hospital times

ht

ISSUE THREE | 2021

Delivering digital healthcare

DIGITAL SPECIAL

How will digital transform care delivery?

Can the NHS maintain momentum for surgical hubs?

What does GIRFT mean for cardiac care in England?

INSIDE: EXCLUSIVE INSIGHT FROM SIMON BOLTON, CHIEF EXECUTIVE OF NHS DIGITAL

rada

A KOHLER COMPANY

INTELLIGENT CARE

WATER CONTROLS LIKE NO OTHER

Delivering the highest levels of safety and efficiency is more important than ever.

Combining smart engineering and advanced technology, Rada's new generation of digital taps will help you achieve exactly that.

- Enhancing infection control
- Improving cost and resource efficiency
- Promoting hand hygiene

PUT RADA'S LEADING WATER CONTROLS TO THE TEST

www.radacontrols.com

rada_technical@mirashowers.com

0344 571 1777

@Radacontrols

Rada – A Kohler Co

iF product design award

hospital times

David Duffy @Dave_J_Duffy
Editor
david.duffy@publicpolicyprojects.com

Niamh Macdonald
Deputy Editor
niamh.macdonald@publicpolicyprojects.com

Vicky Burman
Sub-Editor
vbeditorial@uwclub.net

Carl Hodgkinson
Partnerships Manager
carl.hodgkinson@publicpolicyprojects.com

Lee Davies
Partnerships Director
lee.davies@dorsonconnect.com

Joe Everley
Design
19-Ninety
joe.everley@19-ninety.com

Hospital Times is published by Public Policy Projects Limited. Registered in England and Wales 05401243

Print & Digital Publishing by CPUK Print Publishing

ISSN 2398-5070 (Print) ISSN 2398-5089 (Online)

Public Policy Projects
Public Policy Institute

Hospital Times,
Public Policy Projects,
County House,
St Mary's Street,
Worcester, WR1 1HB

Tel: 01905 330177 **hospitaltimes.co.uk**

Welcome

Please excuse the irony of publishing a digital special edition in print, but it's now more than timely to do so. The sector seems awash with new reports outlining fresh visions for digital healthcare and how to achieve digital delivery. But defining and delivering digital healthcare are two distinct goals.

In this issue of *Hospital Times* we have an element of the 'vision' and an element of the practical application of digital. The soon to be former Chief Executive of NHS Digital, Simon Bolton, outlines how his organisation is building on its Covid-19 response to help foster innovation across the NHS. Simon, who will shortly take up post as NHS England Chief Information Officer, provides a compelling testimony as to how NHS Digital has worked to engage with patients and end users – getting closer to problems and working with end users to co-create solutions.

It will be fascinating to see how these principles will work in practice once NHS Digital has been officially merged with NHS England. The government is once again reorganising central NHS organisations in the name of streamlining decision making, with NHSX also set to be merged; read some thoughts on this from Lottie Moore, Senior Policy Analyst at Public Policy Projects, on page 64.

Speaking of NHSX, we have an extended interview with Giuseppe Sollazzo, Deputy Director and Head of AI Skunkworks & Deployment at NHSX, who delves into the cultural and practical obstacles to advancing AI in the NHS. We also had a fascinating conversation with Peter Thomas, who is heading up the newly established Department of Digital Medicine at Moorfields Eye Hospital NHS Foundation Trust. Peter's focus is on digital delivery and his new department poses interesting questions as to how the concept of digital medicine can be embedded into clinical training as well as care delivery – read more on page 17.

Looking beyond digital, we have a deep-dive overview of the status of surgical hubs in England in our Estates & Facilities section. Tamora Langley, Head of Media, Policy and Public Affairs at The Royal College of Surgeons of England, praises the recent capital funding injections for surgical hubs but calls upon government and the NHS to keep the momentum going. Building on this, Lindsay Dransfield, Chief Commercial Officer of Vanguard Healthcare Solutions, explains how a modular approach to surgical hub design can enable regionally tailored care (see page 32).

David Duffy
Editor, *Hospital Times*
| @Dave_J_Duffy

For more information on Public Policy Projects' privacy policy, please visit www.hospitaltimes.co.uk/privacy-policy

Contents

News & Views

7 **Missing referrals could number nine million as elective care crisis deepens**

8 **Morriston becomes first UK hospital to be powered by dedicated solar farm**

9 **New report from NHS Providers aims to "demystify" technology decisions for trust boards**

10 **Government report recommends new era of digital transformation**

12 **Integrated Care Journal establishes Editorial Advisory Board to "reclaim" integrated care**

14 **Getting from understanding to true collaboration**
By Dr Masood Ahmed, Chief Medical Officer for NHS Black Country and West Birmingham CCG

Digital Healthcare

17 **Defining and delivering digital medicine**
David Duffy interviews Peter Thomas, Director of Digital Medicine, Moorfields Eye Hospital NHS Foundation Trust

20 **Collaboration, customer centricity and continuous improvement**
By Simon Bolton, Chief Executive of NHS Digital

22 **NHS AI Lab Skunkworks: the cautious early adopters**
David Duffy interviews Giuseppe Sollazzo, Deputy Director, Head of AI Skunkworks & Deployment at NHSX

24 **How can digital therapeutics evolve mental health management?**
Niamh Macdonald interviews Dr Charlotte Lee, UK Director of Big Health

26 **Is the greatest threat to the NHS only a click away?**
With Steve Heneghan, Head of Cyber Security, Net Consulting Ltd

28 **Increasing the pace of digital change in east London**
By Nina Biddle, Digital Communication Officer for East London NHS Foundation Trust

Estates & Facilities

31 **Let's keep the surgical hub momentum going**
By Tamora Langley, Head of Media, Policy and Public Affairs at The Royal College of Surgeons of England

32 **Modular surgical hubs enable regionally tailored care**
By Lindsay Dranfield, Commercial Director, Vanguard Healthcare Solutions

36 **Efficient water delivery is vital for healthcare climate resilience**
By David Merriman, UK National Sales Manager, Rada

38 **An estates strategy, now there's a capital idea**
By Melanie Relf, Associate Healthcare Partner, ETL

40 **Lifting the blinkers to tackle forgotten hospital waste**
By Dr Stephen Wise, Chief Strategic Development Officer, Advetec

Clinical Services

43 **Reimagining cardiac care in England**
By Professor Simon Ray, Dr Tim Fairburn and Dr Derek Connolly

46 **Practical solutions to the elective care crisis**
By David Duffy

48 **Protecting the surgeons of this generation and the next**
By Danielle Collins, Consultant Colorectal Surgeon, NHS Lothian Western General Hospital

50 **Striving to for same day diagnosis: community diagnostic centres**
By David Duffy

Workforce

52 **Lessons of the pandemic: Now is the time to protect our workforce**
Niamh Macdonald interviews Dr David Wrigley, GP and Deputy Chair of the British Medical Association

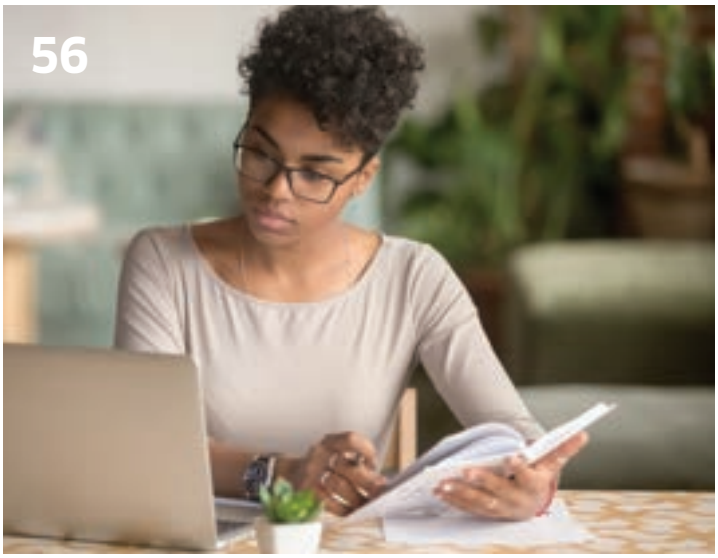
56 **Preparing the workforce for digitally driven healthcare**
By Dr Neil Ralph, Head of Technology Enhanced Learning at Health Education England

58 **PPP proposes comprehensive reform to workforce policy**
By Eleanor Murray, Policy Analyst for Public Policy Projects

Health Policy

62 **Can the UK become a life sciences superpower?**
By David Duffy

64 **Will merging the NHS increase the pace of digital change?**
By Lottie Moore, Senior Policy Analyst, Public Policy Projects



NEWS & VIEWS

"Missing" referrals could number nine million as elective care crisis deepens

Millions of people have avoided seeking or been unable to obtain referrals for healthcare during the Covid-19 pandemic, this is according to new analysis from the National Audit Office (NAO).

The NAO estimates that between March 2020 and September 2021 – there were between 7.6 million and 9.1 million fewer referrals for elective care.

The NAO also estimates that there were between 240,000 and 740,000 "missing" urgent GP referrals for suspected cancer during the pandemic. In addition, it was found that up to September 2021 between 35,000 and 60,000 fewer people started treatment for cancer than would have been expected.

The report claims there is a real risk that the waiting list for patients seeking elective care will be longer in 2025 than it is today. The NAO predicts that if 50 per cent of "missing" referrals for elective care return to the NHS and its activity grows only in line with pre-pandemic plans, the elective care waiting list will reach 12 million by March 2025. If 50 per cent of "missing" referrals return and the NHS can increase activity by 10 per cent more than was planned, the waiting list in March 2025 will still reach seven million.

Commenting on the report, Ruth Thorlby, Assistant Director of Policy at the Health Foundation, said: "The NAO's report has delivered a cold dose of reality about the scale of the challenge facing the NHS in the years ahead. Even before the new Covid variant emerged, the NAO warns that the record-breaking waiting lists could grow even bigger before they improve. Any more disruption risks making the mountain to climb that much higher.

"Given the huge uncertainty, the government's NHS recovery plan needs to be realistic about the complexity of bringing waiting lists down and how long it may take to do so."

Addressing backlogs and reducing waiting times will be a multi-faceted challenge for the NHS. Announcements about additional funding in September and October 2021 answer some questions but important uncertainties about the road to recovery remain. Increasing the numbers of hospital beds, nurses and doctors beyond the levels already planned could take years because of the time required for capital projects and for training. The ongoing Covid-19 pandemic could also continue to affect bed and staff availability in unexpected ways and at short notice.

Responding to the report, Deputy Chief Executive of NHS Providers, Saffron Cordery said: "Trusts and frontline staff are working incredibly hard to bear down on this backlog and progress is being made but this report highlights the sheer difficulty in trying to predict how long a full recovery will take.

"We are also faced with ongoing uncertainty over how many people will continue to come forward for care, the number of hospital admissions due to Covid-19 hospitalisations in the future, particularly given the threat of Omicron, and how quickly we can stabilise the urgent and emergency care pathway."

Morriston becomes first UK hospital powered by dedicated solar farm

Brynwhillach Solar Farm has started exporting zero carbon electricity to Morriston Hospital as the project officially goes live.

The Swansea Bay University Health Board (SBUHB) solar farm has a total of 10,000 solar panels installed by Vital Energi, generating 4MW of zero carbon electricity for Morriston Hospital. The solar panels are predicted to reduce the health board's carbon emissions by approximately 20,000 tonnes over the lifecycle of the project.

Scott Lutton, Operations Director of Vital Energi North and Scotland, said: "This is a very important project for both the health board and the NHS in general as it will be the first Welsh hospital to receive its electricity from a dedicated solar farm and, in addition to the large carbon savings, the hospital will reduce its energy spend by £439,000 per year.

"As energy security is paramount to the NHS, the solar farm underwent a rigorous testing period and met all the requirements of the local distribution network operator. Once it successfully passed these requirements the system went live and is now supplying zero carbon electricity to the hospital."

Morriston Hospital and the solar power farm are connected via a 3km private wire network and supporting electrical infrastructure, installed by Vital Energi.

The solar farm is among a number of works planned by SBUHB to make its sites more environmentally friendly, including installing pipework insulation and LED lighting. The first phase of these measures generated £870,000 of cost savings per year and reduced carbon emissions by 2,476 tonnes per annum.

Des Keighan, Assistant Director of Operations at SBUHB, said: "The project presented a number of challenges, however the health board's project team, together with Vital Energi, were able to overcome these and deliver the UK's first dedicated solar farm with private wire supplying carbon-free electricity to a large acute hospital.

"The health board takes its environmental responsibilities seriously and is committed to reducing its carbon footprint. This development demonstrates the health board's commitment to the Welsh Government's target of net zero carbon by 2030."

New report from NHS Providers aims to "demystify" technology decisions for trust boards

On 2 December NHS Providers published *Making the right technology decisions,* prepared jointly with consultants Public Digital. The guide is a part of the Digital Boards programme, which aims to build board-level understanding of the potential and implications of the digital agenda.

Digital Boards has been commissioned by Health Education England as part of its Digital Readiness programme and is supported by NHSX. With technology playing an increasingly vital role in addressing issues spanning the sector, the programme was created to increase the confidence and capability of boards to use digital tools.

The guide emphasises the critical role of technology in health and care but highlights that trust boards now regularly have complex technology decisions to make. In many cases board members can feel unequipped to make these decisions. In response to this, the guide states that it is "designed to make technology less intimidating and more accessible".

The contents outline the importance of technology and the current point of NHS transition towards digital integration. It also explores key considerations for boards ahead of making any technology decisions and sets out strategies for managing technology risks within the NHS.

The guide points specifically to electronic patient records (EPRs) and interoperability agendas in an attempt to make them more accessible for board leaders. It addresses a range of questions that boards should consider when making decisions on EPRs and interoperability agendas. This guidance aims to be suitable for all NHS trusts, regardless of digital maturity level.

Saffron Cordery, NHS Providers Deputy Chief Executive, said: "The pandemic has put digital in the spotlight, with an abundance of innovations and many services adapting the way they are delivered.

"Consequently, trust boards are having to make decisions on technology on a more regular basis. This involves managing risk, making choices and ultimately avoiding bad decisions.

"This guide supports all board leaders, equipping them with the questions and considerations to reflect on during the decision-making process."

Sonia Patel, Chief Information Officer at NHSX, said: "Boards should be comfortable making decisions on technology, in the same way they discuss finance, quality and operations. This will enable trusts to identify digital technologies that can improve care and transform services for frontline users and citizens.

"The Digital Boards guide helps demystify the technology agenda for board leaders and will better equip them to lead digital from the board room."

Patrick Mitchell, Director of Innovation, Digital and Transformation at Health Education England, said: "We welcome the publication of this latest guide, which will help health leaders ask the right questions when making decisions around the implementation of technological solutions within their trusts.

"It is crucial that these choices not only positively benefit their own organisation and patients but, with the establishment of integrated care systems, that they also consider the wider context and consider the importance of digital and data strategy integration of their wider local system."

Government report recommends new era of NHS digital transformation

On 23 November the Department of Health and Social Care (DHSC) released an independent report, entitled *Putting data, digital and tech at the heart of transforming the NHS.*

The report highlights that this is a pivotal moment of digital transformation when new methods can be used to address unprecedented NHS demand and operational pressure.

The review intends to build on the progress made in using digital, data and technology over the course of the pandemic. This includes analysing the capabilities of the NHS, defined in the report as NHS England, NHS Improvement, NHSX and NHS Digital (NHSD), to lead the digital transformation of the wider healthcare system and support integrated care systems (ICSs).

It also addresses the decision to merge NHSX and NHSD with NHS England. The report states that the decision was not based on centralisation but about empowering the centre to have the necessary "mindset, operating model, skills, capabilities and processes".

The report stresses that local leadership is key to transforming the care delivery, and that the development of ICSs creates new opportunities to use digital technology.

Chris Hopson, Chief Executive of NHS Providers, said: "Over the course of the pandemic, trusts have accelerated innovations and digital has become a core part of everyday operations, with trusts experiencing significant changes in the ways services have been delivered.

"NHS Providers welcomes centralising the leadership of NHSX and NHS Digital into NHS England and NHS Improvement, so long as sufficient focus is given to digital transformation and the important, complex and detailed work being done in this space."

The report acknowledges the accelerated progress made during the pandemic in implementing data, digital and tech, citing examples such as remote patient monitoring and the use of data analytics in the vaccine programme, but emphasises the importance of keeping up this momentum.

What the report recommends

Recommendation 1: Commit to a patient and citizen-centred organising principle for future service transformation.
The NHS should prioritise empowering citizens to manage their health and wellbeing, giving them the tools to take ownership. This involves putting citizens' needs at the centre of decision making and service design. This can improve the patient experience and result in earlier patient engagement and long-term improved health outcomes.

Recommendation 2: Consider and mitigate digital inequality in all service transformation. Expand the role of the senior responsible owner (SRO), the NHS Health Inequalities Director, to include digital inequality.
While digital approaches can improve access to health care services, they can also have unintended consequences, such as excluding those who are less digitally literate or who do not have access to advanced telecommunication services. NHS England and NHS Improvement (NHSEI) should develop national frameworks, guidance and best practice in designing and implementing digital solutions to reduce inequalities.

Recommendation 3: Commit to building patient and citizen trust and acceptance in the use of health data to improve outcomes.
Advances in the field of data science, combined with new data-driven commercial business models, have caused citizens to be concerned about the privacy of their health data and the controls in place over its use. The NHS should work with key national stakeholders to build awareness of the value of data to improve health outcomes and to improve the use and management of data in the healthcare system. The separate *Goldacre Review* is being carried out to consider the technical means to improve NHS ability to use data and respect data privacy.

