Tech powered healthcare

A strategic approach to implementing technology in health and care

Getting the culture right

pwc

Introduction

In response to the challenges that lie ahead for health and care organisations, the learnings from the COVID-19 pandemic and the unstoppable advances in technology that are propelling healthcare into a new era, we have distilled our research into a series of four essays. Each essay will seek to address key questions around how culture, money, skills and partnerships can play a role in transforming the health and care system.

To find out more and access the other essays in the series visit:
www.pwc.co.uk/tech-powered-healthcare

Getting the culture right

Culture makes a bigger difference than technology

Successful innovation requires cultural and behavioural change. To make transformation stick, staff must feel empowered to adopt and champion new ways of working. Supporting this change demands an understanding of the cultural values that underpin the NHS and its workers, and technology must reflect these values and meet the needs of the workforce.

> I am absolutely of the view that culture is instrumental to any kind of transformation in the NHS, but particularly one that includes the adoption of technology."

NHS clinical entrepreneur

When we interviewed senior NHS stakeholders, they repeatedly reflected on the importance of using technology to enable efficiencies that give staff the time to focus on the patient-centric aspects of medicine. Patients too saw the value of technology in making improvements. They expect clinicians to share data between organisations involved in their care – 87% of people are happy with this (Opinium – Jan 2020).

54%

of those surveyed say that overcoming cultural resistance to innovation was a key challenge to adopting technology in the NHS.

Source: Survey carried out by HIMSS on behalf of PwC

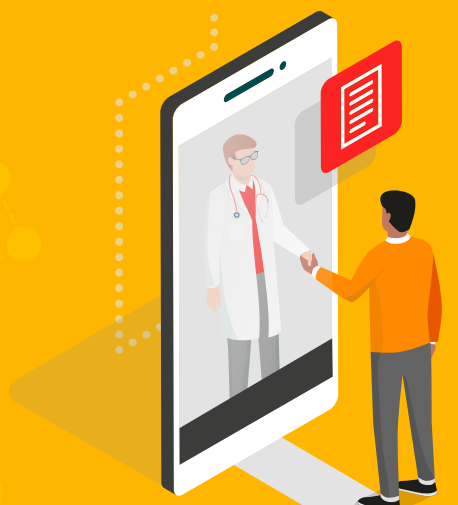
Technology can create a culture that allows time to care

In the 1930s Maynard Keynes claimed that advances in technology would lead to widespread 'technological unemployment' and suggested a 15-hour week as jobs became increasingly automated. It's hard to imagine NHS staff working a 15-hour week anytime soon. However, technology does present an opportunity to shift the role of clinicians away from repetitive tasks and towards spending more time caring for patients. Productivity in the NHS has already increased dramatically since 2010/11, and significantly more quickly than in other sectors. While this is good news, much of the rise in productivity has been driven by wage stagnation and recruitment challenges. The result, in part, is a workforce which is tired and working at or beyond capacity.

Our research found 54% of those working in health industries felt overcoming cultural resistance to innovation was a key challenge to adopting technology in the NHS, and several recent surveys have found that staff morale is low. Policy makers and leaders must take the risk that good will is in limited supply seriously and act on the opportunities that technology presents to improve clinicians' working practices by thinking critically about what it means to improve productivity and outcomes.

The NHS must rethink what productivity means. By using technology to automate processes, staff time will, by many measures, become less productive. Both caring and health outcomes – if we consider them as commodities – are difficult to measure in throughput or cost per unit of time and, as such, more time spent caring and less time spent performing administrative or process heavy tasks could be misinterpreted as inefficient. The NHS needs to rethink how skilled, clinical time should be spent as technology relieves staff of certain duties – particularly in light of the growing backlogs that will be a legacy of COVID-19 for some time to come.

There is an opportunity to achieve this cultural shift. As we've stood on our doorsteps to "clap for carers", we have, as a nation, acknowledged that some of the lowest paid in our society offer something that we profoundly need and value – care. The NHS must rethink how we use technology to create space for people to be less "productive", and how it values time spent in human, compassionate, emotionally challenging tasks.



