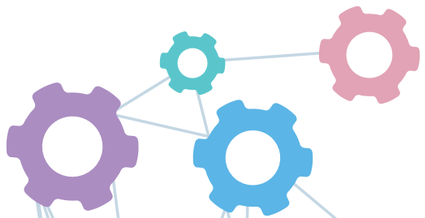
Hein Le Roux – Primary Care GP Lead

Managing end-of-life

The theme of individualised care in the form of 'what matters to me' rather than the traditional medical approach of 'what's the matter with you' runs throughout the LTP. For people approaching the end of their lives, there are two pieces of work that can support people's wishes, advance care planning and treatment escalation plans.

The West of England AHSN is spreading the ReSPECT (Recommended Summary Plan for Emergency Care and Treatment) form and process across our region. In the community there can be a lack of information about a patient's condition and when a deterioration occurs, the family may be panicked and the professionals (out of hours clinicians and ambulance crews) may not know the patient. This can lead to reactive care where the patient's wishes are not fulfilled.

ReSPECT aims to remedy this by encouraging a conversation with the patient and their loved ones to ascertain what the medical issues are and how these fit with the patient's preferences. It leads the professional to have a sensitive discussion with the patient and their loved ones about what the end might look like and what is important to the patient. Having a standardised way of communicating with patients, which is then recognised across the chain of care will hopefully lead to an improvement in the care we deliver for patients.



Mark Gregory – Lead Pharmacist

Optimising medication

In the West of England we have an active Medicines Safety and Optimisation work programme. This addresses themes in the LTP such as the research quoted that shows as many as 50% of patients are not taking their medicines as intended. One of the underlying issues here is the increasing number of medicines people are being prescribed as they live longer with multiple medical conditions.

Our PINCER (Pharmacist-led Information technology intervention for reducing Clinically important ERrors) programme allows GPs to review patient records and identify patients who are being prescribed medicines that are commonly and consistently associated with medication errors. Where possible, they will simplify the regime, in line with the NHS England initiative on 'overprescribing', to help patients cope with their daily medication taking. Our Transfers of Care Around Medicines (TCAM) programme is helping to ensure that when a patient leaves hospital, they have access to support so they understand the medicines they have been prescribed.

The Long Term Plan also includes supporting patients to reduce the use of short acting bronchodilator inhalers. We're developing a Medicines Safety Dashboard with a feature on identifying and addressing the suboptimal use of inhalers. The dashboard also includes a focus on minimising side effects, in line with the new medicines safety programmes envisaged in the Long Term Plan ■

The challenge of student mental health

and how AHSNs can help

Steve West, Vice Chancellor of the University of the West of England and Chair of the West of England AHSN, outlines the challenges facing universities around student mental health, and how harnessing the expertise of the AHSN is helping to develop solutions.

In my day job leading a university I see the mental health and wellbeing of students as one of the biggest issues facing higher education today. The demand for services amongst students is increasing year on year, just as it is in the general population. We shouldn't be surprised by that – one in four adults experience poor mental health. Half of those people will be identified as having mental health issues by the time they are 14, and by the time they are 24 that will have risen to 75%. So the demands on my institution, other universities and the NHS continue to grow.

Working with students also presents a particular set of challenges. Firstly, they are transient. They move between home, university accommodation and onwards, but our health system wants them to have a single GP to act as a gatekeeper to services. Secondly, we know they access services and support in a fairly random way.

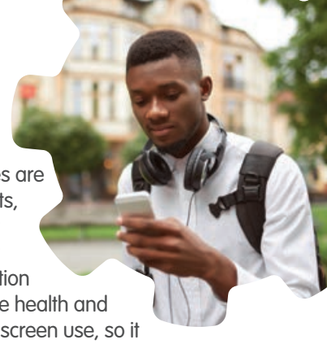
Students can access acute services directly, enrol in cognitive behavioural therapy (CBT), use apps to support their health or access services from third sector groups. This is all in addition to any services they may access through a GP. There is also a lack of evaluation of many of the apps and pathways they using. The result of this increasing demand and complexity of pathways could be a perfect storm - you can see why universities are concerned.

This sort of complexity is something I've encountered before working with the AHSN. The work we've done leading the spread and implementation of tools like NEWS and NEWS2 could provide some valuable insights here. So I wondered if it would be possible to bring the AHSN's ability to navigate complex pathways and find innovative solutions to bear on this knotty issue.

