

Pathways, Place and Priorities for Digital Innovation

Report on a Roundtable
discussion exploring the issues
and priorities for implementing
the digital vision for the NHS
Long Term Plan

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About Breaking Barriers Innovations

Breaking Barriers Innovations is an independent research programme established to inform the radical improvement of public services using locality-driven, joined-up approaches as opposed to town-down driven blueprints.

We work to help shape a new core discipline in UK public services: that of place-based commissioning. Place-based or locality commissioners, such as Metro Mayors, Police and Crime Commissioners and NHS STPs leads are now playing a pivotal role that requires them to think and operate outside their normal silos such as health, criminal justice and local government and rebuild services around place, people, and the local economy.

The UK public sector has grown rapidly since the turn of the 20th century but has developed as a series of deeply entrenched silos. These silos are no longer fit for purpose and are inhibiting the delivery of efficient public services at new scales. Piecemeal transformation is no more than a short-term solution. The answer must be found in place-based integration.

About the Authors



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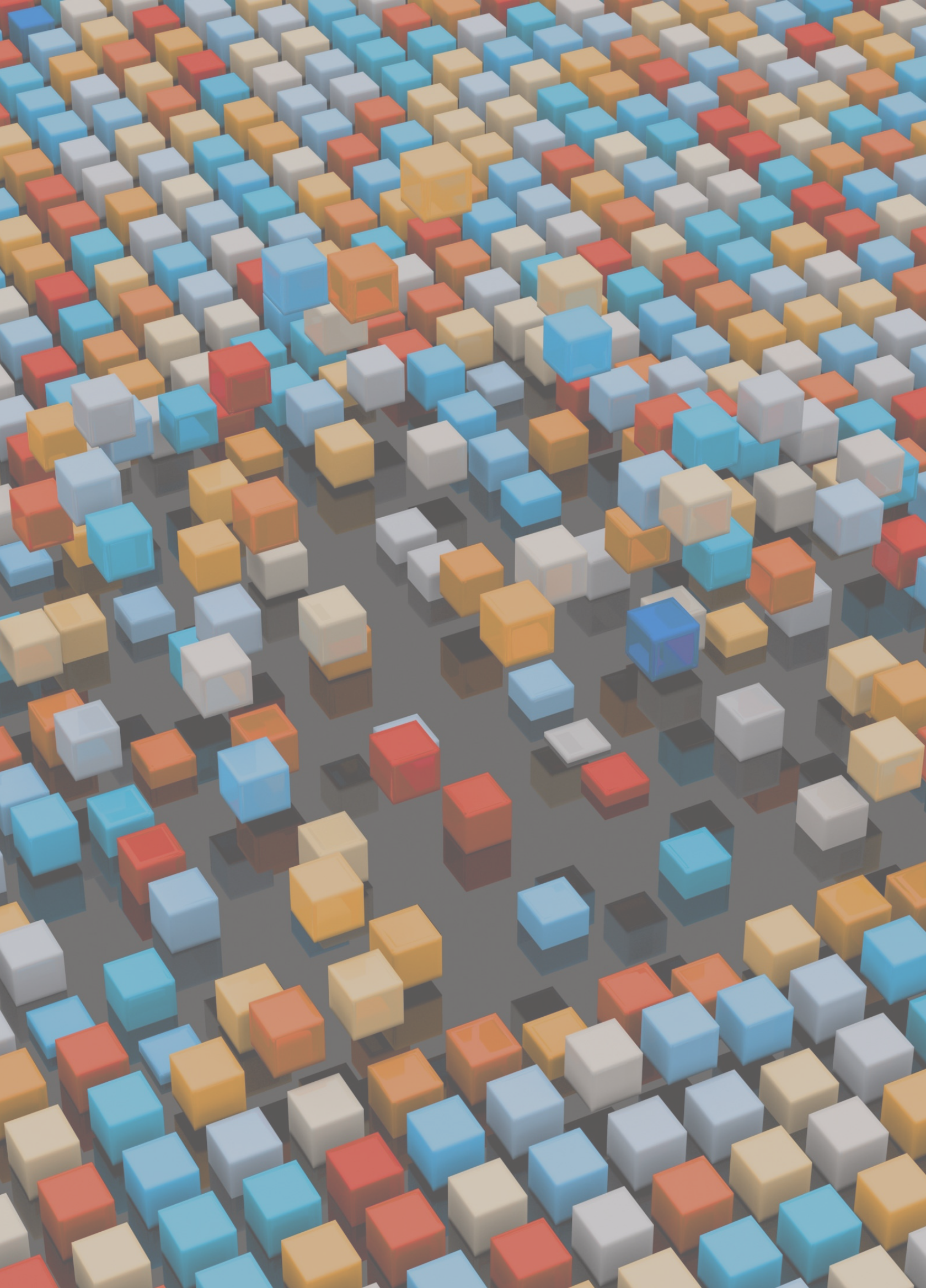
He has provided vital research support on a range of market intelligence and community research projects across the NHS, notably in Solent, Cornwall and West Lancashire where the Playbook programme was developed.

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1 Introduction

The health and social care system is on the verge of a digital revolution that has the potential to radically change the ways in which people access the NHS and social care and transform the relationship between professionals and service users. New digital technologies and recent advances in Artificial Intelligence (AI) have already altered the way in which people communicate and organise their lives and the impact on health and care will be equally profound. However, the experience of professionals and users of digital technologies in health care does not always match the promise:

“How come my doorbell can email me when it needs new batteries, but if I want to share information about a patient with another health professional I have to send a fax.”

While fax machines may be rapidly becoming a thing of the past in healthcare, the NHS has a chequered history in harnessing digital technologies for strategic benefit, for example, the abandoned £12 billion National Programme for IT in the NHS. The programme was intended to support

implementation of modern information technologies to improve the way the NHS delivers services, and ultimately enhance the quality of patient care. However, it became a case study in overoptimistic forecasting and low stakeholder buy in. The programme failed to understand the complexity of the operations involved, in particular, how to persuade NHS Trusts to take on board new systems, which were procured nationally but needed local implementation to be effective. As the NHS moves towards another upgrade in development and use of digital technologies, it is vital these lessons are learned.