Recommendation 4: Reorientate the focus of the centre to make digital integral to transforming care, with NHSEI overall accountable for executing digitally enabled service transformation.
Service recovery following the impact of the Covid-19 pandemic and the next phase of the NHS Long Term Plan must integrate digital, data and technology. NHSEI's operating model should consider the business capabilities needed to deliver care, and the broad technology map and principles that support these. A national framework should be developed to address the conditions necessary for tech-enabled transformation, the benefits of this and how it aligns with the prioritisation powers of ICSs.

Recommendation 5: Implement a new operation model across NHSEI, NHSX, and NHSD to drive digital and data transformation.
The new operating model aims to be more 'modern', linking digital and data delivery more closely with the business while clarifying the accountabilities for supporting delivery. Leaders from NHSEI, NHSX and NHSD have been in discussion to formulate a new operating model. This model has four layers: system leadership for transformation; 'transformation factory'; technology strategy, infrastructure and operations; and data and organisational consequences.

Recommendation 6: Realign organisational responsibilities to ensure delivery of the new operating model.
A new transformation directorate that is central to driving NHS transformation and establishes a 'transformation factory' is to be created. NHSX will evolve into the strategy function of this directorate, integrating NHSX delivery teams into the wider technology and transformation teams. NHSD is to be embedded in NHSEI as its tech function and the centre of excellence for technology.

Recommendation 7: Undertake a fundamental organisational capability intervention across NHSEI and NHSD to build and nurture the skillbase to support data and digitally enabled transformation and adapt ways of working to support the new operating model.
Across NHSEI there should be efforts to build basic data and digital literacy and capability at all levels. Understanding the importance of data and digital and being able to use them effectively must become a requirement for all staff. This should be implemented through career development, including on-the-job training, peer support, and mentoring and formal training. A modern digital culture should also foster an agile and flexible workplace focused on meeting user needs.

Recommendation 8: Revise financial management arrangements both within NHSEI and between NHSEI and DHSC.
Revised financial management arrangements would include the recommendations to:

- Simplify and align funding streams across NHSEI and DHSC. Ensure the right alignment of technology and other spend to support service transformation.
- Adopt a more flexible business case approach for digital transformation in line with processes adopted elsewhere in government.
- Align financial, payment and other mechanisms to incentivise digital transformation within the wider NHSEI system.
- Strengthen NHSEI's commercial expertise and influence so that it can better support ICSs and develop a single, multi-year strategy for market development.

Recommendation 9: Reprioritise NHSEI spend to lift the quantum devoted to digitally enabled system transformation. Assess the level of 'technical debt' across the wider NHSEI system and update estimates of the technology spend required to enable delivery of safe technology operations. In conjunction with DHSC, make the case for increased funding to deliver safe technology operations.
Questions have been raised regarding the low levels of expenditure on digital and technology, specifically IT. NHSEI should urgently determine the levels of spend on IT across the wider system and seek to reprioritise spend from within the wider NHSE budget to support digital transformation.

ICJ establishes Editorial Advisory Board to "reclaim" integrated care

Integrated Care Journal (ICJ) has announced a new Editorial Advisory Board to drive the debate around integration and to ensure that care is transformed for patients across the UK.

ICJ is the only UK publication dedicated to analysing system level reform of the health and care sector. The publication focuses on every facet of an integrated care system and connects stakeholders and system leaders through a unique forum of news, insight and analysis. The publication prioritises practical advice for system leaders as they look to integrate their services together.

To drive content and discussion on the platform, ICJ is establishing an Editorial Advisory Board of experts to guide ICJ editorial strategy. These experts come from every facet of ICS development, helping to ensure that ICJ content is both credible and practical.

Dr Masood Ahmed, Medical Director, NHS Black Country & West Birmingham CCGs said: "As we emerge from the pandemic and focus on recovery, the formation of the ICS couldn't have come at a more opportune moment. It's a chance for us in Health & Care to fashion a shared purpose: to build on our commitment to serving our communities.

The new structures, statutory responsibilities, and leadership will facilitate working together – embodying the spirit of true collaboration to tackle our biggest challenges, whether that be health inequalities, reduced life expectancy, waiting times, or embracing innovation. I'm filled with a sense of hope and excitement as we sail into uncharted territory, and look to a better way of putting the citizen at the heart of everything we do."

Professor Martin Green, Chief Executive of Care England said: "I am both delighted and honoured to be joining the ICJ Editorial Advisory Board because integrated services are the cornerstones of effective, efficient, and personalised care.

I want to reclaim the term integration because all too often, it is focused on processes and organisations, and I want it to be about people and outcomes. It is vitally important that we all work to a set of agreed measures, which must be the same across the entire system. It is only when we get a clear measure of success, will we be able to judge the effectiveness of an integrated system.

I hope that ICJ will be a forum where debate, discussion and innovative ideas can flourish, so that we can work towards integrated services that are fit for purpose in the 21st century. "

Dr Claire Fuller, Senior Responsible Officer, Surrey and Heartlands Health and Care Partnership said: "Integration means many different things to people, whether that be the integration of health and social care; the integration of mental health and physical health; and even the better integration between primary and secondary care.

For me, it is about joining things up, wherever possible, about reducing duplication and ultimately creating an environment that is both easier to work in and easier for people to access high quality services.

As the mother of an autistic son, and the daughter of increasingly frail parents, and as a practicing GP I know from both a personal and professional perspective the value of integrated care and the frustration and lost opportunities that happen without it."

Professor James Kingsland OBE, Professor at University of Central Lancashire said: "There is nothing new in the ambition to improve the integration of health and care services. Previous attempts however have rarely led to systemwide, sustainable and measurable gains for patients.

ICJ aims to bring actionable insights and publish active examples of how health and care services are coming together, within the new architecture described in the current Heath and Care Bill, to deliver transformative change. The main focus for a fully integrated health and care system must be to address the unacceptable health disparities in the UK and recognise the wider determinants of health that need to be addressed to generally improve societal health and wellbeing.

I am delighted to be joining the Board of ICJ, not least to further the publication of the expanding national network, for which I am the clinical lead, currently active in addressing health inequalities across England."

Catherine Johnstone CBE, Chief Executive of the Royal Voluntary Service said: "I believe the pandemic has provided us with an opportunity to do things differently – to be bold and innovative. For years, the voluntary sector has played a vital role as a connector between acute, primary, and social care – however – our

contribution is often overlooked. The pandemic has rightfully changed this perception, with an estimated 12.4 million citizens stepping forward to support the NHS and their communities.

There is also a compelling body of evidence that finds that volunteering has significant benefits for staff (e.g. morale), patients (e.g. personalised care), those volunteering (e.g. improved health) and the system (e.g. greater productivity/efficiency, future workforce). The involvement of civil society is no longer desirable – it is essential to effective healthcare integration."

Dr Nav Chana, National Primary Care Home Clinical Director, National Association of Primary Care said: "Working with the ICJ presents an opportunity to discover and share best practice on the implementation of integrated care models with a view to describing practical approaches for readers.

It is important to note that integration is a means to delivering improvements in population health. While there is an inevitable focus on structural models for integration, the absolute priority is to design care models built on the needs of people who require integration of care the most.

It's also important to note that over many years we have found it hard to integrate care clinically across sectors. Failure to integrate care based on population need results in widening inequalities and perpetuates poor value."

Dr Farzana Hussain, Clinical Director for Newham 1 Primary Care Network said: "I am delighted to work with ICJ as it is the only journal that comprehensively addresses the issues and challenges of integration – which is so crucial to ensuring we can address 21st century health requirements.

The many different organisations that make up our system of health and care must be joined together. We must let go of tribalism that has contributed to creating a siloed system of health and care.

Without integration not only do we jeopardise patient journeys and care pathways, we also duplicate work andwaste precious resources of time and money.

We cannot afford to fail. Lives depend on it."

Sarah Mitchell, Care and Health Improvement Adviser for the Local Government Association said: "I am delighted to be working with ICJ as it is important at this time of enormous challenge to social care and health systems to have honest debates about what integration really means and what it can achieve in delivering better outcomes for the people we serve.

We can learn from where there is excellent system leadership delivering high quality, integrated treatment, care and support regardless of structure and from systems where there is effective collaborative commissioning using aligned and joint budgets."

ICJ is calling upon the health and care community to reclaim integrated care, and experts and stakeholders are encouraged to reach out if they want to join this editorial mission.


Dr Masood Ahmed


Professor Martin Green


Dr Claire Fuller


Professor James Kingsland


Catherine Johnstone CBE


Dr Nav Chana


Dr Farzana Hussain


Sarah Mitchell

DR MASOOD AHMED

Getting from understanding to true collaboration

Dr Masood Ahmed, Chief Medical Officer for NHS Black Country and West Birmingham CCG, reflects on how a shared vision helps health leaders make better and more collaborative decisions.

I was once invited to a leadership training programme while chair of the negotiating team for the BMA Junior Doctors' Committee; facing my own team were colleagues from NHS Employers. The negotiation, for a new national deal, was a successful one, although events in recent years make that hard to believe.

The focus of the training was 'principled negotiation, based on Getting to Yes: Negotiating an agreement without giving in by Roger Fisher and William Ury. Essentially it boils down to this: rather than trying to 'win' the negotiation (traditional 'positional bargaining'), you will deliver long-term success if you attempt to understand the issues faced by both sides and using this as a basis for working together to achieve mutual gains. Basing negotiation on 'understanding' also helps develop long-term trusted relationships, something that will be essential for stakeholders across integrated care systems (ICSs).

Integrated care means integrated decision making

Across the rapidly moving parts that make up an ICS, plans will change, often out of necessity and, inevitably, unforeseen circumstances. Secondary care, primary care, mental health, social care and other community providers on integrated care boards (ICBs) will be looking to make collective decisions based on individual and shared priorities. Uniting these goals in a health and care ecosystem still reeling from the pandemic will be easier said than done.

If ICBs can truly unite around the obvious shared goal, i.e. better patient outcomes, the focus will shift to the citizen and population rather than the organisation or provider; purpose rather than position. This could mean changing suppliers, how staff work, strategy, and everything in between. But end goal isn't everything. Crucial to determining the quality of care delivered, and outcomes eventually achieved, is the decision-making

experience, the data presented to them and what they believe to be the right call, without a broader perspective.

Establishing a meaningful and tangible vision for decision making

Decisions need to be made with a clear vision in mind: getting to a 'win-win'. In the NHS, vision can often be seen as a tick-box exercise included in a master plan, rather than a central priority. Sure, it's great to talk about visionary objectives and it's great to use this vision to get employees and patients excited. But for most, can we say that our organisational vision truly translates into action? Does it have an impact? Does it guide us? Is it really driven by our values?

My own system, Black Country and West Birmingham, has developed stronger system-level decision making by setting a realistic vision – something tangible yet ambitious that staff can work towards and stakeholders can support. The introduction of primary care clinical leadership executives (PCCLEs), for instance, was driven by the idea that primary care expertise should be leveraged in a way that uses both clinical acumen and leadership ability for maximum impact and patient benefit. This mindset helps place the population at the heart of decision making. It's too easy to pay lip service to organisational vision, but when this approach is implemented effectively, it can transform the way one makes decisions.

Vision-driven building supports the idea of making decisions based on first principles – understanding the 'what' and 'why' of what we're trying to achieve. In a reactive world, where everything is moving at breakneck pace, it's easy to get caught in the moment and make decisions on the fly. This happens in too many organisations, and stakeholders end up with choices being made without the long term being considered. We avoid this by placing vision and principles at the heart of these choices, bearing in mind the need for better decision making for both the short and long term. When we determine our vision, we're using first principles. When we make decisions that align with our vision, we're being driven by the 'what' and 'why', striving for outcomes that give short-term benefit and build towards long-term transformation of health and care for our communities.

Our PCCLE for digital/IT, one of the few primary care chief clinical information officers (CCIOs) in the country, approached the issue of patient information visibility with the aim of tackling the existing issues of duplication of tests, delays in diagnosis, harm from medication and inappropriate admissions to hospital. The understanding that improving patient information sharing is key to fixing these issues, while consulting with secondary care, mental health, ambulance service, social care and voluntary sector colleagues, supports an informed approach to the procurement of a shared care record that will create lasting change across the system for all stakeholders.

If we approach decision making this way, it allows function to then lead form. How we make these changes, and how we improve things for our citizens, can be driven by how we see the future, and what we want to achieve. Initiatives are underpinned by solid principles that are substantial, accountable and considered, and have definite benefit. Gone are the sometimes shimmery yet ineffective programmes, and in their place we have people and processes that can make a real, lasting impact. Our PCCLE for dementia was brought in with the ambition to use her field of expertise to benefit our population. She has achieved this by helping to create stronger pre- and post-diagnostic support, leading to reduced risk of crisis management (which can invariably lead to hospital admission but also keep a patient well for longer in their own home). By letting function drive form, and taking a problem-solving approach, her work has led to immediate patient benefit as well as long-term improvements for our system.

"The best decisions can never be made in isolation"

Dr Masood Ahmed
Chief Medical Officer for NHS Black Country and West Birmingham CCG

process prompting these changes. If we as leaders cannot make better decisions then we are bound to fall short, no matter how good our intentions are.

Good decision making must be based on collaboration and the best decisions can never be made in isolation. If there is only one takeaway from this article, let it be that. To build and grow ICSs in a meaningful way, health and care leaders must listen to all stakeholders – including staff and citizens. This is all too often lost within the NHS (and indeed, the wider health and social care landscape) when executives make decisions based on their own

Digital Healthcare

DAVID DUFFY & PETER THOMAS

Defining and delivering digital medicine

NHS trusts are trying to close the gap between digital aspiration and clinical implementation in healthcare.

The health sector seems to be awash with new visions for digital health. In November 2021 the government set out yet another plan for NHS digital transformation and think tanks and policy organisations across the ecosystem are trying to push digital to the care front line.

But, in the words of Peter Thomas, Director of Digital Medicine at Moorfields Eye Hospital NHS Foundation Trust, "there is, and always has been, a massive implementation gap between what is thought to be possible and what can practically be implemented into a clinical care system.

"There are AI [artificial intelligence] algorithms that have been proven to be safe and effective for decades, and yet the progress in implementing this in medicine has been painfully slow. On top of this, there is still far too much regional variation in digital maturity and in how technology is being applied in practice versus how it is used in research." Peter also stresses that the role of the Chief Clinical Information Officer (CCIO), while growing in importance, is still not prioritised enough in certain parts of the country.

Peter, a CCIO himself, heads the department of digital medicine at Moorfields. This is a new division within the Trust, launched in March 2021 and designed to accelerate the practical application of digital technology in healthcare.

"We [Moorfields] have launched this department to help close the digital implementation gap," explains Peter, "so when we have a piece of

technology that we know to be useful for clinicians looking to provide safe and effective care, we have an environment in which it can actually be implemented."

The Topol Review (2019)

The Topol Review outlined recommendations to reform the NHS into a "world leader" in using digital technologies to benefit patients. The report called for greater implementation of technologies such as genomics, digital medicine, artificial intelligence and robotics.

The focus of the report was on the digital skillset of the workforce and what new technology in healthcare would mean for selection, curriculum education, training and development in the NHS.

Is Covid propelling implementation?

In the context of the pandemic, the department has proved to be an invaluable mechanism through which digital technology could be more rapidly implemented. Moorfields specialises in ophthalmology, which is the largest outpatient specialty in the country; nationally, over 300,000 cataract procedures are performed each year. Covid-19 disruption and new infection prevention measures therefore posed major challenges to the continuation of Moorfield's service provision.

The Trust developed a virtual A&E service that went live 36 hours after the first lockdown was announced and has to date seen more than 26,000 patients virtually. Research following the roll-out found that 78 per cent of patients were able to stay at home on the day of their appointment and only 50 per cent ever needed to have a face-to-face consultation. Research also found the video consultations delivered safety levels comparable to an in-person triage, and patient feedback has been immensely positive so far.

The success of the deployment led to the Moorfields digital medicine department receiving a *Health Service Journal* patient safety award in 2021. "We have accelerated our digital ambition due to Covid, both because we needed to, but also because it showed us what the opportunities were and those digital services can not only be safe, but they can in fact enhance care provision," says Peter.

Shifting culture

Peter, a consultant ophthalmologist by background, started his digital career in research and development for IBM before pursuing a clinical career. He joined Moorfields in 2017 as a consultant ophthalmologist and became Director of Digital Innovation in 2018. His path through digital health was formed in the background of the landmark Topol and Wachter reviews, both of which proposed profound changes for the health sector.

"The idea driving this department is to create the structures and processes for clinicians to innovate and deliver safe and effective digital medicine"

Peter Thomas
Director of Digital Medicine, Moorfields Eye Hospital NHS Foundation Trust

The Wachter Review (2016) key recommendations and impact

Professor Robert Wachter was commissioned to lead a review of NHS computer systems and reported back on how IT could improve secondary care in the NHS. Among the recommendations in the final report was the development of a "staged approach" to technological implementation and of trained "clinician-informaticists". The report also recommended that NHS trusts which did not reach a high degree of digital maturity by 2023 should be penalised.

The report laid the foundation for subsequent digital reforms of the health sector, including the *Future of healthcare: our vision for digital, data and technology in health and care*, commissioned under the then Health Secretary Matt Hancock, which led to the establishment of NHSX in 2019.