One of the first issues we have is defining the challenges we are trying to overcome. For instance, the tendency of students to move between locations and services means data sharing is a real challenge. Through the AHSN I can see that there is some great work being done around Local Health and Care Records, but the complexity around this issue is undeniable.

Another issue occurs around handovers of care. Currently we don't have a universally accepted assessment tool. So when a patient is referred from one service or clinician to another, the receiving service don't necessarily accept or trust the assessment they have been given. Again my work with the AHSN has shown me this can be overcome with innovations like NEWS2, where universal acceptance of the NEWS score and a shared understanding of how to use this to track deterioration have led to really significant improvements in patient safety.

We don't yet know what the solutions will look like, but are starting to explore some of the possibilities. For example, one idea of a way to deal with complexity of data sharing has been learned from another of the AHSN's key areas of experience – maternal and neonatal care. The traditional, simple solution to sharing infants' notes is that they are kept by the mother, the old red or green book.



So we are wondering, can we come up with a way that students can take control of their own records? Smartphones are near universal amongst students, so could we develop an app or portal that allows them to carry around a record of their interaction with services? Many already use health and lifestyle apps to track activity or screen use, so it may be possible to integrate elements that encourage students to make lifestyle choices that protect their mental health.

If we can start to apply our learnings and put all this together the possibilities become really exciting. There is undoubted complexity in bringing all the service providers together here, but collaboration is what the AHSN does best. If we harness the power of collaboration and work with designers, clinicians, developers, students and many others, we have the chance to co-design something that could be revolutionary.

The sort of solutions we are looking at will also help move interventions upstream, hopefully enabling students to manage their risk factors and take action at an earlier stage, in line with healthcare interventions more widely. If we get this right we will also be looking to work with schools and colleges and think about how it could provide support to adolescents and children.

It's a huge project, massively exciting and a little bit scary. It will draw on some of what we have learnt from past projects and take us to places where we will learn plenty more. And if we get this right it could have a huge impact on workforces and communities and end up with a replicable and scalable solution.

We're already engaging with other universities on this work, and there is a huge appetite out there. In addition, through the AHSN Network we have one of the most effective adoption and spread mechanisms of any healthcare system in the world, so there is real potential to create a system-wide solution, one that could benefit millions of students ■

Funding from the Office for Students

● The University of the West of England, in partnership with other institutions and supported by the AHSN has won funding for a project to understand and advance the impact of partnership to improve mental health support for students.

The scheme is part of a major collaborative programme launched by the Office for Students to find innovative ways to combat a sharp rise in student mental health issues and spark a step-change in student support across the country.

The project aims to improve care for students in need of mental health support through the development and evaluation of local partnerships between universities, the NHS and student unions connected together through a National Learning Collaborative.

The year in numbers 2018/19

22
member organisations active and involved in our work

100%
of our NHS trust members have implemented NEWS2, improving their ability to monitor and treat deteriorating patients

£10.4 million
lifetime savings in health and social care costs for cases of cerebral palsy avoided through national roll-out of PReCePT

31
entrepreneurs supported through the Health Innovation Programme

11 sites
delivered the ESCAPE-pain programme, helping 468 patients with hip and knee problems

£2,657,704
funds leveraged for SMEs in our region

23%
of companies increased turnover after receiving our support

More than
1,000 innovators
given business support

6,884 patients
supported with their medication through our Transfer of Care Around Medicines (TCAM) programme

Over
1,500 people
attended our learning and networking events

Hooray for HIP

Developing an idea into an NHS-ready product can be a daunting proposition. We know from the hundreds of innovators we support every year that the NHS business landscape can be difficult to navigate. This is why we created our Health Innovation Programme (HIP), now in its fifth year and continuing to support innovators from across the region.

The training programme, created in partnership with SETsquared, the global no.1 university business incubator, specifically addresses the needs of healthcare innovators and covers core skills in entrepreneurship. It's an intensive, fully-funded, four-day personal development course that helps entrepreneurs from the West of England to develop business propositions with real potential for health and care.

During the bootcamp delegates build their skills in many aspects of entrepreneurship, from market analysis to funding strategies. To help navigate this complex sector, they also benefit from tailored health and life science sector specific modules, such as the NHS as a market place, health economics, regulatory standards, and collecting and evaluating evidence. The course provides an opportunity to make a compelling pitch to an experienced panel (think Dragon's Den!) and is a supportive and friendly environment to network with like-minded innovators and try out ideas.