This is an important period for NHS digital planning given the role new digital technologies can play in sustaining an ageing population. For example, in fifty years it is projected that there will be an additional 8.6 million people aged 65 years and over, roughly equivalent to the population size of London. This projection will take place against a projected shortage of 250,000 NHS workers by 2030.

With these factors in mind and the relatively poor history of digital innovations in health and care, Breaking Barriers Innovations held a Roundtable discussion on 20th March 2019. With Professor the Lord Patel of Bradford OBE as chair, the Roundtable provided an opportunity for decision-makers in the NHS, Local Authorities and industry partners to explore the implications for digital technologies in light of the NHS Long Term Plan. The participants explored three themes:

- **Prioritising Innovation:** How can NHS and social care leaders optimise decision-making for using the investment funnel for prioritising which digital technologies will lead to the greatest improvements in health and social care experience and outcomes? In particular, how digital technology can support prevention and help patients and service users to remain independent in the community.
- **Matching Innovative Technology with the Workforce:** What are the major digital skills gaps in the Health and Social Care workforce and how can these be addressed?
- **Building Technology around the Patient and Place not institutions and silos:** How can innovative practices be delivered to join up rather than divide the system?

This report provides a high level summary of the issues that were raised as part of the

discussion. Based on the feedback of participants, it sets out a number of priorities for action which are intended to support the national drive for a suitably equipped and supported workforce to realise the vision for digitally enabled healthcare across the NHS and social care systems.

1.1 Background

The current Secretary of State for Health and Social Care, the Rt. Hon Matt Hancock MP, has made digital innovation one of his top three priorities for the NHS. This commitment is reflected in the NHS Long Term Plan, which envisages a radical upgrade in the pace of change and implementation of digital healthcare technologies that will result in the mainstreaming of digital healthcare across the NHS. Two seminal reports provide the context and challenges for the NHS Long Term Plans' vision and commitments: The Wachter Report and the Topol Review.

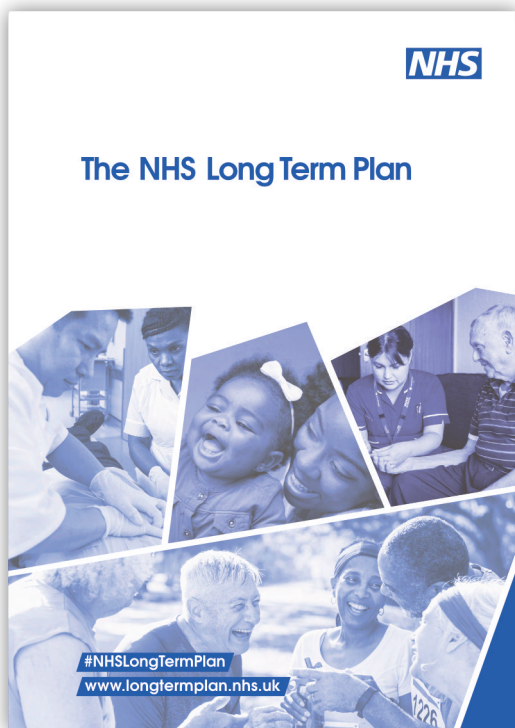
1.2 The NHS Long Term Plan¹

The NHS Long Term Plan sets out an ambitious vision for a wide-ranging and funded programme to upgrade technology and digitally enabled healthcare over the next ten years. In particular, the Long Term Plan promises that by 2024, digital technology will be mainstreamed across the NHS with a particular focus on secondary care

¹ NHS England (2019a) The NHS Long Term Plan. London: NHS England

providers in England, including acute, community and mental health care settings.

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Clinical and operational processes will be fully digitised across all these settings, locations and departments. One of the main aims is that digital technology will play a central role in helping clinicians use the full range of their skills to reduce bureaucracy, stimulate research and enable service transformation. The NHS Long Term Plan sets three commitments for digitally enabled primary and outpatient care:

- Clinicians will be able to access and interact with patient records and care plans wherever they are, with ready access to decisions, support and AI, and without the current administrative demands.
- Predictive techniques will be used to support local Integrated Care Systems to plan and optimise care for their populations.
- Secure linked clinical, genomic and other data will support new medical breakthroughs and consistent quality of care.

1.3 The Wachter Report²

The NHS Long Term Plan's digital ambition is predicated on the Advisory Group on Health Information Technology in England's report on harnessing the power

² Wachter, R (2016) Making IT Work: Harnessing the Power of Health Information Technology to Improve Care in England Report of the National Advisory Group on Health Information Technology in England. London: National Advisory Group on Health Information Technology in England.

of health information technology to improve care (Wachter, 2016).

The Advisory Group's report set out a series of principles and recommendations for implementing the digital future of healthcare, in particular, digitisation of the secondary care sector. The Wachter report strongly recommended that digitisation should be given the highest priority within planning for improvements and quality in healthcare and identified ten overarching principles for digital implementation including learning the lessons from the national programme for IT in the NHS but also:

- Having the right focus and reasons for digital innovation, rather than speed;
- Recognising that the benefits are not only financial;
- Building in user centred design and interoperability from the start;
- Encompassing both technical and adaptive change as part of a multi-faceted implementation process including appropriate workforce development.

1.4 The Topol Review³

In preparing for this enhanced digital future in healthcare, the government asked Dr Eric Topol to lead a review into the education and training changes that will be needed

to maximise the opportunities of technology, artificial intelligence, robotics, digital medicine and genomics to improve services in the NHS. The Topol Review identified that:

- 90 per cent of NHS jobs will require digital skills within 20 years;
- more than 50 per cent of today's workforce will still be working in the service in 15 years' time and most are, at best, self-taught in digital technology.