It is unsurprising, then, that Peter finds himself heading up an innovation division that aims to shift cultural barriers to digital uptake in healthcare. "Every doctor coming out of medical school knows how to analyse a research paper, but the culture of digital training has yet to filter through to the country's medical schools," he explains. "What we are doing at Moorfields is taking that 'Topol Vision' and helping upskill staff to become clinical and digital implementation specialists.

"The idea driving this department is to create the structures and processes for clinicians to innovate and deliver safe and effective digital medicine."

Peter is certainly not suggesting that they have "invented the wheel" at Moorfields. "There are excellent examples of trusts creating structures to facilitate digital implementation," he says, pointing specifically to the University College London Hospitals NHS Foundation Trust, just down the road from Moorfields, which has recently created its own division to drive digital health with a similar purpose.

Peter draws clear parallels between the current state of digital medicine and how radiology was viewed in the early 20th century. "Radiology grew gradually throughout the 1920s, then reached a point where hospitals began creating their own departments of radiology, leading to a faculty of radiology. Over time, that faculty of radiology became the Royal College of Radiologists and it feels to me like we're at a similar place with digital medicine."

Could departments such as this, and organisations like the Faculty of Clinical Informatics, form the basis of a future Royal College of Digital Medicine? If not, how long will these departments be needed for?

"If we imagine 10 years in the future where digital medicine could be. A chunk of training is delivered at medical school and our workforce are rapidly becoming very digitally native, and they're understanding the clinical safety aspects of technology, as well as the data aspects of it," says Peter.

"Will we need a centralised function to drive it? Or will our clinical staff be so skilled in this that they can drive it from within their individual departments? These are fascinating questions to consider. The department of digital medicine is the right model for us right now, but in 20 years' time perhaps we will need a different model. This is an era of profound change for digital healthcare and the models of care we need to harness it are constantly evolving."

SIMON BOLTON

Collaboration, customer centricity and continuous improvement

Simon Bolton, current Interim Chief Executive of NHS Digital and soon to be NHS England CIO, outlines how NHS Digital has built on its Covid response to help foster innovation across the NHS.

The pandemic permanently changed everything in the way health and care are delivered. The changes we had to make to our ways of working in response to Covid-19 have now become essential and embedded. Collaboration using digital tools, consultations using new channels, and new data collections to inform critical forecasting and planning, and ensure the NHS wasn't overwhelmed, are just a few examples among many.

While these are the most visible steps, they might not be the most significant to the long-term future of digitally enabled transformation. We also had to change the way we think about building technology for the NHS and the people it serves, and the way we work with our colleagues in other organisations throughout the health and care system as cross-functional teams.

During the pandemic, our collaboration with NHS England and NHS Improvement, NHSX, NHS Test and Trace, and the Department of Health and Social Care has clearly demonstrated the value of working across teams and collaborating closely with both the centre and the front line.

We left our badges at the door and delivered the vaccine roll-out, the Shielded Patient List risk stratification to identify and protect the most vulnerable, and new Covid data dashboards, to name but a few. We can't afford to slip back.

Listening to and understanding the needs of our customers is the foundation of delivering the right things, and although we had to move at pace over the last 18 months, I'm proud to say we never lost sight of that.

Now we must apply those lessons to supporting and driving forward the NHS priorities for transformation. We'll continue to be guided by the impact of what we deliver, the outcomes that make a difference, and the clinical priorities. This means embedding a permanent change in the relationship between NHS Digital and the organisations around us, both individually and as a whole.

As a collective of organisations at the centre of the NHS, we need to be clear to the people on the front line and at the point of care about what we do, how we work together, and how we can serve and support them as part of the same team, to achieve the same

outcomes. Working closely with integrated care systems (ICSs) and providers will ensure we are designing the right solutions and getting the right technology and data architecture in place to support the NHS.

Innovation can happen in a much richer way if we can get closer to the problem and closer to the real needs of the customer, collaborating and co-creating with them. For example, the power of data is unarguable; it is a fundamental foundation on which managing and transforming the NHS is built. But we must ask, when is it critical or valuable to have data in the centre, and when should it be held by ICSs or trusts locally to meet their needs? And if it delivers real benefits by being held centrally, then what data do we need from our provider partners, and how can we collect it in a way that minimises the burden?

We can only build the right architecture for the solution by having a dialogue with all its users and coming to an agreement about where we as a central organisation can provide value. We can support providers to do a better job by providing direction, setting the standards, and identifying and spreading innovation.

This principle of becoming customer-centric also needs to apply to the way we build and run the things we create together. Products need to evolve and improve continuously to deliver outcomes for the system more efficiently and effectively and to offer an ever-better experience for their users.

"Innovation can happen in a much richer way if we can get closer to the problem and closer to the real needs of the customer, collaborating and co-creating with them"

Simon Bolton
Interim Chief Executive, NHS Digital

During the pandemic, many of our services have evolved at pace. For example, by scaling up massively to meet demand, NHS login has been able to go from a million users to 25 million in a year. Others have successfully faced unprecedented new pressures or a steady stream of new 'asks' for new features and capabilities, like facilitating access to the NHS COVID Pass in the NHS App. But there is still a huge opportunity to improve the citizen experience where it makes the most impact.

In the past, programmes have focused on deliverables and timelines. During the pandemic, the timeline has always been 'as soon as possible' and the deliverable 'by any means necessary'. By switching the spotlight onto outcomes and impact instead, we are forced to think more about why we are building these tools. What difference are they going to make to front line staff under pressure or vulnerable patients? Why are we developing this service rather than another with our limited resources? What's the right thing to do?

Our portfolio of improvement and transformation projects needs to directly reflect the priorities of NHS England and the broader system as we look beyond the pandemic – for example addressing the crisis in urgent and emergency care, supporting elective recovery and removing inequalities in health outcomes. We must dedicate our time as digital technologists to the things that matter for the whole system and make a critical difference to the people that rely on it.

If there's one thing above all that we learned in the pandemic it is that together we must be bold and ambitious. Our aim has to be to change the world, to dramatically improve the NHS for its staff and the people it serves at the time they are most in need. Working closely alongside our colleagues and partners as one team, we will shape and deliver the digitally enabled transformation of the NHS, where data and technology supports its people in a service fit for the future.

DAVID DUFFY & GIUSEPPE SOLLAZZO

NHS AI Lab Skunkworks: the cautious early adopters

How to drive forward AI's early adoption, to navigate concerns, manage expectations and improve clinical workflow.

Is AI going to transform the face of healthcare overnight? Or will it inadvertently destroy it by opening healthcare data to unregulated algorithms? Probably neither.

These two questions are exaggerated demonstrations of the "cultural" barriers that often inhibit AI adoption in healthcare. "On the one hand you have certain corners of the sector that have an inherently negative view of AI, the people who think it's almost evil," says Giuseppe Sollazzo, Deputy Director, Head of AI Skunkworks and Deployment at NHSX, "but just as obstructive can be the group of people who consider AI to be a magic wand to addressing challenges in health delivery."

These parallel but equally inhibiting feelings come with every technological innovation. You will have a spectrum of early adopters and enthusiasts, along with those who oppose the implementation of such innovation, due to the fear of unintended consequences.

The NHS AI Lab Skunkworks team is made up of AI and data specialists. Their brief is a fascinating one; to find new ways of applying AI solutions in both clinical and business contexts across the health and care ecosystem. Skunkworks, a small yet agile team of data scientists, works with providers to apply AI to problems and provide "proof of concept" for innovators on the front line.

Addressing misconceptions of AI (whether inherently positive or negative in nature) is a crucial part of what Giuseppe does. He says: "Our job is to navigate these conversations, manage expectations and help ensure that the system understands AI's relevance to them and then go about adopting it in the most sensible way."

There are, of course, more technical barriers that arise when dealing with AI. "AI is often a challenging concept to implement, particularly as it is becoming increasingly broad in its definition and its application; these issues become amplified in healthcare." According to Giuseppe, governance issues in both AI and healthcare frequently inhibit speedy adoption, but he insists that these are often barriers you want to have in a health system. "It helps to ensure that there are guarantees that data will not be misused," says Giuseppe.

A self-described "open data activist", Giuseppe previously worked as Head of Data at the Department for Transport, becoming "fascinated with improving the use of data in the public sector". Giuseppe is no stranger to the health sector, with a decade as IT Lead at St George's Hospital Medical School and a stint as a governor at Guy's and St Thomas' NHS Foundation Trust.

Case study: Recruitment shortlisting in the NHS

NHSX Skunkworks is examining the issue of bias in using AI to help compare and review job descriptions for the NHS England and NHS Improvement London Talent team.
It is hoped that AI can be applied to manage bias while improving the speed and efficiency of selection processes, leading to fairer opportunities, greater inclusivity and reductions in time and cost.

The project began with some research to explore the various existing approaches to using AI to solve this problem, from chatbots to CV screening, and automated decision-making processes to decision-making support tools, looking at the advantages and disadvantages they offer.

Source: AI Skunkworks projects

Pandemic and data sharing

Covid-19 necessitated more rapid and open approaches to data usage, with varying impacts for AI adoption in healthcare. "People understand that data is required to manage difficult situations in a much more profound way than before Covid-19," explains Giuseppe, who points to the *Data saves lives: reshaping health and social care with data* draft strategy from NHSX as the embodiment of the lifesaving capability of data.

The ways in which staff can access information has been overhauled, and cultural barriers to data sharing have been swept aside in favour of the strength of clinical use cases.

Any opening of data horizons is a positive trend in favour of AI adoption in healthcare, but crisis mentality should not dictate NHS data in the long-term. Central to the work of the NHS AI Lab Skunkworks is developing a normalised approach to the use of such information in healthcare. "We need to develop

'peacetime' data standards," insists Giuseppe, who goes on to say that "while challenges such as Covid have helped in demonstrating the impact of cohesive data approaches, there is an increasing sense of distrust of data sharing developing – resulting in activist groups in some corners."

Clearly the sector should not get ahead of itself by blindly following the path of innovation before trust is manifested in the public and the NHS that data is being used safely. Giuseppe affirms this: "Building trust through transparency and openness is crucial to our work."

Community building

For those early adopters with perhaps more forward-thinking leadership in terms of AI, Giuseppe's team ensures they are brought into the Skunkworks "community", where insights can be more easily shared and best practice scaled in all parts of the NHS. In practical terms, this means sharing case studies and source codes for projects, joining NHS AI Lab meet-ups and contributing to regular vlog and blog posts to share insights.

This "community" has already proven to be directly beneficial to NHS AI development. The Skunkworks team is currently working on a project with the Royal Free Hospital in London and Kettering General Hospital around clinical coding. "It turned out that they have different varieties of the same issue, essentially how to automate clinical coding. Simply having these conversations as part of a community involving two hospitals with two very different sets of issues, different populations, in different parts of the country is very beneficial in showing what can be done, what can't be done, and making sure that we develop that common language to talk about it."

Case study: Clinical coding automation with the Royal Free and Kettering General

Skunkworks is investigating whether the process of clinical coding can be supported by artificial intelligence.

The team is providing data science capability to a joint project with the Royal Free Hospital and Kettering General Hospital. This project aims to understand which open-source models are best to support clinical coders by automating part of the clinical coding process using natural language processing (NLP) to teach computers to 'read' electronic health records. The aim is for the technology to summarise and suggest the standardised codes that will then be checked by clinical coders.

Source: AI Skunkworks projects

"Building trust through transparency and openness is crucial to our work"

Giuseppe Sollazzo
Deputy Director, Head of AI Skunkworks and Deployment, NHSX

Old problems, new solutions

In the context of ominous backlog figures, NHS trusts are increasingly looking to establish how AI can help alleviate capacity concerns and free up beds. The business intelligence team at Gloucestershire Hospitals NHS Foundation Trust, supported by its chief information officer and senior clinical leaders, developed an idea to use AI to address the issue of 'long stayers', and applied to create a proof of concept with the AI Skunkworks.

Applying AI to issues such as bed occupancy could have profound impacts on NHS service recovery. "The fact that bed occupancy is a problem understood broadly across the NHS means that there is an abundance of good data that can inform projects," says Giuseppe, with "business intelligence teams saying we think we can do better at predicting people who are at risk of being long stayers. And if we can predict those people and those patients, then we can target our intervention."

The issue of bed occupancy and 'long stayers' falls into the category of issues Giuseppe describes as a "sweet spot". This is when a potential solution brings immediate benefits to the patient, the hospital and to the wider system, due to the shared nature of the issue.

However, looking ahead, Giuseppe notes that the next cohort of projects that the Skunkworks team will be working on are more clinical in nature. One of these projects consists of finding ways of applying AI to predict acute kidney injuries and prioritise observation.

As projects develop in the context of integrated care, there are interesting questions arising around what type of data should be used and how. "For each project we need to ascertain what type of data is best suited, whether it be local or national level data if we are developing more general models based on national standards, and sometimes you will need more local population-specific data. We are here to explore these questions."

Supporting decision making, not replacing it

Being realistic about current uses for AI in the hospital sector, Giuseppe is keen to stress that in his view "currently AI in healthcare works best as a decision support tool. We are a few years away from the full trials of technologies that could be used more automatically".

Crucial to the AI Skunkworks team is ensuring that people understand AI as a supplement to existing clinical decision making, not a replacement for it. "It's about understanding it as an extra tool in the hands of a clinician, as radiology was an extra tool when it was first discovered over 100 years ago."

NIAMH MACDONALD & DR CHARLOTTE LEE

Can digital therapeutics help the course of mental health management?

Hospital Times Deputy Editor, Niamh Macdonald, spoke to Dr Charlotte Lee, UK Director of Big Health, about how digital therapeutics could transform the NHS approach to mental health management.

With the ongoing pandemic still limiting face-to-face appointments, digital tools have become profoundly important in maintaining access to mental health services. Mental health apps for conditions such as anxiety and depression have been around since well before the pandemic, offering a pharmacy's worth of self-management options. However, there is limited regulation around these tools and it is not always clear which have NHS approval.

Digital therapeutics, like Big Health's Sleepio and Daylight apps, are an attempt to label what is good and effective, taken through an evidence pipeline akin to a drug. Effective digital therapeutics should allow users to self-manage their symptoms, reducing the chances of a visit to the GP or hospital.

The Daylight app is a digital therapeutic for anxiety, while the Sleepio app targets insomnia. Both have been through clinical trials, which saw 71 per cent of patients using Daylight achieve clinical improvement and 76 per cent of patients using Sleepio to achieve clinical improvement.

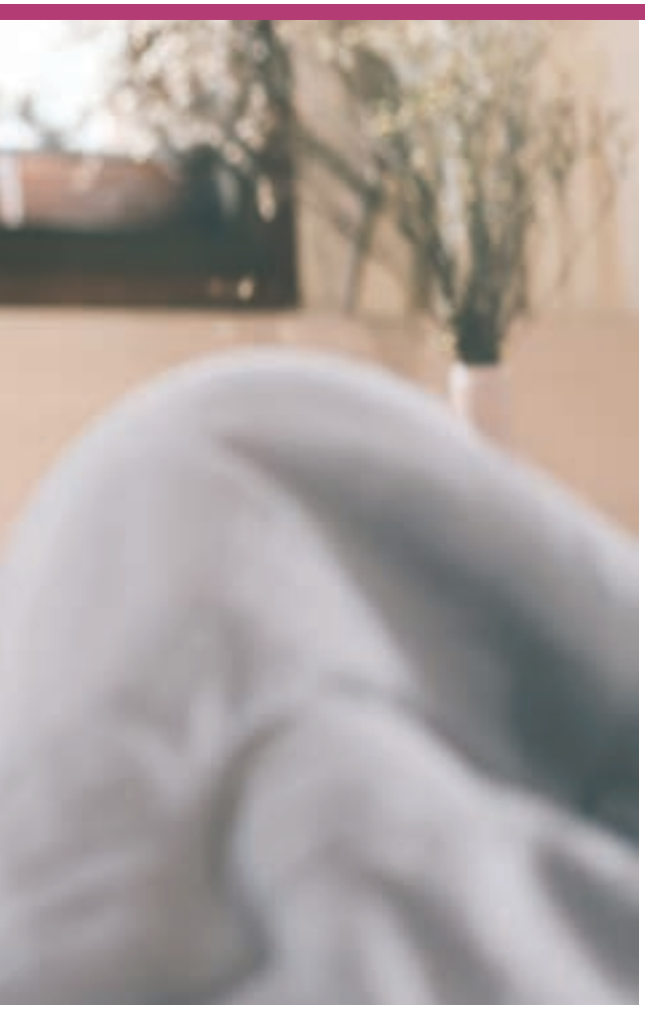
All residents of Scotland have access to Big Health's Sleepio and Daylight apps through the NHS, making it the first country in the world to offer digital therapeutics nationally. Draft guidance for Sleepio has also been issued by NICE – representing the first time the regulator has evaluated a digital therapeutic.

"Digital therapeutics are designed to create an extra level of trust and credibility with evidence to say, nine times out of 10 this is going to be very good for you, compared with all of these other products where you don't even have a statistic. It is about ensuring that when people decide to use a digital therapeutic, they know there is evidence behind it."

A new strategy

During the pandemic, the NHS was forced to switch almost overnight to a digital first model for mental health services. According to a report by The Nuffield Trust, prior to the pandemic around 80 per cent of GP appointments took place face-to-face, falling to just under half of appointments by June 2020.

This digital momentum has shifted attitudes towards digital tools such as therapeutics, making them an increasingly accepted and integrated aspect of care delivery. Dr Lee says that before the pandemic,



the NHS "just had one strategy for dealing with increased demand, which was to increase staff numbers". This, she argues, meant "it was extremely difficult to get into some of these services because of the barrier to entry in terms of the culture and the expectation around what digital could actually do for the service."