"I have found the structured and practical approach to reviewing our business idea invaluable. As a business we are now clear about what we need (and don't need!) which means we have clarity, focus and energy to move forwards! I enjoyed meeting others in similar positions and sharing our learnings and ideas. The environment of the course is supportive and fun."

Lucy Hadley, Director
The Development People

"I was initially hesitant about attending HIP but quickly found it to be inspiring and motivating and learnt loads about my own capabilities and others. As always the networking and collaboration with others, especially those outside the NHS was invaluable."

Marie Altham, Advanced Nurse Practitioner
Churchdown Surgery

Since 2013, 84 innovators have been through HIP in the West of England. This includes delegates from all of our member NHS trusts and universities. Here's what a couple of recent attendees had to say:

Who: Caz Icke, Specialist Neurological Physiotherapist, Founder of SoleSense Ltd
HIP Delegate 2019

What: Pressure sensing insoles in shoes that give visual and auditory feedback about balance. Sound is used to inform users of their posture with changes in pitch and volume, dependent on information from sensors. Visual representation of weight-bearing through the feet is provided on screen with simple graphics.

Why: Caz works with people recovering from brain injuries and identified a need in her patients for more time with physiotherapists to improve their balance. She developed SoleSense to give patients access to intelligent feedback on their posture, available 24/7 to help accelerate their recovery.

"I learnt a great deal on the HIP course - I didn't know how much I didn't know! It was packed full of information and gave me a clearer understanding of where I am at and how to shape things in the future. There was great support from those leading the course and I had access to many experts in the field and made many new contacts that can support the path ahead. My sense of confidence has massively increased and I have even had an offer of a business partnership as a result of the pitch on day four. The HIP course has kick-started SoleSense into a much greater chance of success and I am truly grateful!"

"Very useful start trying to put some order to the tangled plate of start-up spaghetti!"

Matthew Burnford, Director
Response Associates

Who: Chen Mao Davies, Director of Latch Aid Ltd
HIP Delegate 2018

What: LatchAid is a breastfeeding app that utilises interactive 3D technology and virtual breastfeeding support groups to help mothers to learn breastfeeding skills and to connect with others for peer-to-peer and expert support anywhere and anytime.

Why: Chen is a mother of two and had first-hand experience as a once-struggling but later successful breastfeeding mother. Her personal experience motivated her to develop the LatchAid app to help other mothers to succeed in breastfeeding. Chen holds a PhD in Computer Graphics and has 15 years software R&D experience, working for the last eight years on visual effects for blockbuster movies, including the Oscar-winning Gravity and Blade Runner 2049. Applying her industry expertise in the Visual Effects industry, she founded LatchAid and started to develop the LatchAid app whilst on maternity leave. Her daughter also attended HIP and set the record for the youngest age of a delegate at four months old!

"The Health Innovation Programme is amazing! It's packed with practical lectures, workshops and discussions, and ends with a pitching day to a panel of experts! It brought great opportunities to meet other inspiring healthcare entrepreneurs and business advisors and to get valuable feedback on the start-up business for future development!

"We have benefited so much from HIP and the association with West of England AHSN since last year for training, networking, grant applications and business development. We would recommend HIP and the West of England AHSN to anyone and couldn't appreciate enough their support!"

"Good volume of information. Well structured. Good mix of lectures and group sessions. I'd recommend this to a friend."

Junior Doctor and Director
Orvista Health

Kate Phillips, Business Development Advisor, and co-ordinator of the HIP programme says:

"We are always looking to support innovative healthcare ideas. This could be a product or service already in development or simply the germ of an idea, but the concept must be realisable into a sustainable business model/proposition and you will need to be genuinely passionate about taking your proposition forward. We've some amazing ideas come through our course over the years, and it's great to see some them flourishing."

If you'd like know more about the next HIP course, take a look at www.weahsn.net/hip or contact innovation@weahsn.net

The next steps for NEWS

Alison Tavaré – Primary Care Clinical Lead

The National Early Warning Score (NEWS) has been a core part of our work in improving patient safety for nearly five years. The Patient Safety team at the West of England AHSN, which I am a part of, were clear from the start that we wanted to improve the care of very sick patients. NEWS and its more recent iteration, NEWS2, have been central to this work.