Therefore beginning and continuing to develop the digital literacy of the existing healthcare workforce is just as important as the education and training of those at the start of their careers.

The Review recommends that the future NHS workforce strategy should enable patients to be more actively involved and engaged in their care and provide robust research evidence whenever new technology is introduced. The review was based on five pre-suppositions:

1. The patient must be considered to be at the centre when assessing and implementing any new technologies.
2. There is remarkable potential for digital healthcare technologies to improve accuracy of diagnoses and treatments; the efficiency of care; and workflow for healthcare professionals, but

³ Topol, C (2019) Preparing the healthcare workforce to deliver the digital future. London: Health Education England.

implementation must only be carried out when there has been robust clinical validation.

3. Patients who are willing to take greater charge of their care using digital tools and algorithms will be empowered, but this should always be an opt-in choice for them.
4. A marked improvement in the patient-clinician relationship is possible, owing to the gift of time delivered by the introduction of these technologies. This will bring a new emphasis on the nurturing of the precious inter-human bond, based on trust, clinical presence, empathy and communication.
5. The new medicine as envisioned will require extensive education and training of the clinician workforce and the public, with cultivation of a cross-disciplinary approach that includes data scientists, computer scientists, engineers, bio-informaticians, in addition to the traditional mix of pharmacists, nurses and doctors.

- systems in place to identify and develop talented, inspiring new educators within the workforce;
- addressing skills gaps in clinical bioinformatics, digital technologies, AI and robotics, with expanded educational programmes and attractive career pathways;
- ensuring that students gain an appropriate level of digital literacy at the outset of their study for their prospective career pathway.

The conclusions from the Topol Review will inform the development of workforce implementation planning as part of the NHS Long Term Plan. It is especially important to support the NHS workforce in providing more time for care and improving the patient-clinician relationship.

Recommendations to support a digitally enabled health system include having:

- a culture for learning, which adopts a multi-professional learning collaborative approach supporting staff to learn about genomics and digital technologies;

2 Prioritising digital healthcare innovations

The radical upgrade in the development and use of digital healthcare innovations across the NHS present a number of opportunities and challenges for commissioners and providers of health and social care. For example, the NHS Long Term Plan identifies significant savings that can come from digital technology in healthcare and the pipeline for developing innovations in the NHS, will be speeded up so that proven and affordable innovations get to patients faster, for example:

- The Electronic Prescription Service (EPS) is now used in 93% of England's 7,300 GP practices, with more than 67% of their prescriptions delivered via EPS. This has improved patient experience and saved the NHS £136 million in the three years from 2013 to 2016.
- People can book hospital appointments online via the NHS e-Referral Service, which now covers every hospital and every GP practice, creating expected savings for the NHS in excess of £50 million a year.
- Building on progress already made on digitising appointments and prescriptions, a digital NHS 'front door' through the NHS App will provide advice, check symptoms and connect people with healthcare professionals. Over the next five years every patient in England will have a new right to choose this option – usually from their own practice or, if they prefer, from one of the new digital GP providers
- Doubling of the NHS Diabetes Prevention Programme over the next five years, including a new digital option to widen patient choice and target inequality.
- By 2023/24, all women will be able to access their maternity notes and information through their smart phones or other devices.
- By 2022, technology will better support clinicians to improve the safety of and reduce the health risks faced by children and adults.

Understanding how and when to prioritise digital innovations within the new NHS financial settlement is essential for effective planning and management of budgets and the drive towards integrated healthcare systems. The Long Term Plan identifies five priorities for action:

1. Empowering people
2. Supporting health and care professionals
3. Supporting clinical care
4. Improving population health
5. Improving clinical efficiency and safety

However, prioritisation of digital technology is an ongoing issue for the NHS, which does not uniformly have strategic IT skills embedded in its governance and leadership in the way that other similar sized organisations have. Nor does the NHS have a successful history of implementing digital transformation at scale.

Many Trusts and local authority partners are playing catch up and will have to accelerate their expertise and capacity in order to keep up with the full range of digital technologies that are relevant to them.

For priority actions to be mainstreamed across health and social care, participants at the Roundtable identified three areas that will need to be addressed:

- Person-centred care
- Establishing trust in the evidence base
- Balancing the benefits between cost and quality

2.1 Person-centred care

For participants, the central driver for digital healthcare innovations should be the degree to which they can enhance person-centred care. The commitment to this in the NHS Long Term Plan is ambitious. For example, by 2020/21 it is anticipated that people will have access to their care plan and communications from their care professionals via the NHS App. But, the challenge in achieving this effectively will depend on the degree that service users have control over this. This means more than giving patients access to their digital care records, it needs to extend to people being able to input data themselves. The priority for addressing this is twofold: interoperability of systems and promoting trust amongst clinicians to accept and work with user generated information.

2 Wachter, R (2016) Making IT Work: Harnessing the Power of Health Information Technology to Improve Care in England Report of the National Advisory Group on Health Information Technology in England. London: National Advisory Group on Health Information Technology in England.

3 Topol, C (2019) Preparing the healthcare workforce to deliver the digital future. London: Health Education England.

Interoperability is not just a system issue; it is also about people:

"We talk about interoperability between services but not people, we do need this across organisations and systems, but more importantly we need service users to be able to input their own data, for example, monitoring their own blood pressure."

Enabling service users to input their own health monitoring data directly onto their patient record requires a high degree of trust amongst professionals that the data is accurate.