> "In the UK, the biggest challenge is the culture of shifting our focus from what we are doing right now to a redefined future and thinking differently is hard because people don't have the head room to do it ...ultimately, if we are really serious about adopting digital technology to transform healthcare, we need to change our entire approach to its delivery."
>
> **Healthcare scientist**

We see two big areas where time can be diverted. The first is the human side of healthcare, which cannot (even as the field of “artificial empathy” grows) and should not be automated. The second is in innovating and scaling – which require stakeholder management, creativity and other human centric skills. Time for these things should be set out in job plans; consultants should have programmed activity (PAs) set aside for working on innovative projects and it should form part of their job description and appraisal. Organisations should have an expectation that staff are engaging in ways to improve care through technology and they should be paid to do it.

There is an additional advantage. How the NHS capitalises on this moment could build the will and trust to allow for future, more ambitious technology-enabled transformation programmes. COVID-19 will disrupt the health service in ways not seen since its founding, and there is the potential to use technology to bring about fast, seismic change in working patterns. GP video conferencing usage across the UK has sky-rocketed, with the average clinic in Scotland seeing a 1,000% increase in its use. The experience of patients and clinicians has been varied; a clinician operating largely through virtual clinics as part of the pandemic response told us “it’s not exactly why I became a doctor, but I can’t deny it’s efficient.” The evidence for efficiency is emerging and mixed (there is evidence to suggest that telephone consultations are more efficient when used appropriately), but COVID-19 has forced the hand of the NHS. There is a risk that technological change is occurring without the investment in cultural buy in, critical application to pathways and change management to sustain it and ensure that technological changes are made thinkingly and applied where evidence backs up their use (and if the evidence doesn’t exist, then that robust monitoring is put in to develop and share it). If we can maintain efficiencies that allow clinicians to deal with simple, routine cases quickly and safely, it has the potential to enable them to do the things that are aligned with why they became part of the NHS – those which add value but need more time.

To develop a culture of innovation, the NHS needs to be serious about getting the basics right

From speaking to clinicians and service users, we know that plenty of people who interact frequently with the NHS have ideas on how technology could improve their day-to-day working.

> "I think the technological advancement that will impact the NHS most in the future will be something quite simple and basic, like secure communication systems, like interoperable electronic patient records. These are things that other sectors have as a standard."

NHS clinician

Henry Ford reputedly said if he'd asked people what they wanted, they'd have asked for faster horses. While there's room for revolution on the scale of the motor car (robotic surgery; genomics; AI diagnostics), if the only focus is on these, we lose sight of the fact that we still have a workforce using clunky, analogue solutions for everyday problems. Anecdotally, this is leading to widespread frustration and patient safety issues. Ultimately, getting the basics right will be essential for building a culture of trust in change – when your workforce is making do with donkeys, faster horses is not a bad starting point.

Asking a workforce to engage with and trust organisations and systems with the level of large-scale transformation which the NHS requires to achieve the type of revolution imagined by Henry Ford is unreasonable if the technology fails to meet the needs and expectations of the workforce using it.

Taking this further, the NHS has a huge asset in an intelligent, highly skilled, well-trained workforce – and not engaging with them on how technology can make their roles more efficient and effective would be a waste. Part of the solution will be to invest as much in technologies that simplify the systematic complexity of the health system (e.g. population health management or patient records and communication) as in complex innovations that solve specific challenges (e.g. robotic surgery; genomics).

Our polling showed how keen NHS staff are for improvement and basic standards: 42% of respondents felt that mandating technology standards was the highest priority change that could be made to the UK health and care system – second only to digitalising access. The latter has seen an extraordinary catalyst in the form of COVID-19 – but there's a clear lack of confidence that organisations can get the basics right without being forced into doing so.

42%

of those working in healthcare think that mandating technology standards should be held as highest priority for improving our health and social care system.

Source: Survey carried out by HIMSS on behalf of PwC

Research shows that innovation works best when the end-user is involved in solution design, delivery and implementation

How can the NHS create this culture of change? Innovative solutions developed from within services are more likely to be implemented and accepted than those created by external force. An example of rigorous application of this principle is the Veterans Health Administration (VHA), which launched the Diffusion of Excellence Initiative in 2015, aimed at replicating, scaling and spreading innovations developed with greatest potential for impact and positive outcomes.