● NEWS and NEWS2, developed by the Royal College of Physicians, provide a numerical early warning score through the monitoring of six vital signs in a patient. Tracking a NEWS score throughout acute and community settings enables deterioration to be recognised, tracked and appropriately responded to at all stages of a patient's journey. Its use improves communication between clinicians, from community or primary care, to the ambulance trusts, and on to hospital staff.

As a team we've rolled NEWS and NEWS2 out across the whole health system in our region. Our experience shows it works for clinicians on the front line and the data shows it has had significant impact, particularly in relation to sepsis. We've found that NEWS not only supports decisions on what care a patient should receive, but also decisions about where patients should be seen. It helps to ensure they can be seen 'at the right time, in the right place and by the right person'.

This work has won awards and recognition for us and our partners, and more importantly it has saved lives and simplified systems for clinicians. We really started to understand the impact of the work when NHS Improvement undertook an analysis of the mortality from 'suspicion of sepsis'. Using a tool called the suspicion of sepsis dashboard, developed by Imperial College Health Partners and NHS Improvement's Patient Safety Measurement Unit found that mortality is lowest in the West of England, and that it continues to fall. They have called it 'special cause variation'.

"Key to the success has been the collaboration and a real sense of shared purpose and responsibility across the region"

There are a number of reasons why the team has been successful. One is that NEWS is simple it does not require lots of expensive equipment and is based on usual clinical practice being done really well. Also key to the success has been collaboration and a real sense of shared purpose and responsibility across the region. As a GP, working with colleagues from across the NHS and learning so much from them has really added to the enthusiasm and momentum of the work.

Following the successful implementation in the West of England, NEWS2 is currently being implemented across the country. As Matt Inada-Kim, National Clinical Advisor on Sepsis (NHS England) and Deterioration (NHS Improvement), said: "I am so pleased for the West of England AHSN team. They have given the rest of the country a glimpse of what the NHS could be like in every part of the country.

"The standardisation across an entire region, with a single language of sickness, across all pathways of care and environments has demonstrably reduced deaths from suspicion of sepsis, and is a powerful example of the value of marrying quality improvement with outcomes data measurement." ■

Next steps for NEWS

Care homes

● After our success in other areas, we wondered if NEWS could be used to help identify sick patientsin settings such as care homes. Our focus on care homes is an intuitive move on many levels. There are over 11,000 care homes across the country housing over 400,000 residents, many of whom are likely to be frail and susceptible to illness. We are also moving into a world where health and social care are becoming increasingly joined-up.

We hope that providing care home staff with NEWS, to use as a common language to communicate with health professionals if they have concerns about a resident, will save time and confusion and improve care. If they have concerns about a resident, clear communication can save time and confusion and improve care. The challenge is how we work with care home staff to apply NEWS in a different setting, and the team are developing regional collaborations to support this work.

Learning disabilities

● Over recent years there has been mounting evidence of increased mortality amongst people with learning disabilities, particularly from sepsis. There are many possible reasons, such as long term illnesses making infection more likely. Also symptoms can be missed through something known as 'diagnostic overshadowing'. This can occur if something like a change in behaviour, such as not wanting to get out of bed, is not understood to be due to infection, but instead is related to existing conditions.

Discussing this with our Medical Director, Anne Pullyblank, and our Director of Transformation, Kay Haughton we wondered if NEWS can play a role in helping clinicians pick up underlying deterioration. As we are natural collaborators we reached out to see if others would be interested in working on this. As a result we've uncovered an enormous desire to collaborate in this area. We had planned a small scoping event for about 40 people to explore possibilities. In the end we had to change venue to welcome over 150 people to what was a hugely positive and energising meeting. We heard from members of the learning disabilities community and 'Misfits' theatre company, which really helped ensure we understood the priorities. As a result we came away with lots of practical ideas and plans made to take this work forward. As team we are really excited to see where this energy and enthusiasm will take us.

Strong local connections bring national impact in patient safety

In 2013, Elly Salisbury went into labour with twins at just 27 weeks. It was a difficult and anxious time. As part of the care she received at St Michael's Hospital in Bristol, Elly was offered magnesium sulphate, a drug known to reduce her babies' chances of developing cerebral palsy by as much as 30 per cent. Elly was one of the first people to benefit from a programme called PReCePT, a partnership between the West of England AHSN and University Hospitals Bristol, to make the drug more widely available.

Sadly her son Jay died a few days after birth; but Cormac has grown into a healthy and happy five-year-old. "Cormac is an amazing little boy, he has no signs of cerebral palsy at all," Elly said, "I truly believe that the magnesium sulphate was part of that."