But this is precisely what is required from person-centred care. For example, the NHS Comprehensive Model for Personalised Care⁴ establishes:

- whole-population approaches to supporting people of all ages and their carers to manage their physical and mental health and wellbeing, build community resilience, and make informed decisions and choices when their health changes;
- a proactive and universal offer of support to people with long-term physical and mental health conditions to build knowledge, skills and confidence and to live well with their health condition;
- intensive and integrated approaches to empowering people with more complex

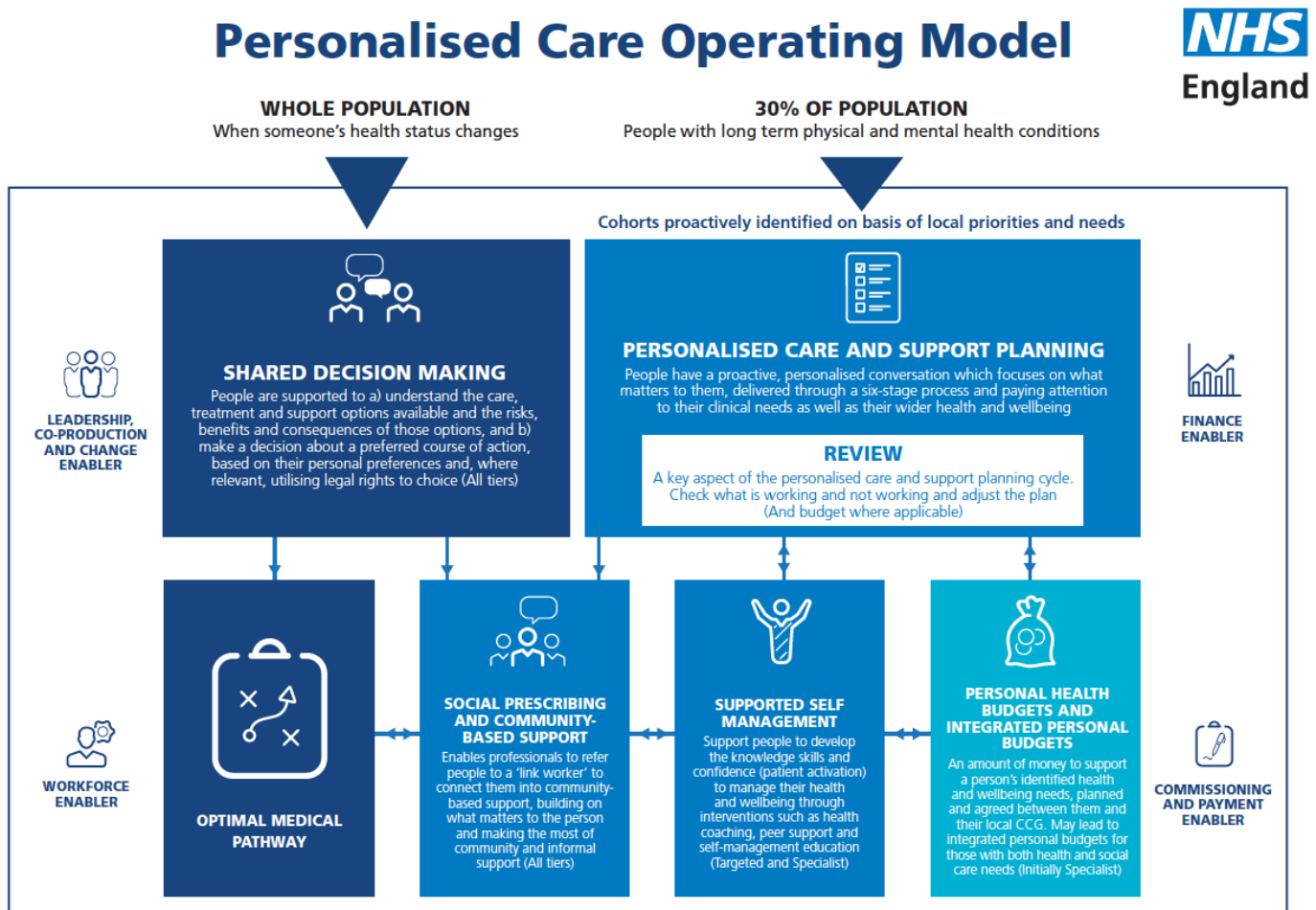
needs to have greater choice and control over the care they receive.

The model brings together six, evidence-based components or programmes, each of which is defined by a standard set of practices. These are:

- Shared decision-making
- Personalised care and support planning
- Enabling choice, including legal rights to choose
- Social prescribing and community-based support
- Supported self-management
- Personal health budgets and integrated personal budgets

⁴ NHS England (2019b) Comprehensive model of personalised care. Online: <https://www.england.nhs.uk/personalisedcare/comprehensive-model-of-personalised-care/>

The updated Operating Model illustrates how all the various components work together to deliver a joined-up approach around the needs of each individual:



Source: NHS England (2019) Updated Personalised Care Operating Model

However, while digital healthcare technologies are implicit within the model, they do not feature prominently. In particular, the model does not address overcoming potential distrust of service user generated data, which participants at the Roundtable thought was too often only done as an after thought rather than being part of the core purpose. Changing this means changing professional and organisational boundaries:

"People think they have always done person-centred care, but actually it is not always about the person, it is being done within the parameters of their own professional remit and organisational boundaries and these are what need to be addressed."

2.2 Population based planning

Use of decision-support tools and machine learning to augment the ability of the NHS to deliver personalised care and predict future behaviour is one of the priorities for the NHS Long Term Plan. Participants valued this kind of innovation at an individual level, for example, to inform care planning and risk management, but there is a perception that there are gaps at the level of translating this into population based planning:

"We are using digital tools to predict individual behaviour risks, but the Clinical Commissioning Group (CCG) struggles to understand this at a population level."

The movement of Public Health into local authorities makes sense, but it has resulted in CCGs having less of this expertise when it comes to planning and commissioning at a population level:

"Individual Apps can give clinicians insights and support in delivering personalised care, but as commissioners we need to be more involved in understanding this at a population level."

Therefore, in addition to prioritising the use of digital innovations to support person-centred care, participants called for greater understanding amongst commissioners about how to use this data to inform population-based planning for healthcare. In this way, person-centred

care is not just about individuals, but how the whole system works to support independence, choice and improved healthcare outcomes.