Dr Lee describes pandemic mentality to digital adoption as "rapid but pragmatic". Covid-19 forced the hands of providers, quickly dissipating previous hesitation towards digital forms of care. "There were no questions around whether digital was the right way to go because there was no other option."

The NHS now faces extreme pressure in moving through an increasingly ominous care backlog and ever-rising service demand. Despite a record number of 1.5 million people receiving NHS mental health support in June, there was an estimated 1.6 million waiting for treatment in September.

"The service cannot rely on training and recruitment to tackle this demand. It's not really a case of whether these tools are 'nice to haves' or not, they are fundamental to the evolution and indeed survival of mental health services."

Preventive and proactive care

Dr Lee argues that while the NHS has proven effective at pandemic crisis management, its focus on preventative healthcare has often been lacking.

"It's not really a case of whether these tools are 'nice to haves' or not, they are fundamental to the evolution of mental health services"

Dr Charlotte Lee
UK Director, Big Health

"The NHS has not been able to achieve a standardised level of prevention and self-care available in the population. It has not been able to collect the data across the population which shows that this is working and is going to be able to prevent people from seeing their GP as often or save money because people are less anxious, so they aren't going to A&E. With digital therapeutics and the ability for digital innovation to integrate into health records, the longitudinal view is much greater."

While large populations have relatively low levels of need when it comes to urgent access to mental health services, there are instances where self-management is not adequate and face-to-face services are necessary. Dr Lee believes this can be managed as a stepped service pathway, which caters for 'high volume' population that require 'low touch' services, as well as a 'low volume' population that require 'high touch'.

"Within the NHS, providers need to be able to harness innovation to connect different services into an integrated pathway that centres around the patient", says Dr Lee.

Developing rich, patient centred pathways can allow for people to be escalated from digital therapeutics into face-to-face care and you can do it in a blended way, such an initial Zoom call to make a diagnosis or establish a relationship.

Equality in mental health services

Navigating a route to recovery for the mental health sector will not be possible without digital tools and therapeutics. However, in striving to increase digital implementation – those without access to digital (either through limited connectivity or in digital skillsets) cannot be left behind. This is partly why GPs and other providers in England have recently found themselves under pressure to increase face-to-face appointments.

"We can't reach 100 per cent of the population but we have got an untenable situation where those who do not have digital means in England can't get access and the system is under huge amounts of pressure to see everyone face-to-face so the level of inequality that you would have looking at the system without digital therapeutics is much greater than you have with it."

Digital therapeutics may not be the answer to solving inequality in access to mental health services, but they offer a trustworthy solution that can be turned to by users in a suitable time and place for them. This can free up capacity for more personalised face-to-face services to reach out to those who are digitally excluded, while providing immediate support for those on a daunting waiting list for treatment.

STEVE HENEGHAN

Is the greatest threat to the NHS only a click away?

Not knowing where to start in tackling potential cyber security issues, the cost of putting effective solutions in place and lack of specialist expertise are all stopping health organisations taking the right steps to protect themselves.

Threats to the NHS have come in various forms over recent years. Whether the threat is the devastating impact of Covid-19 or murmurs of privatisation, there is no doubt that this bastion of British identity is something everyone strives to preserve. However, one danger lurks in the shadows daily and, with the literal click of a button, could bring a health trust to its knees. That threat? A cyber attack.

The resounding message from IT industry leaders, technology suppliers and managed service providers is that when it comes to cyber attacks, organisations need to move very quickly from a thought process of 'if' to 'when'.

Global research company Gartner's latest assessment of cyber security trends states that within just three years 75 per cent of organisations will have faced one or more attacks. Therefore, it is imperative that if health boards are not 100 per cent certain they would be able to withstand an attack and guarantee that all critical data is protected from unauthorised access, they take action to address that fast.

Steve Heneghan, Head of Cyber Security at Net Consulting Ltd, agrees with this but explains why it is not always that easy.

Recognising the wider risk

"The issue we find with organisations we've worked with is that they often don't fully appreciate the scale of the risk, or just how wide their attack surface is. More often than not, they believe they're quite well prepared, because they're unaware just how many gaping holes exist in parts of the network they either hadn't considered or didn't know existed," says Steve.

Steve adds that it is this surface level understanding of a network that can often be the greatest threat to a trust's security posture, because it leads to a situation where many stones are left unturned.

Dave Bloom, Solution Architect at security platform experts Armis, says health boards he has worked with are often astonished by just how many internet-connected devices exist on their networks. "A lot of organisations today are simply unaware of how many unmanaged devices they have on their network. If you ask a CISO [chief information security officer] 'how many internet-connected devices do you have?', they'll quote you x

number of laptops, x number of servers and this many CCTV cameras, but then you'll ask 'how many telephones do you have, how many door badge readers? What about the building management system – air conditioning, thermostats?' and that's before you even consider the situation with BYOD [bring your own devices]."

Dave adds that it is this big unknown that contributes most to the risk, because if you do not know what is on your network, you will not know who is on your network either.

He concludes by saying that in some cases it is the sheer scale of overcoming this challenge that prevents organisations from taking the necessary action.

Limited in-house security

Dave and Steve are both alluding to the same thing; they agree that, like so many things in life, the greatest challenge is knowing where to start. Cyber security is a huge and complex area, with many varying aspects, and being able to truly get a grip on it requires time, focus, expertise and the right technology – things that IT departments across the land are frequently short of.

Implementing, maturing or outsourcing security operations centres (SOCs) features prominently in Gartner's Top security and risk trends, and the reason for this is two-fold. Firstly, it is due to just how sophisticated cyber attacks are becoming, and therefore, certain levels of experience and resources are needed to both prevent and remediate the threat. Secondly, security teams are realising that affective cyber defences now require an integrated approach. A lot of security teams are effectively built around security incident and event management (SIEM) systems. An SIEM system is a good starting point, but this will always be reliant on the quality of the data it is fed, as well as the skill levels of the operators analysing it. Such systems also only provide threat detection, not a threat response.

These days, for security teams to effectively cover all angles, they need to also incorporate endpoint detection and response (EDR) tools, which help to detect 'under-the-radar' threats that evade traditional defences, and in some cases can provide an automated response, stopping the threat. Security teams should also complement all this with security orchestration and automation response (SOAR) tools, which are designed to help remove some of the burden on security analysts by orchestrating and automating response playbooks. These tools effectively act as additional members of the security team, but ones that can monitor more data than any human could and act instantaneously, should the need arise.

"More often than not, they believe they're quite well prepared, because they're unaware just how many gaping holes exist in parts of the network"

Steve Heneghan
Head of Cyber Security, Net Consulting Ltd

Outsourcing specialist capability

To introduce the technology required to carry this sort of detection and remediation, as well as the talent to effectively operate it, comes at enormous cost to most organisations. This is why there has been such an increase in outsourced SOC capabilities in recent years.

"Organisations we work with, both within the NHS and in the private sector, are recognising that they need to invest in the right technology and resources to maintain a strong cyber security posture, but the cost of doing this in-house is becoming harder and harder (and in some cases outrightly impossible) to justify," says Steve.

This, coupled with the fact that they often do not even know where to start, is what is putting organisations at daily risk of attack, but it is also where expert support can help them best.

By outsourcing their cyber security practice to a managed service provider such as Net Consulting, organisations are able to remove much of the day-to-day burden on their already stretched teams. They can benefit from state-of-the-art technology and highly qualified analysts, while at the same time focus their in-house talent where it really matters, whether that is on innovation projects that frequently find themselves on the 'nice to have' list, or on niche threat areas that require the in-house team's full attention.

MORE INFORMATION

NCL **netconsulting.co.uk**

NINA BIDDLE

Increasing the pace of digital change in East London

The NHSX Digital Aspirant programme is giving trusts the chance to accelerate their digital transformation plans.

As part of the NHSX Digital Aspirant programme, East London NHS Foundation Trust (ELFT) has rapidly increased its pace of digital change.

The trust has completely revised its digital strategy, broadened its scope and enabled organisation-wide transformation. We have a Digital Transformation Team delivering projects covering e-correspondence, e-prescribing, speech recognition, AI appointment management and mobile working solutions. Thanks to Digital Aspirant funding, Digital Communications and Digital People Participation Leads resourced, to optimise staff and service user engagement, co-produce new systems, and support roll-out across all our boroughs, spanning two integrated care systems (ICSs).

Renovating a digital first strategy

We believe that we can improve the quality of life for the East London population by becoming a 'Digital First' organisation. This means being a frontrunner in the digitisation of the NHS, and constantly looking to digitally transform the way we work. 'Digital First' at ELFT means:

- engaging and empowering service users in their own wellbeing
- using technology to solve problems, free up staff time and improve experience of care
- joining-up patient data safely, so the Trust can go paperless.

Tangible transformation

When asked about digital transformation, Matthew Gould, Chief Executive of NHSX stressed that it meant so much more than the digitisation of existing services by removing paper, or connecting existing services by improving data flows. True transformation, he says, "means taking a hard look at how we currently do things and asking how they can be fundamentally reimagined".

ELFT's multidisciplinary Digital Transformation Team provides project management, training and support, and pushes for the culture change – the social movement – that is essential to maintain digital transformation. The focus of the team is to create tangible improvements for staff and patients by reimagining ways of working.

"Our Digital Transformation Team pushes for the culture change - the social movement - that is essential to maintain digital transformation"

Nina Biddle
Digital Communications Officer, East London NHS Foundation Trust

While the Trust is part of the digital 'aspirant' programme, it has already delivered tangible improvements to patients. ELFT's Chief Digital Officer, Philippa Graves says, "transformation should deliver benefits. We have a Benefits Register which allows us to track the delivery of benefits for each project initiated and ensure that fundamentally changing the way we operate will deliver the best value."

Digitally enhancing specialist psychotherapy services

In lockdown last year, the digital pods and PC Kiosks programme enabled 20 patients a week to access care who would otherwise have been excluded. These patients were often harder to reach older adults. Users gave an average rating of 97 per cent for both ease of use for the pods and quality of care, and a 93 per cent rating on feeling safe. It reduced clinician stress by enabling a ready alternative to continuing or delivering care virtually when patient factors would otherwise have prevented this.

National Record Locator (NRL) project

Another example of realised benefits is the National Record Locator (NRL) project. ELFT crisis plans have been accessed over 731 times by London Ambulance services, with over 34,000 crisis plans made available to them in total. This has enabled paramedics and ambulance staff to offer our service users the correct care in crisis and prevents unnecessary admissions into A&E.

JAC EPMA e-prescribing system

The benefits of JAC EPMA e-prescribing system have been proven to: reduce errors as nurses can now read the legible electronic charts; reduce time taken to prescribe and administer; offer more data security as papers charts used to get lost; as well as save on costs as paper charts used to cost the Trust £30,000 per year.

ELFT is also the first mental health trust to deploy an Artificial Intelligence Virtual Agent in collaboration with Servelec and EBO. The virtual agent enables patients to view their appointments, request appointment cancellations and reschedule. It frees up admin staff from routine phone enquiries, and enables patients to get their appointment info without having to spend money on phone calls.

Meanwhile, a current project to deliver an Electronic Mental Health Act (Thalamos) is helping the Trust to go paperless and reduce errors, while the AnyConnect VPN improves cyber security and enhances the efficiency of remote working.

The future of digital transformation at ELFT

To develop more patient centred pathways, ELFT trialled a new system, Patients Know Best (PKB), Hackney SPS. The program is designed to share a more complete record of care between healthcare teams and their patients. Evidence from other trusts shows this is not only transformative for patients but it can also reduce demand and boost capacity for our services. The new system will also help reduce our carbon footprint and support our ambitions for a 'greener NHS' by moving to digital.

In 2022 we will apply all that we learnt in Hackney SPS to the roll-out in the rest of Hackney, Tower Hamlets and Newham, working closely with service users and clinicians.

Crucial to this digital journey is sharing knowledge and best practice with our Digital Aspirant network as well as with the broader NHS. For example, Camden and Islington and BEH have consulted ELFT's EPMA deployment team on lessons learned initiating and rolling out EPMA as and when they set out to start their own deployments. ELFT are a founding trust for the pan London Careflow Medicines Management Mental Health EPMA group.

With the help of NHSX the trust is working to create digital transformation blueprints which can hopefully be scaled across the country.

About ELFT

East London NHS Foundation Trust provides mental health, community health and primary care services in a variety of settings both in inpatient units, community health centres, GP surgeries and to people where they live. The Trust has 6,000 substantive staff and an army of bank staff, and operates over 100 sites. The Trust's mission is to improve quality of life for all that they serve. Four strategic outcomes underpin everything the trust does: to improve population health outcomes, to improve the experience of care, to improve staff experience and to improve value by increasing productivity, reducing waste and cut out variation in clinical practice.

Estates & Facilities

TAMORA LANGLEY, HEAD OF POLICY,
ROYAL COLLEGE OF SURGEONS OF ENGLAND

Let's keep the surgical hub momentum going

The government has made significant capital injections to develop surgical hubs, but there is no time for complacency.

Momentum is building for surgical hub development. The £700 million from the government announced in December to boost elective care capacity this winter comes with crucial support for surgical hub development. This follows a capital injection of £1.5 billion detailed within the Chancellor's budget for new surgical hubs, increased bed capacity and equipment.

Trusts are already getting to work. We have seen a range of different approaches to developing surgical hubs during the pandemic, with local areas making pragmatic design decisions in the context of their existing physical infrastructure. Three examples of these hubs in action are listed here.

St George's University Hospitals NHS Foundation Trust built a modular unit in the car park of Queen Mary's Hospital in Roehampton in a matter of months. The cost of modular operating theatre complexes ranges from £4,800 to £6,000 per m^2, making them relatively affordable, as well as quick to build. There will be different sized hubs addressing different levels of need, ranging from 'high volume, low complexity' hubs, and also 'hubs within hospitals', where more complex surgery can be undertaken.

Hubs within existing hospitals will likely require additional capital investment; to create additional separate diagnostic areas and purchase equipment that can be used solely for planned care and kept 'Covid-light'. We hope to see support for both types of surgical hubs feature prominently within the government's Elective Recovery Plan.

The principle of separating planned care from emergency care is not new, but Covid-19 makes separation of planned surgery imperative. Before the pandemic, the NHS ran 'hot', with limited spare capacity and high bed occupancy. This strategy sought to deliver efficiencies, with hospitals flexing seasonally to focus on emergency and urgent care when 'winter pressures' were high, knowing they could increase planned elective work when pressures receded. But this year the 'winter pressures' have been visible since July, impeding the recovery of elective services.

The independent sector has been used effectively to boost NHS capacity in the past. But the independent sector does not have sufficient capacity to deal with the record backlog of care in the NHS. Furthermore, independent hospitals are concentrated in the south east of England. Keeping planned surgery running year-round without exacerbating health inequalities will require broader levels of investment across the country.

In Croydon University Hospital, an 'elective centre' was launched at the hospital to restart surgery following the pandemic, with 10 theatres and 28 beds ring-fenced for surgical patients. The centre has strict infection control policies and controlled access to protect staff and patients from Covid-19. In a separate part of the hospital, emergency admissions and Covid-positive patients are treated. Through this model, elective productivity returned to over 100 per cent of pre-lockdown levels for routine procedures and Croydon Hospital's waiting times were the second lowest compared to eight other London hospitals in February 2021.

Barking, Havering and Redbridge University Hospitals NHS Trust deployed a three-pronged approach of (i) increasing the number of surgical procedures through extended weekend operating, additional staff to pre-assess patients and dedicated ITU beds to avoid last-minute cancellations (ii) enhancing outpatient services with additional weekend clinics and targeted drives to reduce waits for first appointments and (iii) workforce innovation (an enhanced surgical team bolstered by training programmes and surgical advanced nurse practitioners). The Elective Recovery Fund was key to supporting this approach.

St George's University Hospitals NHS Foundation Trust built a modular unit in the car park of Queen Mary's Hospital in Roehampton. It was constructed in less than four months and started treating patients in June 2021. The hub is available for patients from across south west London requiring day surgery procedures, such as urology, vascular and general surgery procedures. It has four dedicated operating theatres along with a recovery area, and can facilitate approximately 120 procedures a week.

LINDSAY DRANSFIELD

Modular surgical hubs enable regionally tailored care

Surgical hubs can be up and running quickly to tackle elective care backlogs. They also have the potential to focus on local population needs and address health inequalities made worse by the pandemic.

The recently announced additional funding to tackle the elective care backlog provides an opportunity to put in place well-planned solutions that will increase resilience in the long run rather than as a temporary measure. Stand-alone surgical hubs, which separate acute and elective pathways, are such a solution.

At the same time, the elective surgery backlog is increasing each day and there is no time for lengthy planning processes; the catch-up must begin immediately to prevent the backlog becoming even larger. The ideal capacity solution should be quick to implement, flexible and customisable to address local requirements, regional inequalities and other variations in healthcare delivery.

Surgical hubs built using specially designed modules – and placed in strategic locations to ensure the greatest impact on the elective care backlog – would add substantial capacity and could be the answer to many of the challenges the NHS currently faces.

Turning the tide on elective care

The pressure on the NHS to manage the waiting list for routine care has never been greater. According to the latest available data, 5.7 million people were on the elective surgery waiting list in August 2021, the highest number since records began in 2007. Of the more than 1.7 million people who had been waiting over 18 weeks for surgery, about five per cent had been waiting longer than 52 weeks, although this share had thankfully fallen from a peak of almost nine per cent earlier in the year.