Having started life in the West of England, PReCePT is now one of the seven programmes being adopted and spread by all 15 AHSNs, funded by NHS England. Meanwhile Elly has become a patient representative, sharing her story to encourage greater take-up. "I think it's incredible that across the country all mothers in my situation will be offered magnesium sulphate," she says. "It will make such a difference to thousands of babies, and that in itself is just so completely worth it."

Ellie Wetz manages PReCePT at the West of England AHSN. She's passionate about achieving equitable access to the treatment. "When we started PReCePT, it was a simple quality improvement project to try and increase the number of eligible mothers being offered magnesium sulphate. Children aren't actually tested for cerebral palsy until after their second birthday, so it can take a while to see results.

"It's now developed into a national improvement programme with standardised resources which each trust can tailor for their local circumstances. Where we're seeing PReCePT being really successful is in bringing the whole perinatal community together – obstetricians, midwives and neonatologists – in giving the mother a drug for the benefit of their preterm baby."

NEWS – the National Early Warning Score – provides a well-established tool to assess the risk of a deteriorating patient deteriorating, making handovers quicker and more effective through the use of a single score. It's another project which started in the West of England and is now being adopted in hospitals and ambulance trusts across the country.

Successful projects take on a life of their own spreading organically into different sectors. NEWS is making inroads into primary care, care homes and the community. People with learning disabilities die 16 years earlier than average, with many of these deaths from avoidable causes such as sepsis. NEWS was chosen as one of three interventions to improve their health outcomes by a newly established West of England Learning Disabilities Collaborative.

NEWS is one example of the many patient safety improvements that are being implemented through the West of England Patient Safety Collaborative (PSC). Commissioned by NHS Improvement and hosted by the West of England AHSN, it acts as a bridge between frontline staff, system leaders, commissioners, researchers and innovators.

West of England AHSN Chief Executive, Natasha Swinscoe also takes a role as the AHSN Network's lead chief officer for patient safety. She says the West of England Patient Safety Collaborative has gained momentum in its first five years.

"It's the frontline staff in our member organisations who make the changes that deliver a real impact for patients. Our collective achievements only happen because of fantastic engagement from people across the system, and their willingness to get involved and give it a go."

The power of building strong relationships is particularly evident in the South of England Mental Health Quality and Patient Safety Improvement Collaborative, which the West of England AHSN co-funds. It is the largest and longest-running NHS collaborative in mental health, bringing practitioners together from Cornwall to Kent.

Sally Ashton, Programme Lead for the collaborative, says the learning culture is incredible. "Our learning events are very well-attended and after six years it's interesting to see how people have become less focused on organisational issues and are more concerned with the bigger picture."

She's proud of their work on learning from deaths related to mental health and suicide, and improving end of life care, and how they've been able to increase involvement in the collaborative from people who have lived experience of mental ill-health. It's an approach Sally could see working in other areas too.

"It's quite a unique forum in some ways, but is entirely transferable anywhere within the NHS. It's simply tapping into people's natural passion and enthusiasm and giving them the space to come together. You have to invest the time and do it for the long-term."

For Natasha Swinscoe, this shift from supporting the progress of individual services to improving how different services work together in local and regional systems is key. "Effecting lasting, significant change to the way people think about and work in relation to safety is a big ask," she said. "We are operating as trusted partners in a fast-changing landscape. The more closely we can 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."

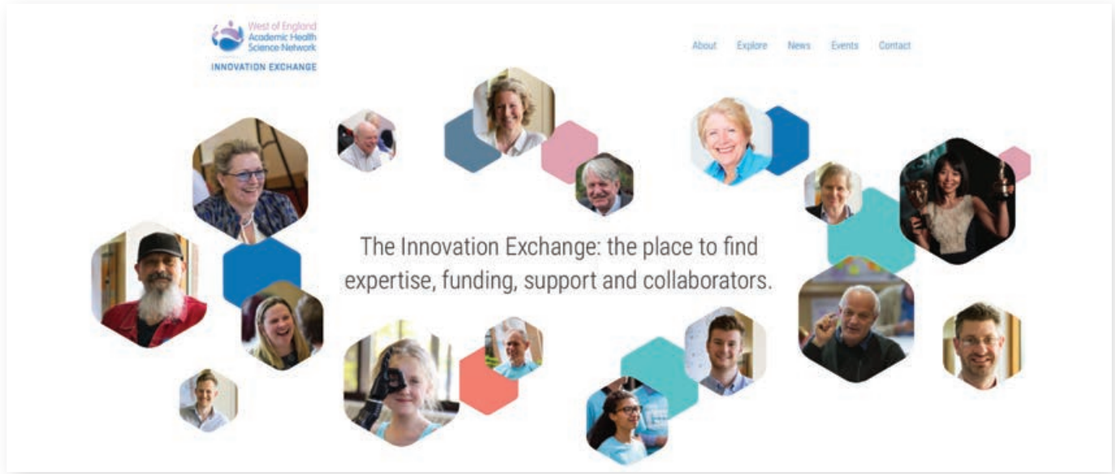
To find out more, visit the West of England Patient Safety Collaborative web pages www.weahsn.net/patient-safety ■