2.3. Establishing trust in the evidence base

While participants at the Roundtable welcomed the renewed focus and priority on digital healthcare technologies, they also perceived a lack of trust amongst frontline staff and clinicians about the evidence base for improvement:

"Everyone knows a roll out of IT that promised much, but actually made things harder."

When people's experience of using technology acts against the intended benefits, it creates a substantial barrier to adoption of new technologies. Individual resistance to digital innovation builds up over time and is experience-based. For example, many health and social care professionals, especially GPs view technology as creating more work, rather than freeing their time up to interact with patients face-to-face.

All participants knew staff members who felt increasingly frustrated by the amount of screen time that new ways of working demanded and this was feeding disillusionment with technology and burn out:

“If the evidence base for improvement is out of line with people’s experience then they will remain resistant to adopt new technologies.”

Ensuring that frontline staff and clinicians are involved in the proof of concept stage for new digital healthcare technologies is a priority for overcoming this historical resistance. For participants, this means involving professionals at the outset of development of new technologies so that they can influence the way in which is introduced and fully understand the intended benefits.

Trust in the evidence base for improvement is also a priority for service users. One of the most often cited digital technology applications are for increased monitoring of vulnerable or frail older people. Such monitoring will enable people to remain independent for longer in their home, but if the person distrusts the technology or its purpose then they will be reluctant to use it:

“People don’t like being monitored, if they perceive that to be the prime function of technology and don’t understand the evidence base or why it works, they will resist it.”

This was recognised in the Wachter report:

“The end user should be involved in the design of new technologies, which can ensure greater buy-in and support to endorse and adopt these technologies and avoid errors and frustration.”

(Wachter, 2016)

It was also a prime consideration of the Topol Review, which stated that the patient must be considered to be at the centre when assessing and implementing any new technologies.

Participants also thought that there needed to be more deliberation around the ethical considerations in developing the evidence base. For example, use of monitoring technologies for those who lack informed consent or have mental capacity issues. From this perspective, it is not just a priority to engage service users in understanding the evidence base for new technologies and the intended benefits, but also their families and carers.

2.4 Balancing the benefits between cost and quality

The NHS Long Term Plan plans to move to a blended payment model, beginning with urgent and emergency care, with a single set of financial incentives aligned to the commitments in the Long Term Plan. 2019/20 will be a transitional year, with one-year, rebased control totals.

The rebased control totals, which will be financially neutral in aggregate at the national level, will take into account the impact of distributional effects from any changes agreed following engagement in areas such as price relativities, the Market Forces Factor and national variations to the tariff. There will be greater flexibility for

all STPs and ICSs to agree financially neutral changes to control totals within their systems, where this will improve overall financial and operational performance.

Participants identified the need to find the right balance between cost and quality benefits as one of the most important priorities for digital innovations. In particular, addressing fears that the costs outweigh the quality benefits:

"People have become risk averse to costs that they perceive to be out of step with intended quality improvements. It becomes easier to avoid investment when the benefits to health improvement are not clearly demonstrated."

There is a need to find the right metrics for measuring cost and quality improvements from digital innovations. These are not simply about finances, they must include articulation of the difference and added value for people, the qualitative outcomes from digital innovations.

For example, electronic records are not just about reducing or eliminating paper records, they are a tool for improving decision-making and service user participation in their own healthcare. One way to do this is to involve service users in defining the cost and quality metrics so that these reflect lived experience and encompass things that matter to people, which may be more about lifestyle than specific health benefits.

Achieving the right balance between costs and quality outcomes can be especially challenging when these cross over health and social care. For example, digital innovations can clearly achieve higher quality benefits for individuals if they are able to remain living independently for longer. But the cost benefits to the acute care system, in terms of reduced admissions, may not be clearly realised. This requires new thinking at the level of integrated care systems to ensure that the benefits of digital innovations are recognised on a cross system basis.

This means taking account of the development costs and achieving the right balance between statutory investment through the NHS and local authorities and individual purchasing. Prioritising the business case for a new technology could appear very costly at a population level, but for individuals the cost of a digital technology or a new App would be small.

Some participants cited the use of personal health budgets to enable individuals to purchase digital technologies:

"We have used different approaches, for example, individuals have used personal health budgets to buy Alexa. It doesn't always have to be about a service, it is also changing the way that we engage with people on digital innovations."

Social prescribing was identified as an area that can be used to develop new cost and quality models for purchasing digital innovations. However, participants identified that this would require a different approach to development of the business case for digital innovations - to one that included the emotional case:

"We learnt early on that you could have the best business case to support digital innovations, but this needs to sit alongside an emotional case in order to get people to adopt the new technology and use it as intended."

The NHS Long Term Plan envisages a number of infrastructure supports as local areas develop their plans for the next five years. For example, access to expert advice and support through the regions, including clinically focused transformation programmes and access to technical expertise such as on rostering, mobile working, procurement, estates, and corporate services.

Participants thought that it should be a priority for this regional support to include expert advice and guidance on digital innovations and support to develop

appropriate local and national cost models for balancing finances and quality improvement.

3 Matching innovative technology with the workforce

Participants at the Roundtable identified three priorities for workforce development:

- Managing culture change
- Leadership
- Widening digital literacy

3.1 Managing culture change

As noted above with respect to person-centred care, matching innovative technologies with the workforce is more about changing culture than increasing capacity and skills. But changing professional culture is actually much harder than equipping people with skills. Health and social care professionals act within the boundaries of their expertise and professional culture, and do not always adapt easily to change, especially the kind of radical change that comes from digital technologies:

“People do things in the way they have learnt to do them and don’t easily adapt to new ways of working, especially when it involves digital innovations.”

The medical workforce, in particular, is thought to be prone to professional resistance. For example, medical staff are trained to always take a fresh patient history even when the move to shared record keeping makes this less necessary. New training is not thought to be the answer for this; rather there is a need to engage people in the process of adopting new technologies:

“People have a lot of myths and conceptions about digital innovations and we will only break these down by involving people at an early stage, in development and early adoption.”