Not only do we have a substantial backlog dating back to spring 2020, when elective care was initially suspended, the number of people waiting continues to rise markedly each month despite significant efforts to address the issue. Even the Secretary of State for Health and Social Care has admitted that the NHS waiting list could reach 13 million if urgent action is not taken.

Vanguard Healthcare Solutions has designed, developed, and delivered a modular surgical hub to assist Queen Mary's Hospital, St George's University Hospitals NHS Foundation Trust

Under its new Build Back Better plan for health and social care, the government recently committed an additional £9 billion to support the NHS to increase elective care activity, with the aim of reaching around 130 per cent of pre-pandemic levels by 2024/25. Once the NHS has recovered, the government wants activity to remain at about 10 per cent higher than under the NHS Long Term Plan.

However, even if activity levels were to reach well above 100 per cent of pre-pandemic capacity, catching up will take time. Worryingly, as of August, activity was not increasing, rather the opposite; admissions fell by 11 per cent in August, following a decline of 6 per cent in July. Despite activity increases seen in the Autumn months, the winter resurgence of Covid-19 will likely limit activity further.

A substantial amount of additional capacity is urgently needed to avert a more serious elective care crisis. Investing in surgical hubs and separating acute and elective care will help protect elective activity during future Covid-19 outbreaks and other disruptive events.

"Even if activity levels were to reach well above 100 per cent of pre-pandemic capacity, catching up will take time"

Lindsay Dransfield
Chief Commercial Officer, Vanguard Healthcare Solutions

All is not equal

Although the entire country has been affected by delays and disruption to elective care, the scale of the problem is not the same everywhere. Even before the pandemic, regional disparities in waits for routine surgery were stark, with access to care increasing at a much slower rate in the most deprived areas. The pandemic has unfortunately made the problem worse.

The parts of the country most severely affected by Covid-19 have also seen waiting lists grow the fastest. For example, the backlog is significantly greater in the north east and north west. Research by the Institute for Fiscal Studies, Harvard University and Imperial College London found that the north west had seen the greatest drop in admissions, with 467,000 operations missed in 10 months, while the south west saw the smallest drop.

The NHS backlog also disproportionately affects people in poorer areas. By analysing data from April 2020 to July 2021, The King's Fund found waiting lists for routine treatments had grown by 55 per cent on average in the most deprived parts of England, compared with 36 per cent in the richest areas. Those in deprived areas were also nearly twice as likely as those in the wealthiest areas to wait more than a year for treatment. Clearly certain areas need more urgent support to meet local healthcare needs.

The effects on patients of long waits are well known. In September a survey commissioned by the charity Independent Age found that more than half of over-50s on the waiting list were in pain daily. Last month, Health and Social Care Secretary Sajid Javid warned that the UK faced "two backlogs" — the waiting list for routine operations and "a social backlog in mental health and public health".

Addressing healthcare variations

So how will the extra funds be spent? An effective solution for tackling the backlog needs to have a strong focus on addressing health inequalities and allow for tailoring the approach to each region's specific needs. Speed of implementation is also a key concern.

Although temporary surge capacity can be provided through measures such as extending the working hours of key staff or outsourcing procedures to independent providers, these do not constitute viable longer-term solutions – and certainly will not address the regional disparities that are emerging.

There are reports of record numbers of patients turning to private healthcare due to the long waits for NHS treatments – a recent survey showed that over 20 per cent of adults had sought private

First and foremost, surgical hubs provide concentrated additional capacity

healthcare during the pandemic. However, 47 per cent said that paying for private treatment "was not an option" for them.

Aside from the affordability issue, one reason turning to the private sector is unlikely to solve all the NHS's problems is that patients in different parts of the country do not have the same access to private healthcare, and trusts do not have the same opportunities to outsource treatment to independent providers. An estimated 60 per cent of independent sector capacity is in London and the south east, while opportunities to mobilise extra capacity are more limited in the areas with the greatest need – the north west and the Midlands.

A July report by the Health Foundation highlighted that existing inequalities left parts of the UK more vulnerable to the virus, and in early September this issue was discussed at a House of Commons Health and Social Care Committee oral evidence session about the NHS backlog. During the session, Anita Charlesworth, Director of Research and the REAL Centre (Research and Economic Analysis for the Long term) at the Health Foundation, highlighted the importance of tailoring any solution to the needs of different parts of the country and forming well-thought-out local healthcare plans, rather than using a national one-size-fits-all approach.

While it is likely that a combination of measures is needed to make a significant impact on the growing backlog, the approach must be targeted as well as balanced. Well-informed plans and rapid implementation will be key to recovery.

Surgical hubs: the way forward?

The concept of surgical hubs has received widespread attention and support since the Royal College of Surgeons of England (RCS England) published the New Deal for Surgery in May. The RCS England report urges every integrated care system (ICS) in England to identify at least one "surgical hub" where planned surgery can continue safely if the country is hit by another wave of Covid-19, a new variant, severe seasonal flu or other disruptive event.

During the September Health and Social Care Committee oral evidence session, the success of surgical hubs in the London area was emphasised by RCS England President, Professor Neil Mortensen, who credited the Croydon and Redbridge hubs with providing safe surgical capacity to reduce the strain on the NHS. Both sites have achieved 120 per cent of pre-pandemic activity and had an "electrifying" effect on staff morale due to the progress made. NHS England London Medical Director, Dr Vin Diwakar, has also been vocal in his support of the implementation of new surgical hubs across the city.

Implementing surgical hubs brings a wide range of benefits. First and foremost, they provide concentrated additional capacity, with the potential to achieve high volumes of activity, not least through a design optimised for effective patient flow and streamlined operational processes. As a result, they can have a big impact on waiting lists.

They also tend to be more efficient, due to a pooling of expertise and the sharing of resources. A clear separation of urgent and routine pathways

reassures patients that it is safe to attend and minimises disruption by helping to protect elective care from outside influences.

Although a surgical hub could be a designated hospital within an ICS, space is often limited in the existing hospital estate and admitting and discharging patients directly to and from the unit might be difficult to achieve. A stand-alone surgery centre at the hospital site – or at a different site with convenient access from neighbouring trusts' catchment areas – could be the ideal solution.

A tailored, flexible solution

Modules are often used as a short-term temporary solution, but operating theatre modules provide a complete, purpose-built, clinical environment designed to last for over 60 years. They can be assembled in a wide range of configurations and customised to suit the needs of both the provider and the local population. If a high-spec modular solution is chosen, a surgical hub can be ready to receive patients only a few months after being commissioned.

The evidence speaks for itself. On Monday 14 June, a surgical hub at St George's University Hospitals NHS Foundation Trust welcomed its first patients, just four months after construction had begun on the facility. The new centre at Queen Mary's Hospital in Roehampton had been commissioned in direct response to the longer waiting times faced by patients in the area. With four operating theatres and recovery space, the complex has allowed an additional 120 operations per week to be carried out, helping to cut waiting lists for day surgery in south west London.

Vanguard Healthcare Solutions managed the entire build project, providing enabling works including electrical, medical gas, water and drainage infrastructure in addition to the operating theatre modules. The rapid build meant valuable time could be saved and the trust could start catching up on the backlog earlier. The speed at which these facilities can be delivered will be critical in supporting the communities hit the hardest by increasing waiting lists.

The complex stands alone, meaning both surgery and all related patient care happens inside it, with patients coming directly into the facility. Because of its size and the high build quality, the trust is able to deliver a wide range of procedures, including neurology, plastic surgery and ophthalmology.

It can also be repurposed for other uses or be turned into an endoscopy suite once the backlog is resolved.

Making a lasting impact

With the extra money now committed over a period of three years, there is an opportunity to put plans in place for more lasting healthcare infrastructure solutions that separate urgent and non-urgent pathways and protect elective capacity in the long run.

Flexible healthcare infrastructure offers an effective and impactful solution; it is quick to implement, minimises disruption to existing activity and can be situated away from the hospital site if required. It enables additional care capacity to be taken to the areas of the UK that need it the most and allows healthcare provision to be tailored to local needs so that backlogs can be tackled effectively at a regional or local level.

The roll-out of surgical hubs using modern methods of construction to rapidly expand surgical capability must form part of the NHS solution to the elective care backlog. However, not all modular buildings are suitable for clinical activity, and collaborating with a specialist provider of sophisticated healthcare facilities, such as Vanguard Healthcare Solutions, is essential.

"If a high-spec modular solution is chosen, a surgical hub can be ready to receive patients only a few months after being commissioned"

Lindsay Dransfield
Chief Commercial Officer, Vanguard Healthcare Solutions

Operating theatre modules provide a complete, purpose-built, clinical environment designed to last for over 60 years

MORE INFORMATION

Vanguard

vanguardhealthcare.co.uk

DAVID MERRIMAN

Efficient water delivery is vital for healthcare climate resilience

Saving water and conserving energy while keeping patients and professionals safe is a crucial aspect of building climate-resilient and low-carbon sustainable health systems. Specialist water control providers such as Rada are working towards this ambition.

Up and down the country, the Government is modernising hospital buildings and investing in new equipment and technology to improve patient care. At the same time, the health service is facing enormous pressures, from Covid-19 and the elective backlog to climate change. We are also rapidly reaching the limit at which water and other energy resources can be sustainably delivered to healthcare settings – and demand must be managed. Prioritising water delivery systems that improve water and energy efficiency sits at the heart of these challenges.

We all have a duty to minimise unnecessary water usage, which is why we at Rada are constantly reimagining ways to save water and conserve energy. Part of the Kohler Company, Rada has been at the forefront of designing and manufacturing water controls engineered to improve water and energy efficiency for more than 80 years. We are proud to have helped many hospitals across the country introduce smarter

ways of safely and sustainably managing water usage through our Intelligent Care range.

Intelligent Care is the first tap of its kind to support the NHS and other healthcare providers to meet some of our greatest health priorities – including reducing healthcare-associated infections and tackling climate change. Replacing outmoded systems with Intelligent Care can transform water management in healthcare settings, delivering improved outcomes for patients and healthcare professionals and supporting the NHS to meet its ambition to become the first net zero health service.

Minimising water and energy usage in healthcare settings

Water delivery solutions are at the frontline of patient care in healthcare environments across the UK – but the increasing pressures on water supply require a fresh approach. The NHS is one of the UK's largest consumers of water, using approximately 50 billion cubic litres of water per year. When delivering patient care, hospital staff use 10 times more water than the average office worker, at an annual cost of £60 million. The NHS estate also makes up 15 per cent of the NHS total carbon emissions profile. If NHS estates are to play their full role in tackling climate change and water scarcity, innovation must be embraced in water delivery.

The 2021 policy paper *Delivering a net zero NHS* recognised the importance of improving water management in healthcare settings. Intelligent Care can support such settings to better manage their water usage by pre-programming temperature run times to the optimum length. This minimises water and energy usage caused by overuse or waiting for water to reach the right temperature. This thermostatic technology delivers the critical added benefit of keeping users safe by ensuring water is delivered at a safe and reliable temperature, securing better handwashing outcomes and reducing the risk of scalding.

Significant water savings can also be realised by automating duty flushing processes. Intelligent Care provides the valuable option of only duty flushing taps that have not been used, meaning water wastage and opportunities for human error can be minimised while helping to ensure that water systems are free from harmful bacteria.

Digitalising healthcare estates and facilities

The government's commitment to build 48 new hospitals by 2030 represents a major opportunity to transform NHS infrastructure and reduce the environmental impact of healthcare systems. Central to this is embedding innovative digital technology in the NHS and ensuring healthcare settings are as connected and efficient as possible. For this to happen, the innovation that has been successfully integrated in patient care must be applied to all aspects of the NHS estate, including the critical area of water delivery.

"If NHS estates are to play their full role in tackling climate change and water scarcity, innovation must be embraced in water delivery"

David Merriman
UK National Sales Manager, Rada

Amid the current push to embed digital solutions throughout the NHS, water delivery systems have the potential to play an important role in supporting healthcare professionals to improve environmental and financial efficiency across estates and facilities and keep patients protected from infections. To support this, Intelligent Care has a sensor-operated, non-touch control, which reduces the spread of water-borne pathogens, encourages users to comply with hand-hygiene procedures and minimises water wastage. This directly supports the NHS in its ambition to use innovative technologies to improve patient outcomes with a reduced impact on the climate.

By digitising and automating compliance processes, Intelligent Care also makes it easier and quicker to monitor water and energy usage, which is essential for estates to complete mandatory sustainability reporting. This is crucial for healthcare settings looking to meet sustainability targets and drive year on year reductions in water and energy usage, while freeing up staff time to spend delivering the best patient care and driving resource efficiency in other areas.

Now is the time to act

It has never been more importation to reduce the environmental impact of healthcare systems. This was recognised during COP26, when the government and 40 other nations signed up to the COP26 Health Programme and pledged to build climate-resilient and low-carbon sustainable health systems. To do so successfully, it is vital that the safe and sustainable delivery of water is prioritised. Through our Intelligent Care range, we are uniquely placed to help our partners shape the future of healthcare design, delivering long-term sustainability for hospitals, the health service and the overall health of the country.

Intelligent Care makes it easier to monitor water and energy usage

MELANIE RELF

An estate strategy: Now there's a capital idea

Unlocking capital to invest in healthcare's physical environment has never been more important, yet many trusts fail to develop an effective estate strategy which is essential to access funding, argues Melanie Relf, Associate in Healthcare Strategy and Planning at ETL.

As we witness an extraordinary time in the history of the NHS, the service continues to grapple with its biggest challenge to date, the impact of Covid-19. This combined with the fact that investment in the NHS was at an all-time low prior to 2020 resulted in an extensive backlog of maintenance and development, plus grossly under-funded national healthcare building standards. Today, we are also in the early stages of the biggest building programme of new hospitals for a generation, so why do so few trusts have an estate strategy in place?

Estate strategies are frequently overlooked but might now be the key to launching a successful bid for funding, so it is vital that trusts take a closer look. These uncelebrated documents have recently taken a larger role on the healthcare stage, because of the New Hospital Programme; where previously considered optional, they now play a critical role in securing a much-coveted place on the 'Go' list.

The 2005 NHS Estates document Developing an Estate Strategy states, "All NHS trusts, including primary care trusts (PCTs) and foundation trusts, are advised to have an estate strategy"; however, it was not obligatory, despite also being described as "an essential precursor to the allocation of capital".

An estate strategy is the first step towards producing a strategic outline case or outline business case for any investment scheme. Despite the ambiguity of the document's status, there are recent instances of schemes being rejected from the New Hospital Programme due to a lack of an estate strategy.

Developing an estate strategy

Investing time and resource into developing the key elements of an estate strategy is imperative, to facilitate a strategic review of current capacity and

capability and support strategic change in terms of location, scalability and quantity. These include a description of all the accommodation and buildings owned by a trust, a review of the activities the trust undertakes in those buildings, and whether the amount and quality of the accommodation suits the trust's existing requirements, as well as future plans. This then enables a conclusion to be drawn as to:

- whether the accommodation can be reallocated more efficiently
- whether services are unnecessarily duplicated
- where there are gaps in the service.

At ETL we often see examples where the clinical or services strategy is used as a base document to extract pertinent information to create the estate strategy. If the clinical strategy is not current, the trust may feel it is in a challenging situation. Strategic thinking by healthcare planning experts can overcome this using clinical evidence and best practice to make logical deductions, without waiting for capacity projections, but there is a strong argument for decoupling the estate strategy from clinical strategy. Buildings last decades, whereas clinical strategies have considerably shorter life spans.

In addition to the baseline information required within the estate strategy, the opportunity exists to incorporate several other aspects to ensure a trust's accommodation will meet its requirements beyond the next 10 years. These include:

- flexible estate
- agile working
- resilience
- sustainability and net zero carbon
- digital transformation
- MMC (modern methods of construction)
- derogations
- innovation.

Net zero carbon in strategic estate planning

A paradigm shift is taking place in the NHS, transitioning estate planning priorities towards delivering upon sustainability objectives. Since the publication of the NHS Operational Planning and Contracting Guidance in January 2020, the NHS requires all new buildings and refurbishments to meet net zero carbon standards, and business cases must include net zero ambitions and planning or risk push-back from NHS England and Improvement (NHSE/I).

NHS specific guidance for delivering net zero published in spring 2021 provided much needed details and information for integrating net zero

"Investing time and resource into developing the key elements of an estate strategy is imperative"

Melanie Relf
Associate Healthcare Planner, ETL

principles into the estate. There is much that can be done now to prepare for net zero carbon, including identification of significant opportunities for decarbonisation and rationalisation of buildings and space. Key opportunities for NHS sites include:

- Shifting from steam systems to low temperature hot water to enable heat pump technology
- Reducing office space in favour of agile working
- LED lighting upgrade opportunities
- Ensuring contracted partners are also committed to net zero through tendering processes
- Consideration of energy and resource requirements from clinical interventions, such as MRI scanners
- Enabling access to public transportation and integrating electric vehicle charging infrastructure

Planning for net zero as part of the estate strategy is critical, and must be anticipated, designed, and costed in at the earliest stages of estate and project planning. ETL is supporting several NHS clients to prepare for net zero and has developed design briefs with key interventions required aligned to each Royal Institute of British Architects (RIBA) stage to support delivery of net zero.

As we move through the 2020s, the NHS will face some of its toughest challenges. Strategic estate planning is essential in the wake of coronavirus, alongside securing all important capital funding to ensure a fit-for-purpose healthcare estate for generations to come.