Online networking

As the connectors, the people that bring together innovators and clinicians from all parts of the health and care spectrum, we are constantly trying to build communities of interest. There is only a small team of us, and many thousands of innovative ideas and opportunities out there. So to expand our capacity to deliver services and facilitate collaboration we are increasing our presence online.

Over the last year we have been building and refining two online tools: *hyvr*, our online collaboration tool; and the Innovation Exchange, a web portal through which innovators can find collaborators, funding opportunities and business resources. By adding these services to our existing business support, we're developing the tools to really nurture and grow the innovation ecosystem in the West of England.

The two systems share some similarities and users can move seamlessly between them. Here Jo Bangoura, Senior Project Manager, who has overseen the development of both platforms, outlines what makes them unique.



The Innovation Exchange
www.innovationexchange.co.uk

Through our Innovation and Growth team we offer bespoke support to hundreds of companies every year, at every stage of the innovation lifecycle, from ideation to full-scale adoption. Sometimes innovators need the personalised assistance of our business support team, but sometimes they just need a connection, introduction or somebody to point them in the right direction. This second kind of interaction is where the Innovation Exchange web portal comes in.

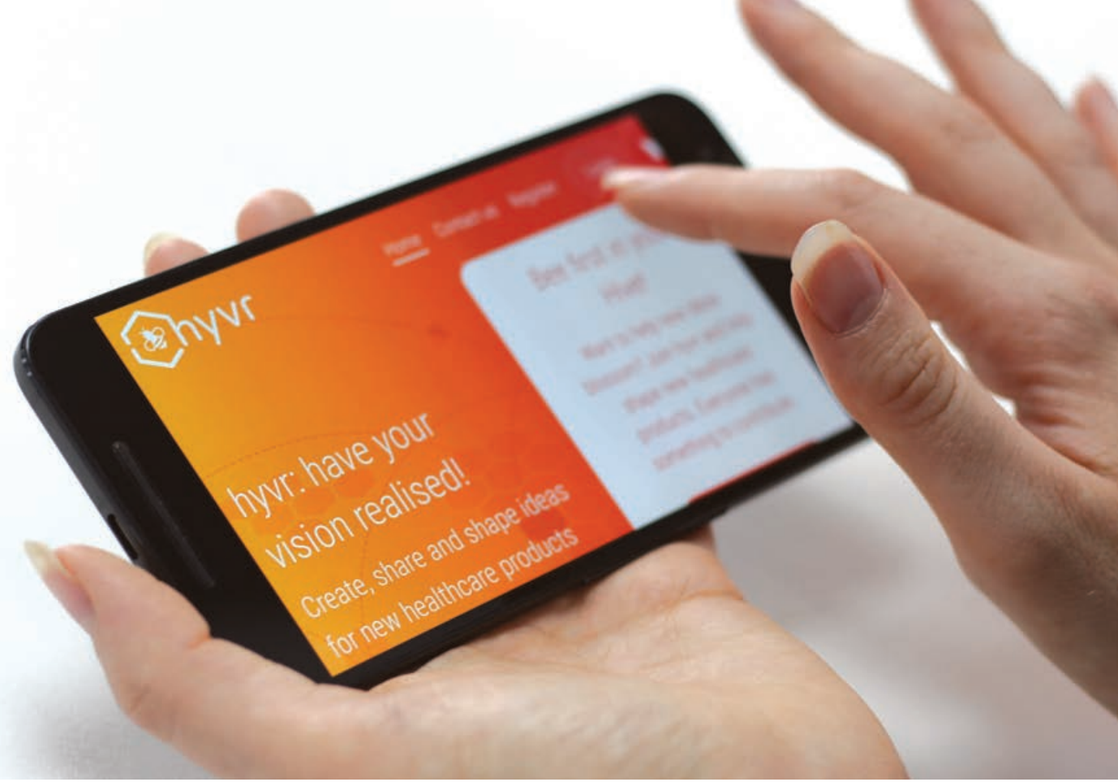
The Innovation Exchange website provides access to all of our business support services in one place.