Workforce development on digital innovations needs to set out the context for people and help normalise new technologies in practice. This involves enabling professionals to take control and participate in decisions about the adoption of new technologies. But it also means changing the organisational culture to one that is less risk averse and less concerned about organisational sovereignty, which requires leaders to be

proactive in supporting new technologies and innovations.

3.2 Leadership

Senior leaders and board members need to support the workforce to adopt new technologies through leading by example. They need to be seen to be taking the lead and to give permission to the workforce to adopt new technologies and embrace the changes that this can bring. However, there was a perceived risk amongst participants that too much emphasis has been placed on regulating digital innovations, which has made leaders more risk averse.

Central government and national agencies such as NHS England and NHS Improvement need to support local leaders in ways that promote innovation rather than stifle it.

This will be an important consideration for the new digital unit being set up the current Secretary of State for Health and Social Care, the Rt Hon. Matt Hancock MP. This new unit, known as NHSX, will be responsible for technology, digital, and data across the NHS. It will become operational in July 2019 under the leadership of Matthew Gould, previously the government's Director General of Digital and Media Policy. The overarching aims of the new unit include:

- helping people stay well and manage their own care by giving them easy

access to quality digital services and their data;

- helping NHS staff to focus on patients, by freeing up their time through digital technology;
- working with providers and the Local Government Association to understand how technology can help staff and users of social care services.

In particular, NHSX will set national policy framework for best practice, including developing, agreeing and mandating clear standards for the use of technology in the NHS. It will also champion and develop digital training, skills and culture so that staff are digital-ready. An important aspect of NHSX's programme will be the inclusion of industry and being open to conversations with the health technology industry.

Speaking at The Kings Fund Digital Health and Care Congress on May 22, Tara Donnelly, NHS England's interim chief digital officer set out seven priorities for NHSX:

- Setting standards to ensure all new NHS technology are interoperable.
- Publishing KPIs for key national services.
- Developing a structured and consistent approach for digital health innovators.

- Partnering with industry to leverage their capabilities.
- Developing and implementing a new transformation model.
- Enabling health and care staff to access patient records securely and reliably across the system.
- Recruiting a world class technical workforce to crack some of the toughest problems in health and social care technology.



Tara Donnelly,
NHS England's interim chief digital officer

It is important that local leaders become part of the process for supporting the use of new technologies, both by working with industry and via NHSX's prototyping and development capability. This is thought to

be especially important for sustainability and ensuring that digital innovations are adopted for the long term, as part of an embedded process.

3.3 Widening digital literacy

Participants reported having tried various attempts at widening digital literacy with varying levels of success, for example digital champions and using team briefings. Participants also noted distinct differences in digital readiness and literacy between the healthcare workforce and the social care workforce, with much more attention needed for the latter, who are seen as having lower levels of digital literacy and capacity:

"There is a poverty of diffusion and adoption in the social care workforce compared to healthcare. In the NHS the staff all have access to tablets, but the social workers only have phones."

This is in contrast to the adoption and use of technology at a personal level. Participants thought that it is important to better harness people's individual and personal experience of digital innovations, as part of their workforce development:

"Social workers are early adopters of digital technology in their home life, but less so at work, it hasn't received enough support and development."

The wider care workforce is also identified as a priority for development:

“We need to think about the wider care workforce and how to help them to be digitally effective. The reasons why it is not being more widely used in the care sector are unclear, but workforce is key.”

The Social Care Digital Innovation Programme is viewed as an important enabler for this and participants thought that greater sharing of learning from the programme with NHS colleagues would be beneficial in addressing some of the variations in capacity and uptake of digital innovation between the health and social care workforces. There is an opportunity for this as the third wave of funding from NHS Digital to support council-led digital solutions to social care challenges is underway.⁵

The current wave is providing local investment funding of up to £120,000 for projects that will be working with key partners such as citizens, social care providers, health partners and the voluntary sector to address issues within their locality or sub-region. The programme aims are:

1. Use principles of service design to address social care problems differently.
2. Develop collaborative, innovative and person-led solutions to social care problems.

3. Measure the benefits, share learning and practice to encourage wider action.

The two-year programme is split into two phases; a discovery phase and an implementation phase.

Expressions of interest are being sought for the discovery phase, where 10 councils will receive funding of £30,000 to undertake a discovery and develop a digital solution for a specific issue. The discovery phase will support councils to research and understand the needs, behaviours and experiences of users (social care service users, informal carers, social care providers, health partners and the voluntary sector).

Lead councils are expected to bring local partners through the discovery phase to develop a detailed proposal for the implementation phase. Councils will be assisted collectively and individually by a commissioned service design partner at various stages of the discovery phase. Following submission of an application and a council visit, it is anticipated that eight councils participating in the discovery phase will progress to the implementation phase (with up to £90,000 of further funding) in the late autumn.

⁵ LGA and NHS Digital (2019) Social Care Digital Innovation Programme 2019-2021: Invitation to apply for funding, 2019 prospectus. London: LGA and NHS Digital.

The programme will work across three themes:

- 1. Efficiency and strength-based approaches** – engaging citizens in the design, development and delivery of health and social care processes or systems.
- 2. Managing markets and commissioning** – councils working directly with social care providers to improve the quality, range and efficiency of care and support provision.
- 3. Sustainable and integrated care and health systems** – approaches to cross-sector working and ways of improving health and social care outcomes for people.

Participants thought that the narrative for adoption of new digital technologies was often lacking or inappropriate and that clinicians and service users should be engaged in developing this:

“We need the right narratives to get the workforce behind digital innovations, but this should come from them, alongside service users. The narrative needs to show that this is not about removing something, but about what people can gain, both professionals and patients.”

“Senior clinicians should be engaged in demonstrating the value of digital innovations.”