DR STEPHEN WISE

Lifting the blinkers to tackle forgotten hospital waste

Biotechnology business Advetec believes NHS net zero goals are being held back by a series of 'green misnomers' and a lack of waste education. Trusts should re-educate themselves about the waste journey, take the blinkers off and harness innovations such as biotechnology.

Waste management might have been surprisingly absent from the COP26 global agenda – but it has a critical role to play in supporting the acceleration of NHS net zero goals.

To make the radical changes needed to achieve net zero and reduce the NHS contribution to the UK's total carbon footprint, trusts must address the fate of all waste, including non-recyclable.

The NHS generates approximately 600,000 thousand tonnes of waste per year and for every 100 tonnes that go to landfill, a staggering 47 tonnes of CO2e (carbond dioxide equivalent) are generated – not including the CO2 and particulate emissions created by the act of transporting that waste for disposal.

Tackling myths with facts

Many NHS trusts believe they are well on the way to reducing waste going to landfill and that the majority of their non-clinical waste from primary care estates is recycled. They have waste contracts in place and recycling bins aplenty – it appears that all is in hand. But what they do not know is that, despite these efforts, 50 per cent of NHS trusts' waste still goes to landfill or for incineration.

This 50 per cent is made up of mixed residual waste – the waste that cannot be segregated or sorted for recycling because it contains contamination such as an organic fraction. This could be a half-empty drinks bottle, a yoghurt pot or a sandwich wrapper with crusts in. When hospitals talk about their waste, this portion often gets overlooked altogether. It does not even get a direct mention in the *Delivering a net zero NHS* guidance. We call this 'forgotten waste'.

How is it possible for NHS trusts, many of which have dedicated waste managers, sustainability leads and significant waste contracts, to have such an inaccurate view of their waste reality? One view is that it is human nature to celebrate progress, which can distract us from the rest of the picture. The other

possibility is that mixed residual waste is not on the radar because no one thinks it a big enough issue to warrant action.

With increased scrutiny from government, regulators and the public, and with the danger of 'greenwashing' (conveying misleading environmental information) looming large over reputations, progress will only be accelerated if trusts garner a more accurate picture of all waste.

Context and questions

With improved knowledge about the waste journey will come greater accountability, as well as the insight needed for NHS leaders to query their waste handlers' choices, make more informed decisions and dictate their own desired waste outcomes, rather than letting suppliers chart the course or do the detailed 'green thinking'. When NHS trusts better understand their different waste streams, the options for that waste and how it fits within the wider waste journey, forgotten waste comes squarely into view.

One trend we are seeing across the UK is for organisations to say they send 'zero waste to landfill'. It is a commendable claim as landfill is widely recognised as an unacceptable form of disposal (due to toxins, leachate and greenhouse gases). However, when you interrogate these statements, the frequent reality is that zero goes to landfill because a large proportion of waste, namely forgotten waste, is sent for incineration, or 'energy from waste' (EFW), instead.

Unlike most of continental Europe, 99 per cent of EFW plants in the UK do not capture heat offtake generated, which makes them an inherently inefficient form of waste processing and not as virtuous as it might sound. About half the energy created from burning waste is lost into the atmosphere rather than harnessed for greater commercial use. Add the transport-related carbon and poor air quality from lorries delivering waste to the plant into the mix, and it starts to paint a much less green picture.

This example highlights the need to know the real meaning behind every waste statement – if it is not going to landfill, then it is probably going to EFW, which is most certainly not green. Perhaps it is time for the language to shift to what trusts are doing rather than what they are not.

Tackling behaviour with technology

A significant part of this problem is human behaviour. While the public will separate waste at home (albeit to varying levels of success and requirement) they rarely exhibit the same behaviours elsewhere. For high-footfall locations like hospitals, this presents a challenge.

"Perhaps it is time for the language to shift to what trusts are doing rather than what they are not"

Dr Stephen Wise
Chief Strategic Development Officer, Advetec

Even when recycling bins are widely provided, there is a strong chance of organic matter contaminating and changing the content's destiny from a recycling centre to landfill or EFW. Equally, plenty of people will simply put all their waste in a general bin, and not even think about what they could separate.

As well as increasing recycling efforts, awareness is also required on what can be done to reduce residual waste further before it goes to landfill or incineration.

Being realistic

Despite all the big targets, ambitions and intentions around the green agenda, we must be realistic. Even with a huge commitment to delivering a net zero health service, landfill and EFW will remain part of the NHS waste picture. We cannot change everything – but we can reduce the amount that is sent there, and we can do it now. Those trusts ready to improve waste management will be willing to harness more innovative methods, perhaps the easiest of which is using biotechnology to reduce the amount of waste that leaves site.

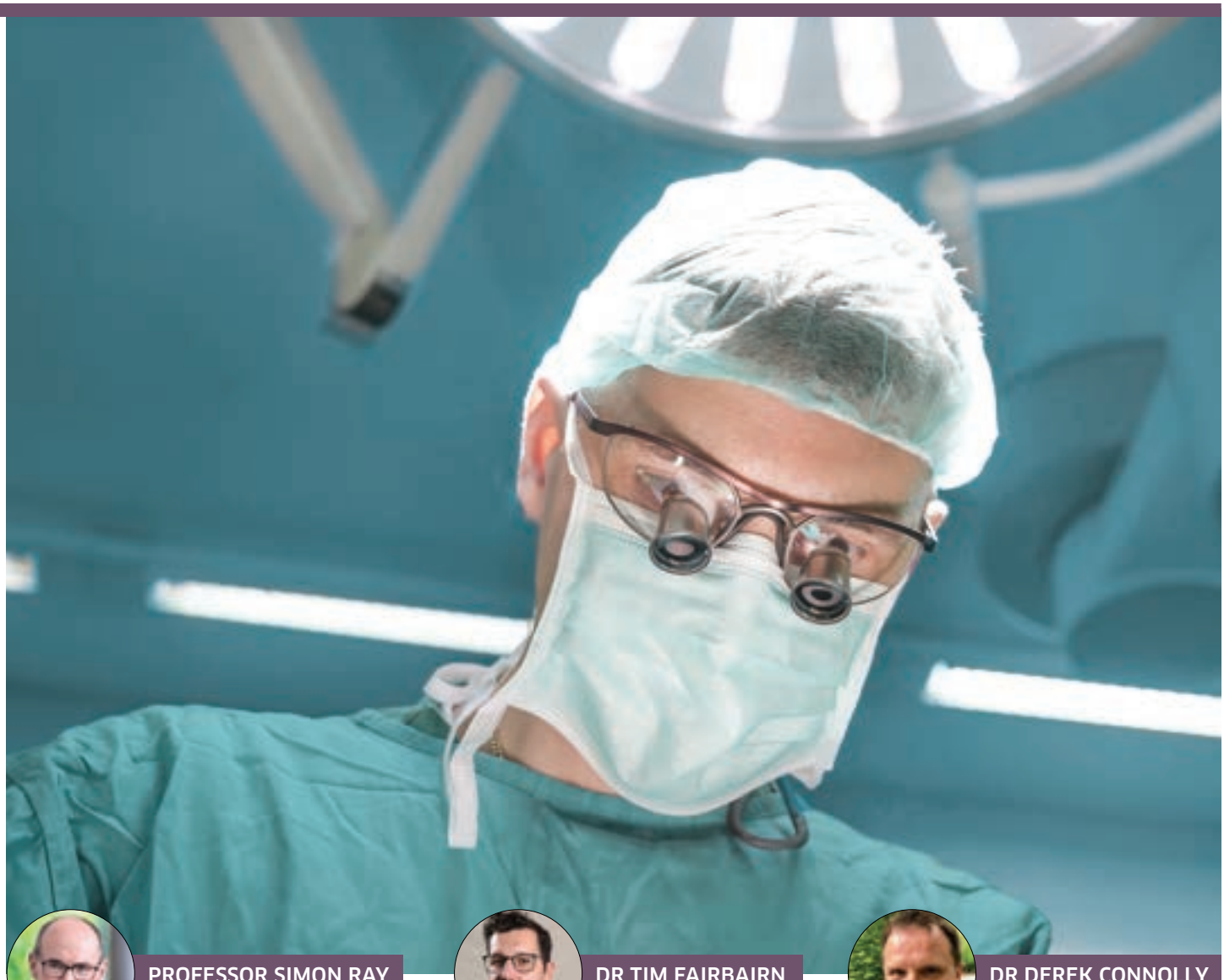
Biotechnologies such as aerobic waste processing address the effects of human behaviour by processing the mixed residual waste that would otherwise go to EFW or landfill, and, importantly, reduces it by half. A 50 per cent reduction in waste destined for landfill or EFW is an enormous gain, achieved because the method removes the organic fraction and moisture. In turn, this reduces the mass and volume of the waste stream by typically 50 per cent and 85 per cent respectively, and it is all done on site.

The cost, community and environmental benefits are numerous. Reduced mass and volume means fewer wagons collecting waste, which in turn reduces road-related carbon and unnecessary journeys, improves air quality and reduces non-clinical spend. Put simply, it disposes of waste more quickly, responsibly and efficiently and lessens the EFW and landfill burden. Technology could create an easy-win for the NHS in the war on waste.

Making changes and unlocking value

For the NHS to become the world's first net zero national health service, waste management must be championed more resolutely at senior leadership level. We must insist on greater knowledge about the waste journey, scrutinise every decision and claim, and leverage the technologies that actively reduce the use of EFW and landfill. There's no room for waste myths or the status quo to prevail anymore. It is time to do something different – and that process must begin by asking, 'are we talking rubbish enough?'

Clinical Services



PROFESSOR SIMON RAY

DR TIM FAIRBAIRN

DR DEREK CONNOLLY

Reimagining cardiac care in England

A conversation with Professor Simon Ray, Dr Tim Fairbairn and Dr Derek Connolly to discuss the implications of GIRFT for cardiac care in England.

Earlier in 2021, the *Getting It Right First Time* (GIRFT) programme released its latest report on cardiology, providing recommendations on how diagnosis and treatment could be improved for patients across England.

Authored by two of the UK's leading cardiologists, Dr Sarah Clarke and Professor Simon Ray, the report features an in-depth review of England's cardiology services. It calls on healthcare networks to ensure stable chest pain pathways are consistent with NICE CG95 recommendations, which advocate a computerised tomography (CT)-first approach to diagnosing heart disease.

The report also suggested fractional flow reserve CT (FFRCT) – an artificial intelligence (AI)-enabled technology that uses data from CT scans to assess how blood is flowing through patients' arteries to identify any problem areas where narrowing is causing a significant impact – is also made available either on site or at a network level. The GIRFT report authors called for significant progress to be made towards this within a year.

What would you like the key takeaway to be from the GIRFT report?

Professor Simon Ray, Consultant Cardiologist, Manchester University NHS Foundation Trust

"The fundamental finding of the report is that cardiology services must be reconfigured to work on a network basis. While cardiology often operates within networks to some extent, there's absolutely a need to strengthen and emphasise this.

"All hospitals admitting cardiology patients should have a consultant cardiologist on call and daily consultant review of acutely admitted or unwell patients. There should be clearly defined pathways covering all common cardiology conditions that can be completed within the network."

What role do you think the NICE CG95 recommendations should play in cardiac care?

Professor Simon Ray

"A very important one. We hope to see networks being as compliant as possible with NICE CG95 recommendations, which advocate CTCA [CT coronary angiogram] as the first investigation for the majority of patients on the stable chest pain pathway. Networks should ensure that all hospitals have ready access, either on site or at a network level, to CTCA and to FFRCT, with all images reported by appropriately trained cardiologists or radiologists.

"Of course, this will mean significant change in the way patients are managed on the stable chest pain pathway, with a move away from the routine use of invasive coronary angiography as a purely diagnostic procedure. Where invasive angiography is performed, it should be done by an operator trained in PCI [percutaneous coronary intervention] and invasive coronary physiology and imaging in a suitably equipped catheter lab."

Dr Derek Connolly, Consultant Interventional Cardiologist, Sandwell and West Birmingham NHS Trust

"We've been using FFRCT at Birmingham City Hospital for some years now and have seen a significant reduction in unnecessary angiography during this time. In low to moderate-risk settings, we're able to confidently identify patients who can be managed medically and those who need invasive intervention and prioritise time in the cath lab for these cases.

"It also gives us the capability to diagnose incidences of coronary heart disease in a matter of hours, which has real benefits from a patient experience perspective. It essentially means that people can come in once and get their results the next day, potentially providing assurance they won't need any further invasive intervention."

How do you envision cardiology and radiology teams working together going forward?

Professor Simon Ray

"Historically there have been incidences where collaboration between cardiology and radiology has been somewhat stilted and where greater cooperation has been needed. Alignment between these two fields is vital for developing a smooth-running network of cardiac care so reporting is as rapid as possible and reduces any delay for patients. At many sites we visited around the country during the development of our report, we found that the best CTCA services were underpinned by good collaboration between cardiology and radiology. For me, a strong relationship between both specialties is absolutely a prerequisite as we start to set up network services."

Dr Tim Fairbairn, Consultant Cardiologist, Liverpool Heart and Chest Hospital
"Our relationship with colleagues in radiology forms the backbone of our CTCA service at Liverpool Heart and Chest Hospital. It helps us to develop the best possible image quality, which in turn gives us richer FFRCT findings and helps us to identify the severity of disease more accurately in our patients. Since adopting a CT-first approach with FFRCT, our departments have grown closer as it's more essential than ever that we're on the same page when it comes to interpreting findings and identifying areas for further investigation. We both have different skill sets to bring to the mix that, together, can help patients get the best possible care sooner."

Following the pandemic, how do we tackle capacity challenges when it comes to CT scanning? And how can we ensure quality of service is consistent across the country?

Professor Simon Ray
"We know access to scanners has been an issue for many cardiology services, particularly as the health service tries to balance the pressing need to tackle its cancer screening backlog and provide scanning for Covid patients. The introduction of community diagnostic hubs [CDHs] is seeking to take imaging out of secondary care and put it into a community setting. CTCA is unlikely to be performed in many CDHs but the redirection of other work to the community should reduce the burden on in-hospital scanners and create capacity in the medium to long term.

"In addition, moving to a network cardiac model provides an opportunity to pool resources and allow highly trained clinicians and radiographers to work across the network, using all available infrastructure, and ensure that patients have access to rapid, accurate diagnoses.

"From a GIRFT perspective, the network-delivered CTCA future model is the best structure for achieving long-term success. Inevitably, this will need to be delivered as part of a seven-day service if we're going to start tackling some of the backlog. But, while there will be some considerable challenges in implementing these changes, I believe they're entirely achievable and can optimise patient care."

Key recommendations of the GIRFT national report on cardiology

- All hospitals must deliver cardiology services as part of a defined and agreed network model
- Hospitals must have a consultant cardiologist on call 24/7
- All NHS consultant cardiologists should participate in on-call rotas for general and or specialist cardiology
- Each network must ensure that there are clearly defined patient pathways covering all acute hospitals for the provision of 24/7 emergency temporary pacing and 7/7 permanent pacing
- All outpatient referrals should be triaged with maximum use made of the electronic referral service (ERS)
- Networks should ensure that stable chest pain pathways are consistent with the recommendations of NICE CG95

Dr Tim Fairbairn
"Interventional cardiologists have been sharing their expertise across cardiac centres for years and broadening this out to other specialties seems perfectly feasible. The network approach makes sense and doesn't mean that small centres will have to close or that patients will need to travel miles for care. In fact, it's the opposite. Giving these smaller services the capabilities to build their patient numbers means that they're able to tackle waiting lists in their regions and develop the expertise to deliver first-rate cardiac imaging. We've been helping other centres in our region to develop much larger platforms in recent years and it has shown great results."

Dr Derek Connolly
"The GIRFT recommendations are very welcome and something we'll be able to use with our managers to build services. For me, that's one of the primary ways to overcome backlogs and ensure that patients receive the same level of care, no matter where they are. AI and FFRCT have a really important role to play in this as the technology is helping us make treatment decisions more confidently. I think we're just scratching the surface of what it'll help us to achieve in the future."

Going forward with FFRCT

FFRCT technology is being increasingly used across the UK. In England, this is partly thanks to initiatives such as the NHS MedTech Funding Mandate, which prescribes the adoption of FFRCT in cardiac centres throughout the national network. Hospitals in Scotland and Wales have begun using the technology too, which allows clinicians to feel more confident in their diagnoses and treatment plans by reviewing the 3D models of patient arteries and gaining insights into blood flow.

Supported by the recommendations of the GIRFT review, clinicians are empowered to better tackle disease, diagnose coronary heart disease (CHD) quickly and improve treatment. And as we continue to embrace cutting edge technology that streamlines and enhances care, it will only improve patient outcome and experience.

DAVID DUFFY

Practical solutions to the elective care crisis

NHS trusts are seeking new ways to mobilise clinical support, increase coordination and boost capacity – all with the goal of reducing the elective treatment backlog while enhancing care delivery. A collaborative approach that brings in expert teams to make the most of existing facilities can be extremely effective.

The daunting figure of 5.6 million people waiting for elective care treatment is set to grow significantly over the coming years. This winter will likely be plagued with uncertainty. Hospitals are preparing for what could be an acutely severe flu season that is coinciding with a Covid-19 resurgence. The requirement for stringent infection control measures, combined with the age-old problems of workforce and bed shortages, will rise a lot in the near future.

Six million fewer people completed elective care pathways between January 2020 and July 2021 than would have been expected based on pre-pandemic numbers.

These are hard truths for the NHS, but that has not stopped trusts exploring new ways to alleviate capacity concerns, and even to enhance service offerings and bring down backlog figures. In the face of fresh challenges, finding solutions that are both innovative and practical has taken on profound importance.