After strict impact evaluation, these programmes are refined and rolled out. It sounds labour-intensive, but it works; frontline VHA staff have submitted more than 1,676 programmes, 47 of which have been replicated more than 412 times in Veterans Affairs hospitals across the USA. The impact is improved care for more than 100,000 veterans and approximately $22.6 million in savings for the VHA. With time and investment, this structure could be replicated in the UK. Here, Integrated Care Systems (ICSs) are better placed to champion and nurture local innovation than individual Clinical Commissioning Groups (CCGs) or individual providers. Working closely with local partners and resources – universities, Academic Health Science Networks (AHSNs), local technology companies – could further embed ideas as local, community-grown solutions and tackle challenges like Kate's (see Kate's story).

ICSs should identify, review and analyse grassroots changes across the country during the crisis and provide the support, resource and expertise to improve and scale – and they should be given funding to do this. The resources and expertise to innovate exist within the NHS and the higher education sector as a network of leading research organisations. The challenge is to make sure that researchers and clinicians are equipped with the skills to scale, and to recognise the skill set (entrepreneurship, patient involvement, stakeholder management, business case development) required to do this. There are some great examples in the UK: Greater Manchester is collaborating with the University of Manchester, which in 2019 announced its launch of the Christabel Pankhurst Institute for Health Technology. The institute will develop technologically enabled healthcare products and services. These will follow an accelerated pathway to clinical use through Greater Manchester's devolved health and social care system moving from bench to bedside in less than a year. ICSs should be encouraged to pursue similar routes, identifying, funding and scaling innovation locally.

Case study:

Kate's story

Kate is a community nurse working in a rural part of south east England. Kate sees about 12 patients in a day, and drives, on average around 90 miles a day to see them in their own homes.

Kate estimates that she spends 50% of her time on administrative tasks, journey mapping and travelling, and 50% on patient care. She worries that more technology will mean more time in front of a computer and less time seeing patients. She also wants to be able to make decisions about acuity and feels strongly that a 'computer can't feel if a patient needs more support'. As such, Kate thinks scheduling and route-mapping could be automated. She imagines a system that could map her journey between patients and tell them when she is about to arrive. However, she'd like to be trusted to override this system if she knew a patient needed prioritising. It would make Kate's day much more efficient, with less time planning and more time with patients and clinical tasks. However, she doesn't feel empowered to suggest these changes, or know the route to making it happen.

Leadership at board, organisational and ICS level needs to feel empowered to embrace technology and lead on innovating change through tech powered healthcare

Changing cultures within large, complex organisations is challenging and not something that can be centrally mandated. Leadership should be driving this cultural shift in the knowledge that there is an imperative for patients and staff to use technology that makes healthcare less process focused and more patient focused.

> "I wish that more technology meant less administration. I wish that it meant less red tape. In my experience, technology has created more red tape and more administration."

NHS clinician

The current NHS leadership needs to do more to ensure it has the right skills, structures and experience at board level to empower the clinical and research community to provoke change and innovation through technology. This view was echoed by several of the senior NHS stakeholders we spoke to. They felt that leadership was too insular and relied too heavily on 'born and bred' hires. With an industry as complex as health and care, there is value in hiring from within as it means people have a deep understanding of the sector. However, our interviews showed that the NHS needs to accept insight from outside to inform progression and modernisation.

> "I think the UK needs to say healthcare is a digital business. We need to mandate the level of digital leadership at boards and execs level. The 'old school' approach needs a complete change to drive a different view of the culture. That is not happening. No IT Director or CIO should be reporting to an accountant, a finance director."

Director, NHS commissioning support unit

At an organisational level, boards need to be better supported and incentivised to develop the capabilities needed to make good decisions about technology and digital services. This may involve challenging the makeup of boards in the NHS and questioning whether boards have the right mix of skills. Ultimately, as health and care services change, more needs to be done to attract relevant skills which may well sit outside the current system. Currently, only a handful of Global Digital Exemplar (GDE) trusts have anyone on their executive board with significant experience either outside of the health sector or in working with technology, which is celebrated on their websites. This suggests that either boards are only recruiting people with NHS experience – or that experience elsewhere is not seen as valuable enough to highlight.