Identifying and supporting early adopters of digital innovations is thought to be a powerful way to influence those who are more resistant. This is seen as valuable for emphasising the human element of digital use, rather than the technical:

“Digital is about people, we can teach people how to use technology but what they really need is how to manage the technology and the people that will be using it.”

One suggestion is to use a case study approach so that learning can be shared about the different ways in which local areas have managed the digital marketplace and supported adoption:

“We should build up more case studies, it is hard to sell innovations to providers, especially when a large number of SMEs are involved, so we have to get this right.”

4

Building Technology around the Patient and Place not institutions and silos

Participants identified four priority actions for taking digital innovation forward as part of place-based model of change:

1. Having a clear local vision
2. Engaging hearts and minds – professional and public
3. Flexible adoption
4. Individualised training and support

4.1 Having a clear local vision

One of the threads that runs through the previous sections and was a consistent theme of the Roundtable, was the need to build technology around people and place, not institutions and silos:

“Don’t think digital, think people.”

Participants thought that it was a priority that digital healthcare technology development does not become a new silo of its own and that it should be central to planning for integrated care systems:

“Organisational systems and silos act against innovation and we have to have ways of managing this.”

Participants thought that digital innovation should be approached from the perspective of market shaping, especially given the potential for a large amount of Small Business Enterprises (SMEs) that are involved:

“We need to consider the number of small providers and developers within the context of a market and how to shape this.”

In particular, there is a need to engage SMEs in bringing technological innovations to the health and care sector and this shouldn’t be left to happen by chance but should be managed within the local system integrated planning processes.

Participants also thought place-based approaches should consider digital innovation as an enabler of change and an opportunity to do things differently, recognising and harnessing the disruptive potential for digital innovation to support place-based change:

“Digital is a disruptive force but it can also be a support to place-based approaches and we need to keep the pressure on people, the decision-makers to make and sustain change that supports adoption of the right digital innovations, it needs to be a multi-pronged approach.”

The national vision for NHS digital enablement is clear, with a strong focus on user empowerment and decision-making, harnessing digital information to support prevention and improving healthcare outcomes. The Topol Review shows how this can be translated into tangible opportunities for genomics, AI, digital medicines and robotics. However, this all needs to be part of a clear local vision for digital healthcare innovation that is part of place-based planning and service transformation strategies.

It needs to be a shared vision across NHS and local authority partners alongside industry, community and voluntary sector partners and patients. The advantage of a place-based local vision is that it will clearly embed plans for digital healthcare

innovations within the broader area plans and strategies for socio-economic renewal. In this way, digital innovations can be understood not just as a health innovation, but as something that serves the whole population and supports broader wellbeing outcomes. The benefits of this approach include:

- A whole system approach to digital innovation that encompasses health and wellbeing within the context of the social determinants of health, for example, employment, addressing social isolation and housing.
- Supporting local authority duties for market shaping that addresses the wide range of SMEs and digital providers entering the market for healthcare.
- Strengthening the use of predictive data and information for population-based health and social care needs assessments, which can better inform integrated planning and commissioning for health and social care services.

The key to success is in having an integrated local vision for digital innovation that harnesses the potential for technological development and use of MedTech, AI, robotics and digital access together. In this way digital innovation can become a core support mechanism in the

drive towards integrated health and social care systems.

4.2 Engaging hearts and minds – professional and public

Adoption and diffusion of digital innovations does not happen in isolation, it requires support and understanding among a range of professionals, service users and the wider public. While the local vision articulates the anticipated advantages and sets out the steps for digital innovation, this needs to be socialised with professionals, service users and the public. This should also support a broader strategy for digital participation that uses the potential for digital innovations to address health inequalities and better meets the needs of vulnerable population groups.

As the digital revolution across the NHS gains pace, it is essential that local areas are able to win hearts and minds in support of the local vision and to enhance adoption and use. Adoption of new healthcare technologies is currently being driven by a combination of national and local drivers. For example, all GP practices are expected to be able to offer access through the NHS App from July this year.

NHS England and NHS Digital are working closely with CCGs to schedule in connection dates for GP practices, but this needs to be managed within the context of

other local system changes such as the establishment of Primary Care Networks.

Public expectations about the NHS App will be driven from national media coverage, but appropriate and effective use will depend on the local systems and willingness and understanding about use of the App within primary care. The public, patients and GPs need to be engaged at local levels to support the increased digitisation of primary healthcare. In similar ways, development and adoption of MedTech, AI and robotics in secondary healthcare will require a robust approach to public, patient and professional engagement.

4.3 Flexible adoption

The NHS has a poor track record of wholesale introduction of IT programmes that have been undertaken from a top down approach without sufficient flexibility to work with local circumstances and system variations. Local system leaders need to have permissions and freedom to adopt digital innovations in a way that meets local priorities and plans. Flexible adoption means having the scope for variation within an appropriate regulatory framework.

This approach fits well with the national programme of Global Digital Exemplars (GDEs) and the plans for an extended number of fast followers. All Acute Global

Digital Exemplars are now partnered with fast followers (Trusts who will support the spread of best practice and innovation) and plans are underway to link mental health GDEs with fast followers. However, as the pace of change for digital innovation increases, there is a need to ensure that those areas not covered by a GDE or fast follower are able to develop their digital maturity in a similarly flexible and locally sensitive way.

The risk of flexible adoption is that some areas fall much further behind and this could threaten the national plans for digital innovation to be mainstreamed across the NHS.

Balancing local area needs and maturity against the national drivers for a radical upgrade in digital innovation will require senior NHS and government department leadership to acknowledge the challenges and provide overarching guidance and support. It is also important that local authority and industry partners are able to fully participate in the roll out of the GDE programme and that learning is diffused effectively and rapidly.

4.4 Individualised training and support

There is a significant workforce development need for digital innovation that requires individualised training and support. In particular, it is important that

workforce development plans take account of the four elements of digital empowerment:

- patients being able to participate actively in their own care;
- a greater focus on wellbeing, to prevent health problems including earlier identification of cancer, hypertension and risk of self harm;
- being able to predict the most appropriate treatments and applications of digital technologies and MedTech;
- personalising the management of long-term conditions.