In the absence of an instant influx of healthcare infrastructure, the NHS will increasingly need to rely on the mobilisation of clinical teams to boost capacity – teams that can do so within the existing clinical estate.

Working right across the UK, clinical healthcare provider Medinet has been offering dedicated 'insourcing' support to alleviate capacity for over 15 years. It holds the country's largest pool of expert clinicians in 20 different specialties, supplying teams to provide additional clinical capacity to enable hospitals to meet waiting times targets and then work with them to ensure these are not breached. Medinet's various packages of clinical support are developed with each trust around dedicated consultant-led solutions for any hospital elective specialty.

Medinet's service model is designed to maximise output from facilities already available in an NHS trust's estate. This approach helps hospitals deliver truly seven-day services and boosts overall elective care capacity. The service has proven invaluable to trusts in the context of the pandemic; since the end of 2020, 98,000 patients have been seen and treated by Medinet clinical teams.

Bespoke solutions based in clinical expertise

All trusts are facing a myriad of challenges to sustaining elective care capacity, and this was the case for an NHS trust in southern England. Its waiting lists had been growing across a range of specialties such as colorectal, dermatology, general surgery and gynaecology, and assistance was required with both procedures and administrative support to manage outpatient lists.

The multifaceted nature of this demand meant that the trust was struggling to meet its referral-to-treatment targets, and so it turned to Medinet for support to deliver both outpatient and theatre services.

Medinet quickly coordinated regular meetings with the trust to develop a plan of action – no easy feat

considering the multifaceted nature of the challenges facing care delivery across multiple hospital sites. The first service provided consisted of a full Medinet team that established a weekend theatre service in orthopaedics; this has been live since 3 July. Medinet also worked closely with the trust to mobilise weekday theatre services across all major specialties, which went live on 23 August, and an oral and maxillofacial surgery (OFMS) outpatient weekend service that began on 4 September.

The clinical team Medinet provided was comprehensive. It included a consultant anesthetist, operating department/anesthetist practitioner, lead nurse/practitioner, two scrub nurses, a circulating nurse, and two recovery nurses.

Constant communication and collaboration have been key to effectively alleviating capacity concerns and coordinating activity across multiple disciplines and settings. Two stakeholder meetings each week has proved highly effective in maintaining ongoing services while simultaneously facilitating the development of new ones.

One of the regular stakeholder meetings is a clinical review of the previous weekend service, and a look forward at the coming weekend to ensure everything is in place. The other meeting is to discuss mobilisation of upcoming services. Communication in these stages is critical to ensuring that a way forward is agreed on.

Another trust, based in north London, faced severe capacity concerns following the second main Covid-19 wave in late 2020. Medinet stepped in to backfill clinical teams to keep patient theatre lists running. Multidisciplinary teams from the trust and from Medinet engaged to ensure that clinical, governance and operational capabilities not only matched but were closely aligned to the wider needs of the trust.

The trust's commercial director says Medinet not only delivered a solution but did so consistently. "I can't think of a single occasion where they have let us down, so we moved from just Saturday surgeries to adding Sunday operating, outpatients and ENT. Excellent service, good communication between all parties, and I felt the governance within the service was well demonstrated."

Again, regular weekly calls with all the main stakeholders (clinical, governance, operational and commercial) from both the trust and Medinet has enabled them to review the previous week's delivery, address any barriers to success (such as IT access, timely consultant team orientation and equipment preparation), agree actions and next steps, and plan for coming weeks. This has resulted in a closer alignment with trust pathways to deliver a safe, efficient and valuable service, with the patient at the heart of every decision.

The north London trust director appreciates Medinet's open approach: "Most of the senior team, if not all, have great communication skills and will deliver what they say they will. If asked to do a service, they will either say no or deliver it."

"Providing a quick response to requests for additional consultants, as well as additional decontamination staff to cover unplanned or last minute absences and staff shortfalls in the trust, ensuring continuation of an effective service."

The figures speak for themselves (see table). Over 1,100 surgical procedures and 1,400 endoscopy procedures were carried out across the north London trust, and 2,359 Medinet outpatients were seen in 2021 alone. Quite simply, Medinet's clinical teams kept the trust's elective care running.

Table 1 (shown below) illustrates the impact that insourcing has had over the past two years for various providers (all of which are anonymously referenced below).

Provider/Activity type	2020	2021	Cumulative totals
Outsourcing			
Provider A – Full pathway surgery	N/A	1,241	**1,256**
Provider A – Imaging	2,202	2,616	**4,888**
Provider A – Directly delivered surgery	1,337	195	**1,532**
Provider A – Directly delivered endoscopy	1,263	N/A	**1,263**
Provider B	261	151	**413**
Provider C	41	31	**72**
Insourcing			
Medinet surgery (Hospital 1)	25	1,563	**1,622**
Medinet endoscopy (Hospital 2)	104	2,211	**2,315**
Medinet outpatients (across both sites)	N/A	4,742	**4,887**
Cumulative total patients treated	**5,233**	**12,750**	**18,248**

Building trust through sustained partnership

Obviously, different trusts have different needs, but a consistent theme running through each of these case studies has been the use of a partnership model to evolve care delivery. Regular meetings and constant stakeholder engagement have enabled Medinet to not only understand the needs of an individual trust more clearly, but to align more effectively with trust pathways to deliver a safer, more efficient and valuable service, with patients placed at the heart of decision making. Through this model of clinical mobilisation, trusts are not only working to bring down the elective care backlog and alleviate capacity concerns, but also enhancing care delivery.

MORE INFORMATION

medinet **ukmedinet.com**

DANIELLE COLLINS

Protecting the surgeons of this generation and the next

How surgical robots and their data ecosystems can play a critical role in in alleviating pressure and boosting surgical capacity.

Over five million patients in England were waiting for surgery in March this year – the highest number since modern records began. Unfortunately, the situation will get worse before it gets better, with official predictions that the backlog "could climb to 13 million patients in England" before the year is out.

The crisis in elective care has arisen from a twofold blow of acute healthcare workforce pressures resulting from rising Covid-19 cases and large numbers of staff still having to self-isolate across the UK, as reported by BMA Scotland.

While cancellations and delays in surgical procedures often have negative consequences for patients, there are also significant implications for our surgical workforce – this impact often lies beneath the surface of the headline-grabbing figures. Firstly, Covid-19 has decimated training opportunities for clinical staff over the past 12 months, affecting recruitment and retention of the surgical workforce across the UK at a time when maintaining staff numbers is more important than ever.

Given the time pressures on theatre sessions, both training opportunities and the adoption of new techniques have been affected. Added to this, all existing trainees have had reduced experience in outpatient clinics, ward work and multidisciplinary meetings because of redeployment to support the emergency response to Covid-19. This disruption has been acutely felt in procedure-based specialties, such as surgery.

There is no doubt that trainee surgeons are completely committed to supporting surge demands resulting from the pandemic, but delivery of adequate surgical training is equally important in ensuring the continued supply of these vital medical professionals.

A further consequence of the pandemic will be the exceptional demands placed on the surgical workforce – already a major issue – as we tackle the backlog. Strikingly, in 2019, three in four UK surgeons reported experiencing back pain while performing laparoscopic surgery, according to research by CMR Surgical, while one in five surgeons in the UK and US was set to retire early due to the physical toll of conducting minimally invasive procedures.

Both the physical and mental toll of performing surgery cannot be underestimated in the context of tackling this backlog. Surgeons cannot be overwhelmed, or put at high risk of developing work-related injuries that force them to retire early, just when we need them the most.

The power of robotics to relieve long-term pressure

It is vital that we support our nation's surgeons (both trainee and experienced) with long-term investment in the right tools, training and resources, so that patients can get the long-awaited care they urgently need as quickly as possible.

For instance, robotics can relieve the physical and mental pressure on experienced surgeons performing keyhole surgery, helping to prevent them from leaving the workforce due to physical work-related trauma. Historically, surgeons have been required to contort themselves and occupy static positions for prolonged periods of time in the operating room.

And the 'one size fits all' limitation of traditional equipment can lead to multiple physical issues that put surgeons at risk of developing musculoskeletal disorders. Revolutionary surgical robotic technology overcomes many of these challenges by alleviating some of the physical and mental impact of performing surgery and ultimately supporting surgeons' wellbeing with the potential to extend their careers. The use of robotics when performing minimal access surgery, for instance, allows for a more comfortable and flexible operating position. Not only that, it also gives surgeons a better view through camera control and advanced 3D imaging. The flexibility of robotic instruments combined with optimal view can make difficult operations easier to perform.

"It is vital that we support our nation's surgeons with long-term investment in the right tools, training and resources"

Danielle Collins
Consultant Colorectal Surgeon, NHS Lothian
Western General Hospital

The Versius® robot used at NHS Lothian is portable, modular and designed to be easily moved between operating theatres, and can be set up in 15 minutes. This has the potential to help hospitals ease pressure on surgeons while at the same time boosting capacity. If these robots can be used at scale, they can increase the frequency and accessibility of minimal access surgery, thereby reducing patient waiting times and length of stay in hospital, all of which will prove critical for long-term recovery.

Boosting training with a digital interface

Crucially, the adoption of surgical robots not only supports surgeons ergonomically in theatres, but the datasets and simulation it provides can also help fine-tune the skills of future surgeons. Surgeons have the option to develop the motor and cognitive skills required for the most demanding of surgical tasks in a virtual environment, with performance feedback to hone their technique. This is not about training surgeons how to use robotics equipment; this is about using the latest technology to help surgeons gain valuable surgical experience – something that is particularly vital in the current pandemic environment.

Using data in this way makes personalised training that mirrors best-in-class performance a real possibility for more surgeons than ever before. This not only has the power to improve proficiency quicker but is also a way to help surgeons of all experience levels benchmark and improve their technique.

Make robots part of our planning

The response from hospitals across the UK when faced with the unparalleled clinical demands and logistical challenges of Covid-19 has been outstanding. The pandemic has also underscored the need for hospitals and the medical community to prepare and plan to ensure continuous care delivery. I reflect on this in light of the compelling requirement to protect our surgical workforce, both in terms of ensuring that trainee surgeons receive the necessary training opportunities to qualify and that experienced surgeons can enjoy a long, injury-free career.

Even more broadly, the use of surgical robotics makes sense clinically. I have seen theatre staff enjoy learning new skills, while nursing staff looking after post-op patients have commented on the speedy recovery of those who had a robotic procedure. Indeed, minimally invasive surgery provides many benefits to patients, including smaller incisions and faster recovery times, as well as reduced pain and scarring. For these reasons, I believe surgical robots and their data ecosystem should form an integral part of our surgical workforce's future in planning the post Covid-19 recovery.

DAVID DUFFY

Striving for same-day diagnosis: community diagnostic centres

Optimism is growing about the potential of new diagnostic approaches, as David Duffy found when speaking to delegates and presenters at the Public Policy Projects healthcare and life sciences conference.

Two years have passed since Professor Sir Mike Richards published his review of England's diagnostic services. In the face of unprecedented NHS diagnostic demand and ever-limiting capacity, the message from Professor Richards' report was clear – the NHS needs more, and it needs different. As Professor Mike Richards wrote in *Hospital Times* back in April: *"CDHs [community diagnostic hubs] will be expected to offer a range of diagnostic tests and to provide one-stop services where this is feasible. Integration of CDHs into seamless pathways of care will be vital. Some CDHs may be provided directly by the NHS, others in partnership with independent sector providers. Whatever the delivery mechanism, joint workforce planning and ongoing training will be essential. Overall, CDHs need to play their part in improving health outcomes, delivering more diagnostic capacity, improving efficiency, reducing health inequalities and improving patient experience."*

While the terminology may have changed, (hubs have now become 'centres') the case for moving diagnostic capacity away from the acute sector has never been stronger. Across A&E departments, one in 10 patients now needs CT scans and only half of NHS stroke patients are being scanned within an hour. The NHS Long Term Plan target of diagnosing 75 per cent of early-stage cancers by 2028 looks an increasingly ambitious ask.

A system "ripe for transformation"

The development of community diagnostic centres (CDCs) has taken on profound importance in the face of daunting service demand. The government does appear to be heeding these calls to transform diagnostic service provision. Of the £5.9 billion funding boost it recently announced to address the NHS backlog, £2.3 billion of this has been marked for CDC development.

This cash injection has been followed up by a £10 billion procurement framework to manage providers for services for around 150 new centres, designed to provide imaging, cardiorespiratory, pathology and endoscopy services and a host of others.

These developments were described as "game changing" by Peter Harrison, Managing Director of Siemens Healthineers GB & Ireland. Peter was speaking at the Annual Conference for Healthcare and Life Sciences, hosted by Public Policy Projects in November. In Peter's mind, the funding boost might be just what is needed to overcome obstacles presented by dated NHS capital estates and shared workforce shortages ,and could in fact finally facilitate a move from traditional to transformational diagnostics.

There is no guarantee, however, that CDCs will have this effect. Experts agree that if money is simply pumped into the same old system, then the underlying issues facing UK diagnostics are unlikely to change, a point stressed by Matt Gibson, Siemens Healthineers' Head of Diagnostic Imaging. He said: "What cannot happen is for money to be spent on capacity without a view as to how that capacity is going to enable better outcomes, and have we thought about the pathway in totality?" The ability to "zoom out" and take in the entire patent pathway is central to CDC development.

Peter's optimism in CDC development is partly rooted in the feeling that UK diagnostic inefficiency "can't get any worse". He told *Hospital Times* at the conference: "It would be generous to describe the existing diagnostic pathways as sub optimal. There are simply so many inefficiencies and scope for errors in the current system, as patients often have to engage multiple appointments with multiple clinicians usually with multiple delays to get to a point of diagnosis. This is both inefficient from a direct cost perspective but can also allow progressive disease to develop impacting the ultimate treatment success and outcome for the patient. Furthermore, the impact of patient stress and anxiety as they navigate the current pathways should not be underestimated." In Peter's mind, this is a system "ripe for transformation".

"Sometimes you must challenge the status quo to reform, and we have got to encourage this disruption to maintain momentum for CDC development"

Peter Harrison
Managing Director, Siemens Healthineers GB & Ireland

Transforming diagnosis

Part of the 'holy grail' vision for CDC development lies in the possibility of same-day diagnosis, a principle perhaps unthinkable based on traditional diagnostic infrastructure but one that could become a reality through the modern and flexible infrastructure offered by CDCs.

"It's about enabling faster, streamlined diagnostic decision making. Once the patient is off the scanner, what do we do next? And what works best for the patient?" said Matt, emphasising the profound impact that real-time diagnostic capacity could have on health service provision. "If done correctly, CDCs will inevitably lead to less cost, better patience experience and wholeheartedly better patient outcomes," he explained.

Peter made the same point. "Why should we not strive for same-day diagnosis? Why should it ever be considered unattainable?" He sees almost as much benefit for staff being able to participate in an end-to-end delivery service as for the patients who will receive same-day diagnosis.

Momentum building for CDCs

Cautious optimism was the recurring theme among specialists at the PPP annual conference. CDCs are in the early stages of development and careful consideration will need to be given to the technology that can thread the process together, the staffing of these facilities and, of course, the built environment of the centres themselves.

However, it is fair to say that the pandemic has underscored the need for flexible diagnostic delivery in the UK. As Nancy West, Head of Enterprise Services and Solutions for Siemens Healthineers, put it: "Covid-19 has acted as a huge catalyst for change and widespread adoption of tech-led collaboration tools.

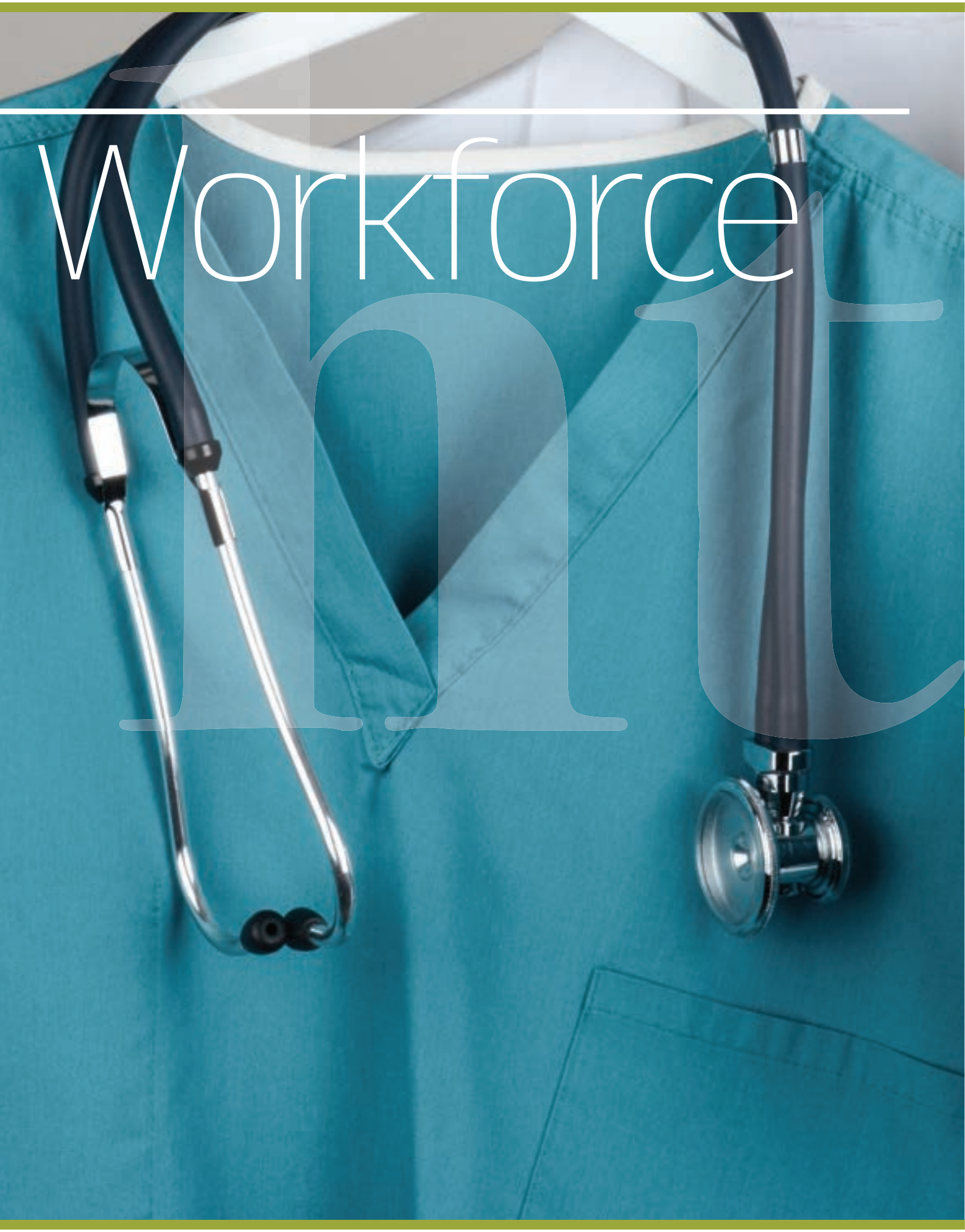
"By accelerating adoption of medical technologies and CDCs, not only will the NHS create financial efficiencies but will also dramatically optimise the speed, quality and provision of care, through more informed decision-making, and to make sure that patient outcomes are actually improved."