NHS foundation trusts	Number of exec board members with tech or digital experience listed on trust website / total board members
Trust 1	2/12 (~17%)
Trust 2	1/17 (~6%)
Trust 3	1/13 (~8%)
Trust4	1/17 (~6%)
Trust 5	0/13
Trust 6	0/13
Trust 7	0/13
Trust 8	0/13

Source: We searched for significant technical or digital experience in the biographies of all listed board members in each trust's website.

Recommendations

1

ICSs and other NHS bodies should be responsible for and incentivised to create a local culture that solves problems using technology.

ICSs should be encouraged to develop a ‘sandbox’ approach to operational inefficiencies, which should be funded by central money that ICSs can apply to having piloted ideas. This would support the scale-up and the cost of working with AHSNs to independently assess the impact of solutions.

2

Boards should recruit people with the skills that allow them to lead on technological solutions and implementation plans.

The NHS does not have the skills, at scale, to lead on technology. It needs to look outside for the right skills to bring in, requiring a cultural shift to recognise the importance of these skills alongside more conventional board roles.

3

User experience should be at the heart of developing solutions.

User experience of technology solutions is consistently cited as poor, leading to frustrations and delays at best, and patient safety issues at worst. To get the most from technological advances – particularly where there is an intention to drive efficiencies – communities and practitioners should be as involved as possible in the design process.

4

Innovation should be part of the day job. People must be paid to innovate and to spread ideas.

People do not convert overnight. The average amount of time taken to spread from conception to widespread usage is seven years; this is time we do not have. For innovations identified as a priority, clinical time should be protected for training and advocacy to promote spread, and programme management time should be dedicated to scaling.

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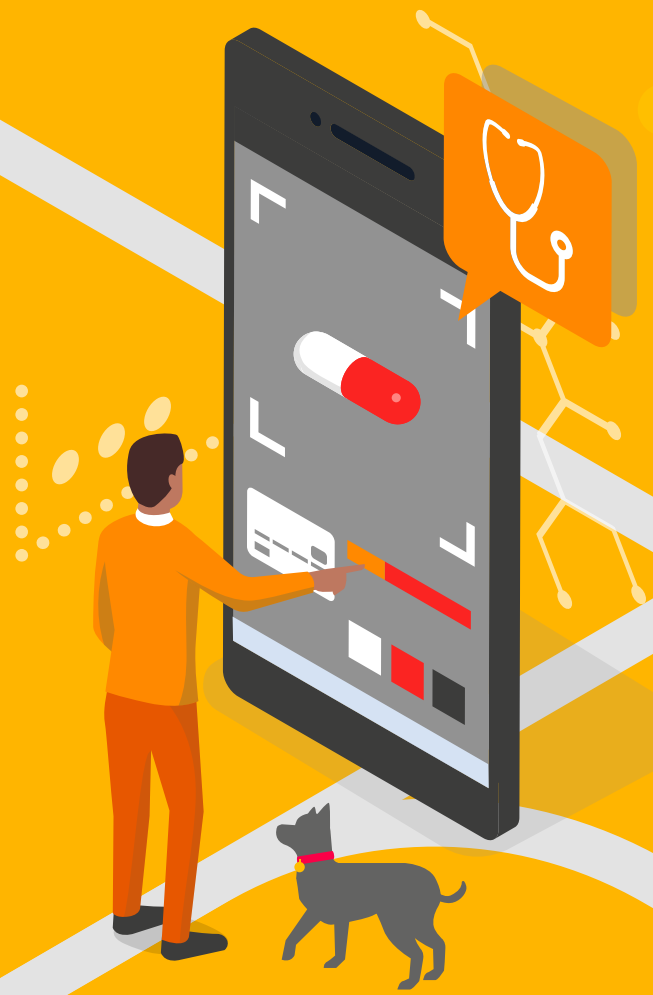

How we can help

At PwC, we're helping to lay the technology foundations for healthcare. And we're working with the industry to create the innovations that will transform healthcare for the future.

From supply chain analysis and management, to cyber security. From data and analytics, to experience design. Our teams bring together business understanding, real-world human insight, and cutting-edge technological capabilities. All built on our heritage of building trust in society.

At the heart of it all are our healthcare experts. They use their industry expertise to curate and convene the best of PwC, to create the technology innovations that will transform healthcare.

www.pwc.co.uk/tech-powered-healthcare

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Thank you

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