The Topol Review recommended that:

"The requirement for flexibility and personalisation of learning should extend to the future workforce who should be able to move away from a one-size-fits-all approach."

(Topol, 2019)

In particular, Topol recommended a series of actions to support the design of curricula for digital technology implementation and having the right support to ensure the mix of skills and experience in the future selection of the workforce is identified and managed. This includes the need to not only define the specific skills and competencies that the future workforce will need, but also what

they will not need and what can be safely omitted from future learning and development programmes.

Curricula development for digital innovation and use of technologies to support health and social care should provide learners with the means to understand the provenance of health data including individual user generated data and population-based learning.

New skills for understanding the use of genomics will be required and old skills may be replaced. In particular, students will need to be adept at explaining new technologies to patients and service users, and be able to support them to be part of the care team in making decisions about adoption of new technologies. These are skills in human interaction rather than technological skills and this may also bring new ethical challenges and require adaptation of professional cultures and boundaries to encompass this.

There will also be a need for greater consideration of the skills ladder and how to support students from across disciplines to develop and move with newly acquired digital skills. It is likely that the NHS will need greater numbers of professionals with a range of these skills including genomics, data science, computer science and engineering expertise to fill skills gaps in the current workforce.

However, this will need to take place against current urgent drivers for workforce development and recruitment across health and social care. Participants thought that there is an urgent need for simultaneous planning on immediate workforce development and future recruitment.

5 Conclusions

The NHS Long Term Plan sets out an ambitious framework for mainstreaming digital healthcare technologies across the NHS. The commitments outlined in the Long Term Plan go significantly beyond the reach of the Global Digital Exemplar programme and encompass every area of healthcare. This includes improvements in patient experience and outcomes for mental health, maternity, long-term conditions and social care. In addition, the Plan seeks to ensure that digital innovations, including AI and predictive technologies, can inform prevention and population-based health needs assessments.

The Roundtable was convened to explore these commitments with a range of senior managers and representatives from the NHS, local authorities and industry to enable them to identify priorities for implementation and what the future for digital innovation means at local levels.

The overarching message from the Roundtable discussion supports the earlier findings of both the Wachter report and the Topol Review, principally that enabling

digital healthcare is fundamentally about people, rather than technology.

This is the golden thread that runs through the priority areas for development set out by the Roundtable participants:

- Person-centred care
- Establishing trust in the evidence base
- Balancing the benefits between cost and quality

All of the above requires degrees of professional and public engagement with the end users, both professional and service users involved in the design and implementation of digital innovations. Alongside this, the participants identified priorities for matching innovative technology with the workforce, including:

- Culture and practice
- Leadership
- Widening digital literacy
- Engaging the workforce

The most urgent priority for workforce

development is changing the culture and professional practice and this is something that can only be achieved by the right leadership support and guidance and frameworks for using appropriate organisational and professional levers for change.

It is also essential that workforce development for digital innovation encompasses the wider health and wellbeing workforce and seeks to address the imbalances in digital literacy and access to technology. All the above will require a high degree of engagement amongst the workforce to ensure that there is an approach that can dispel myths and challenge professional resistance.

Finally, the participants identified priorities for ensuring that local areas can build their digital healthcare technology plans around the patient and place, not institutions and silos. This requires action that will involve:

- Having a clear local vision
- Engaging hearts and minds – Professional and public
- Flexible adoption
- Individualised training and support

There can be no doubt about the significance of digital innovations in healthcare and the potential to radically transform service delivery and health and

social care outcomes. But while there is widespread recognition of the potential gains and benefits, these do not come without challenges. For all its transformative and disruptive potential, digital innovation does not just happen.

If we are to fully realise the ambition of the NHS Long Term Plan for mainstreaming digital healthcare technology, then we need to put people at the heart of development and implementation. The pace of change is quickening and there is an urgent need to ensure that local system leaders, as part of the drive towards integrated health and care systems, can respond effectively to the opportunities and challenges that digital innovations provide.

6

Priority actions going forward

The Roundtable discussion has identified a number of priorities to ensure that the current visions and commitments for a digitally enabled NHS and social care system can be realised effectively. The next steps are for national digital leads, working alongside local integrated system leaders, to address these priorities and provide the right support for widespread organisational, professional and public readiness for the digital revolution that is already underway. Failing to do this risks losing professional and public support and the loss of the most effective element of all digital innovations – the enthusiasm and support of the people who will use and benefit from them.

6.1 Applied learning

While central leadership for digital innovation is important, the lessons from the past show that this will not be sufficient on its own to ensure that digital technologies provide the promised transformation in health and social care. Cynicism about the benefits of digital innovation is pervasive across health and social care and there are many instances of digital initiatives that

have promised more than they can deliver and left professionals feeling overburdened. There is a need to apply learning from the best and worse examples of digital innovations through practice studies.

There is a need to ensure that national programmes for digital technologies for health and social care are integrated, so that learning can be applied on a whole system basis. It is also necessary for local NHS Trusts and local authorities to have prominent digital leaders as part of their governance and senior leadership teams. This will help to ensure that digital innovation is fully appreciated within planning, strategies and financial allocations.

6.2 User generated data and control

2020/21 will be a watershed year for health and social care digital innovation. In particular with respect to patients and service users having access to their care records and control over care planning. There is an opportunity to use the current

period to pilot evaluations of the easiest, most dynamic and safest means for patients and service users to actively contribute to inputting data into their care plan with a range of interoperable tools.

6.3 Balancing the financial commitments between person centred care and population needs

There is a potential gap in financial planning and workforce skills for balancing budgetary commitments on personal care for digital technology use and scaling this up to address population needs. A playbook needs to be developed to address this gap so that strategy, user engagement and workforce development are developed coherently as part of an integrated health and social care digital solution that can ensure population level investments in personal care are maximised.



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