The website offers:

- a directory of business services and facilities
- local and national funding opportunities
- business development programmes and a range of business support services
- online toolkits and resources
- information on our strategic partners and their services.

While the site focuses on the West of England, however businesses from any part of the country can register on our directory for free. We want potential collaborators to be able to find each other easily. We're also encouraging registered users to promote their events through the portal and hope to build a comprehensive listing of key innovation-related events in our region.

www.innovationexchange.co.uk



hyvr – www.hyvr.co.uk

hyvr has grown out of our work on co-design of healthcare innovation. Placing users, patients and carers at the heart of the design process allows products and services to be designed *with* them, not *for* them. This was the approach of our successful Design Together, Live Better project through which we supported local innovators to engage with citizens and healthcare professionals to develop prototype products using a combination of online surveys and face-to-face focus groups.

The project succeeded in facilitating real engagement and enabled a number of products to make progress, but it was time-consuming and resource intensive. That got us thinking about other ways we might be able to facilitate the same kind of interaction at scale.

The result of this thinking was *hyvr*, a social networking site that enables groups of interest to form in 'hives' to discuss ideas, issues, new innovations and products.

The site enables innovators to get feedback on concepts to help shape their development to market-ready products. They can ask other users if they 'like' what they see and then review responses to see if the idea is worth further refinement and consultation.

hyvr enables dialogue for any group to easily share ideas and experiences, and has additional built in features to gather feedback – all contributing to innovation in healthcare through co-design and crowd-intelligence.

We are trialling *hyvr* with a number of voluntary sector groups as exemplar projects. We are supporting them to use *hyvr* as a way to widen and deepen community engagement in their projects. At the same time we're building the active community of users on *hyvr* learning more about how the platform can be used.

The site is free to use and completely free of adverts or any data-sharing small print, giving users peace of mind.

www.hyvr.co.uk

If you register on either *hyvr* or the Innovation Exchange you'll have the chance to connect with innovators and potential collaborators across our region. Even better, as the systems are connected, you only need to register once to access both systems ■

ESCAPE-pain

Chris's story

How one of our national programmes is having a life-changing impact.

Early in 2018, 64 year-old Chris went to see his GP about worsening pain in his hip and groin. He was diagnosed with arthritis in both of his hips but decided he wasn't prepared to go through surgery to fix the problem. Instead, he started a course of physiotherapy and his NHS physiotherapist suggested he enrol in ESCAPE-pain, one of the AHSN Network's national adoption and spread programmes.

Chris attended the course, twice a week for five weeks. ESCAPE-pain is an NHS group rehabilitation programme for people with knee and/or hip osteoarthritis, providing self-management support in the community. 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. For Chris it had a significant positive impact on both his physical and mental wellbeing.

"Before ESCAPE-pain I managed my symptoms with pain relief, and avoided exercise in case it caused a flare up. After the programme I was able to re-engage with normal life; for instance I started walking the half mile into my local village and back. Most importantly the programme connected me with other people going through the same thing."

At the end of the course, Chris was referred for a further exercise programme at his local gym, which he now maintains.

"It's a lifestyle change – I could see the difference it made, and it spurred me on to continue working on the change. Before the programme, I was struggling to put my socks on; now I'm looking forward to getting out for country walks again. I've invested in some walking poles and I'm building up my confidence and stamina so that I can get out and enjoy some country walks this summer.

"The programme has been brilliant for me, I feel very fortunate to have this facility available locally. I recognise that this is very much the start of a process, but the great thing is that I feel I am back in control of my condition."

Nicholas Biffen, Senior Physiotherapist who led Chris' local ESCAPE-pain group, commented:

"Chris has been one of our star participants; he even comes back to talk to new participants about what the course can do for them. Word is starting to spread about the course now and we're getting patients referred by their GPs as an alternative to surgery, and we've even had some self-refer. I'm really happy the AHSN has chosen this as one of their key programmes to spread across the West of England, as we continually see it have a direct and positive impact on people's lives."

Megan Kirbyshire, Senior Project Manager at the West of England AHSN commented:

"It's great to hear stories like this – we know that nearly 500 patients have benefitted over 11 sites in our region during 2018/19. This will ensure that people receive the right treatment at the right time, and hopefully will relieve some of the pressure on orthopaedic surgery. It also means that hundreds of individuals in the West of England are enjoying improved mobility and a new level of understanding and control over their conditions." ■

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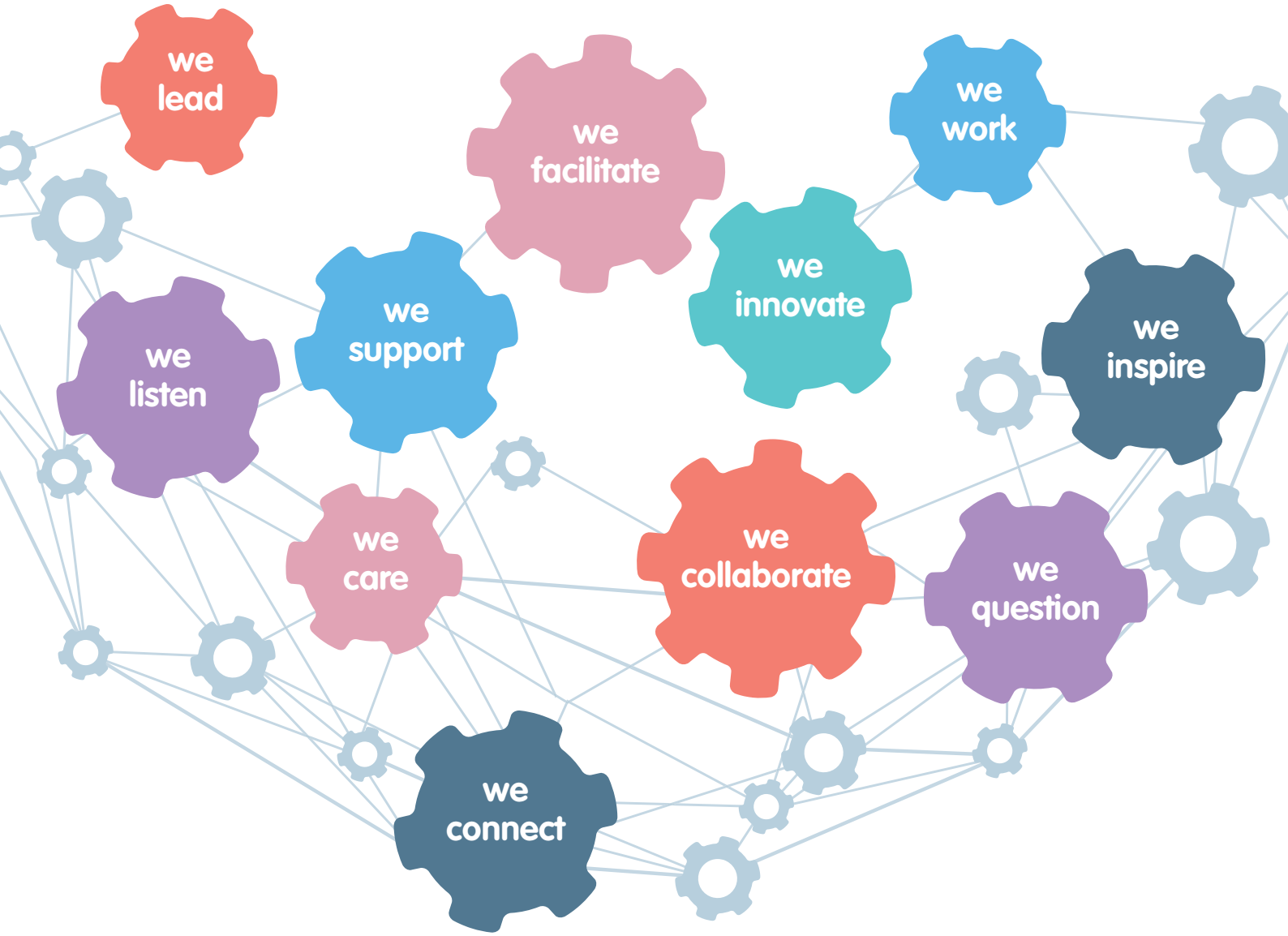

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