However, as Peter outlined at the conference, key to facilitating this transformation is a disruptive mentality in healthcare delivery, and this should be fed by NHS leadership. "Sometimes you must challenge the status quo to reform, and we have got to encourage this disruption to maintain momentum for CDC development."

MORE INFORMATION

SIEMENS Healthineers **siemens-healthineers.co.uk**

Workforce



NIAMH MACDONALD

Lessons of the pandemic: Now is the time to protect our workforce

Dr David Wrigley, GP and Deputy Chair of the British Medical Association (BMA) council, outlines how the BMA's 'Lessons Learned' inquiry is vital to understanding the concerns of NHS staff and informing future government measures.

The UK has one of the highest Covid-19 death tolls in Europe, with current estimates placing the total at 144,000 at the time of writing. With other comparable nations experiencing far fewer casualties, the government's management of the pandemic, and its ability to protect those it has consistently hailed as "heroes", has been called into question.

During the first wave of the pandemic nearly half of intensive care staff reported symptoms of post-traumatic stress disorder, severe depression or anxiety. A lack of resources, inadequate PPE, and understaffing took a serious toll on the workforce. This begs the question, what more could have been done to protect NHS staff?

For anyone who examined the struggles of the NHS prior to the pandemic it was painfully clear that the resources needed to manage a crisis of this scale were not going to be available to the NHS workforce. This lack of preparedness essentially set the UK up to fail according to Dr Wrigley, who has worked as a GP in north Lancashire for over 20 years and currently leads on a safe staffing project as Deputy Chair of the BMA council.

Setting the scene of the prior state of the NHS, Dr Wrigley said: "When the pandemic started the NHS wasn't in a great place; we had far too few doctors, nurses and others, of course, far too few numbers of beds to deal with the problems that we had, and the funding as well was far lower than comparable nations."

While Boris Johnson has promised that a public inquiry will be held into the handling of the pandemic, this is not due to begin until the spring of 2022 at the earliest. A public inquiry may take years to

complete and, given that Covid-19 continues to place pressure upon the health service, the BMA has stated that this is "simply not good enough".

On 8 July the BMA announced it would begin its own 'Lessons Learned' inquiry, while memories are still fresh in the minds of health and care staff. Gathering evidence from members across the UK and seeking accounts from stakeholders, the BMA hopes to highlight the extent to which neglect hampered the efforts of the NHS and its staff.

Five key areas of focus for the inquiry include the protection of healthcare workers from Covid-19, the impact of the pandemic on healthcare workers, the delivery of healthcare during the pandemic, the public health response to the pandemic and the impact of the pandemic on population health.

Protecting the workforce

The pandemic has shone a light on longstanding obstacles that the NHS workforce has faced in delivering care, while also throwing up a whole host of new challenges. The government has uncomfortable questions to answer over its plans to futureproof healthcare workers' protection.

Dr Wrigley said: "Over the course of the pandemic we've been advocating on many aspects. Right from the outset around concerns over lack of PPE provision and when it is appropriate to use it, but also around the number of deaths from Covid in the NHS workforce and the prevalence of doctors from ethnic minority backgrounds who died."

Healthcare workers have been exposed to the harshest realities of the pandemic and their mental health has become an increasingly important factor. Safeguarding staff wellbeing, in turn, allows them to deliver their highest standard of care.

"Doctors have told us in our surveys that they have seen an increase in stress, poor mental health and depression, with many developing symptoms of PTSD. Our helpline and services have seen a huge increase in the number of doctors and medical students utilising it. Doctors will often not come forward and acknowledge that they're unwell and so it is extremely important to recognise that the numbers are going up."

Long-standing shortages, amplified by Covid

In many ways, the pandemic has not actually changed the nature of the problems facing the NHS workforce. Long-standing workforce shortages were already pushing clinical staff to their limits.

"We [the BMA] estimate that it'll take until 2046, that's 25 years, before the NHS has enough practising doctors in training to meet the current EU nation average. We think that 50,000 extra doctors are needed to meet the country's health care challenges and to deal with the backlog," explained Dr Wrigley.

"Doctors have told us in our surveys that they have seen an increase in stress, poor mental health and depression, with many developing symptoms of PTSD"

Dr David Wrigley
GP and Deputy Chair, British Medical Association

While the government has announced extra funding for medical schools to allow over 9,000 students on medical and dentistry courses for 2021, training the doctors of the future does not offer an immediate solution to a current issue. Further, recent funding announcements from the government for the NHS have failed to offer ring-fenced workforce support for the NHS.

"Training more medical students is essential but it takes a long time to feed through. You also need the infrastructure in place to look after those students, that is not only in hospitals but in general practice as well, to train them and ensure they can see patients. We need an increased number of medical academics as well."

"Looking after" the workforce

Dr Wrigley emphasised the overall importance of "looking after" the healthcare workforce, a component that he felt was missing from the government's Health and Care Bill currently making its way through Parliament. The BMA has publicly opposed the bill, making a clear statement that this is the "wrong bill at the wrong time". For Dr Wrigley, with an urgent need to support the workforce, "the last thing the NHS and doctors need is another reorganisation".

A recent survey by Healthcare Workers Foundation found that nearly three quarters of NHS staff have considered leaving the NHS in the last 12 months. With nearly 30 per cent of those surveyed considering leaving in the next year, a mass exodus threatens NHS recovery.

Dr Wrigley said: "We know that doctors and others in our surveys have said that they will likely retire early because of the pandemic and not feeling supported. We've got issues around punitive pension taxation rules for senior doctors who are working very hard but, in many instances, just don't see the benefit of working. This is something that the government can directly tackle as these are the doctors who are the most experienced and we need to retain."

The voice of the workforce

The BMA's inquiry will focus on the voices of the NHS staff who have worked tirelessly over the pandemic, an attempt to hear their accounts while still fresh in the mind. Their accounts will inform the BMA's report, which will be produced into a series of clear recommendations for the government before the government's own inquiry has been completed.

Drawing upon the lessons learned over the course of the pandemic, the BMA will call upon the government to put measures into place to prepare the NHS for the possibility of a future pandemic or unexpected surges in demand, and to support and protect healthcare staff.

Dr Wrigley affirmed: "It is amazing what the NHS workforce has done to help protect the nation over the

pandemic and in difficult circumstances, with a lack of beds, lack of doctors and lack of adequate funding, but the workforce is exhausted.

- The BMA's inquiry hopes to ensure frontline healthcare staff have a powerful voice in the government's public inquiry to come in spring of 2022
- The BMA will gather evidence from members across the UK and publish a call for evidence from stakeholders
- Their accounts will inform the resulting review and recommendations
- The review will pose questions for policymakers and identify questions for the public inquiry to ask
- This review, including evidence and recommendations, will be submitted to the public inquiry

They're concerned about the winter ahead and the backlog of care and facing increasing abuse from increasingly frustrated patients. This is what we need to feedback to politicians."

With the outcome of a public inquiry still a long way off, it is essential to capture the reflections of healthcare staff on the management of the pandemic sooner rather than later. By helping the UK government to learn from mistakes made prior to and during the pandemic, and crucially providing guidance on what can now be done in this period of unprecedented service demand, the BMA hopes its report will provide a powerful corrective to the enduring legacy of NHS mismanagement. After working through the toughest circumstances many will have faced in their careers, it is only fair that the NHS workforce is not kept waiting for answers.

DR NEIL RALPH

Preparing the workforce for digitally driven healthcare

Creating a technologically advanced workforce in the digital age and how technology-enhanced learning can enable new ways of training and technology integration.

Education and training are undergoing a transformation in the digital age. As new technologies and ways of learning become available, the expectations of learners and educators are also changing to embrace digital modes of delivery care that can meet the demands of a more technologically aware population.

Health Education England's (HEE) Technology Enhanced Learning (TEL) team is at the forefront of digital education, training, and workforce transformation in the NHS. HEE works with national, regional and local partners within a wide health and care community to enhance the effectiveness of education through the use of learning technologies and simulation-based approaches.

The team specialises in technology-enhanced learning and how it can be used in education to support a technologically advanced workforce, enable the adoption of new ways of training and help the wider NHS to integrate technology into clinical care delivery.

The Covid-19 pandemic has had a significant impact on training and education, some of which was unexpected. These changes include the necessary adoption of new models of learning and teaching and create opportunities to use new technologies that can positively support the NHS.

Throughout the pandemic, digital innovation played a significant part in the the delivery of services as well as healthcare education and training. HEE delivered 5.99 million sessions of online Covid-19 learning in the UK, which were accessed by 115 countries globally. It is crucial that these digital advances are embraced, by our collective Covid-19 recovery efforts, and in future reforms.

This will deliver HEE's fundamental aim – to ensure that the NHS has the skilled workforce required to deliver the care that is needed now and in the future.

How TEL delivers digital education

The TEL team is part of the Directorate of Innovation, Digital and Innovation at HEE. The team works with individual learners and educators, as well as strategic programmes and organisations, to help them meet their education objectives.

"We are deepening our role in shaping, expanding and communicating the evidence base for digital learning"

Dr Neil Ralph
Head of Technology Enhanced Learning, Directorate of Innovation, Digital and Transformation at Health Education England

TEL services cover four key areas: platforms and content development, simulation and immersive technologies, supporting and embedding TEL functions and an Academic and Advice Unit.

HEE's TEL platforms are familiar throughout the NHS. The e-learning for healthcare hub offers more than 450 programmes of online learning that are accessible and free of charge to more than two million registered users across health and care. Online learning is rapidly becoming the method of choice for people needing more flexibility to work and study and balance both around busy lives.

Our latest platform is The Learning Hub, which is in beta development but already being used extensively as a platform for stakeholders to share and disseminate learning within and outside their organisations. There are already 68 live catalogues and the system now has over 4,000 resources. This hub will be at the centre of an increasingly integrated and comprehensive online learning service for health and care as we continue to expand on the functionality of our platforms.

Simulation and immersive technology

Making sure educators and learners have equitable access to the latest technology is another key area of TEL's work to prepare the future and current workforce for digitally driven healthcare.

HEE is also investing in simulation faculty development programmes and providing on-the-ground support for technicians. Critically we work with the expertise distributed across the system and use our central role to bring it together, aiming to encourage collaboration and innovation.

The core of this is our XR hubs, which are a library of resources to educate, train and evaluate new opportunities for using extended reality – augmented, virtual and mixed reality – in healthcare education. HEE has brought together a range of XR devices and is loaning them to NHS organisations in both primary care and acute settings. By creating a central resource repository, there is equal access to the latest technology for all NHS organisations, across all disciplines and specialties, which can be complemented by local investment. The devices come with a range of pre-installed software but TEL has also created a catalogue of companies with applications that include highly specialist content, to meet demand from users across the NHS.

Through this approach TEL can rapidly support thousands of XR-enabled training interventions, facilitating innovation beyond the boundaries of the classroom and geography, at a scale and pace never before achieved. Feedback is already

showing how the use of technology is making a difference to learners; for example many report preferring to observe virtually rather than physically, especially in surgery or ward rounds, where there might previously have been space and capacity restrictions.

The XR Hub model has been designed so each application of the technology will inform how it will further evolve and grow. The team works closely with users to get the technology working, help educators to integrate it into their work and gather evidence from each use and application to inform our future strategies.

The future of digital learning

As well as our work to scale our immersive technology offerings and our national online learning services, we are working to improve our ability to connect directly into the frontline of education across the country through our Supporting TEL function. Doing so means we will be able to maximise the impact of our ability to help, by consulting with leadership and educators at a regional and local level. This support includes professional development for our educators and IT colleagues so they are equipped for a digitally enhanced world and can overcome barriers within the NHS education environment.

HEE is also deepening our role in shaping, expanding and communicating the evidence base for digital learning. In the coming months and years we expect to see a significant expansion of technology-enhanced learning and its integration into healthcare education. We believe it is integral that this integration remains guided by evidence and that steps are taken to ensure the generation of evidence keeps up to inform real-world applications.

Fundamentally, the team will continue to collaborate, support and deliver technology and digital ways of learning across the health and care system, which will benefit educators, learners and the populations we serve.

If you would like to speak with us or find out more about TEL's work in health and care, our services and how we can collaborate, please follow us on Twitter @HEE_TEL or email tel@hee.nhs.uk.

ELEANOR MURRAY

PPP proposes comprehensive reform to workforce planning

On 1 December Public Policy Projects (PPP) launched its State of the Nation report, *Workforce and Talent Development: More Time to Care*.

Despite accounting for 8.6 per cent of the working-age population, health and social care is severely understaffed. According to the BMJ, one in 10 NHS posts is vacant in England alone – amounting to more than 100,000 full-time equivalent vacancies. Similarly, according to Skills for Care there was a vacancy rate of 7.3 per cent in August 2021, with 105,000 jobs being advertised on a typical day in 2020/21.

The report, chaired by Professor Mike Bewick, former Deputy Medical Director at NHS England, considers three key themes in workforce planning, recruitment and diversity, development and innovation, and wellbeing and retention.

To form a set of practical recommendations for each theme, the report consulted with a range of stakeholders from Health Education England, NHS trusts, social care providers, the private sector and the not-for-profit sector.

Parliament recently rejected an amendment to the Health and Care Bill that would have mandated ministerial transparency over NHS staffing shortages – a move widely criticised by health experts. *More Time to Care* calls upon the government to commit to publishing regular projections of the demands for health and social care staff and to produce a plan for how that demand will be met.

In addition to meeting demands, the report argues that the NHS and social care must better represent the communities they support. A significant difficulty in broadening access to medical training is the idea that medical careers must begin at a young age. New medical schools and new routes such as apprenticeships can provide opportunities for educational institutions to develop links with local schools and encourage

greater ambition across students from different ages and different backgrounds.

More Time to Care also highlights the critical importance of placing patient-centric workforce planning at the heart of the integrated care agenda. Bringing the NHS and social care workforces together is key to providing a high-quality, integrated health and care service, with shared programmes of recruitment, training and retention to build system-wide resilience.

Joint training programmes will help ensure digital readiness among staff at all levels is a key priority for workforce development. Current workforce strategies are not fit for purpose in a digital age – according to HIMSS Analytics in June 2021, only six hospitals in England had reached a "high level of digital maturity". The report also stresses that digital implementation must maintain or improve the quality of learning and widen access to it. Digital must support rather than disadvantage students with fewer financial resources or with disabilities.

Taking steps to support the mental wellbeing of staff

The pandemic has amplified long-standing pressures on the health and care workforce, and instances of fatigue and burnout increased as a result – exacerbating increasingly poor levels of staff retention across the sector. This report highlights the Reflective Spaces programme run by Doctors in Distress, a charity committed to influencing cultural change in the NHS by providing spaces for healthcare workers to come together to talk about the emotional impact of their work.

Commenting on the report, Doctors in Distress Chief Executive, Ann Paul, said: "There is a critical need for leadership to take a decisive step in the culture change necessary to make a significant difference for the future. At the same time it is important to encourage medical students to take care of their own wellbeing as a matter of course since Doctors in Distress is running several programmes for medical students.

"We hope that this will also encourage students into medical schools – and the phrase 'turning on the tap' is apposite. The final area of real concern to us, which is well highlighted by the report, is the plight of foundation year doctors. The NHS simply cannot afford to lose doctors at any point, but the drain on Foundation Year doctors is a major issue."

PPP is calling for a shift in clinical culture to encourage trainees to ask for help. The report argues that reaching out for help in the early stages of clinical training is a sign of strength and a mark of professionalism. The idea that a deterioration in mental wellbeing is a sign of weakness, particularly among doctors, must be dispelled. Professor Mike Bewick said: "The recent pandemic has laid bare the fragility of our health and social care workforce. Future planning must address both capacity and wellbeing as equal priorities to retain as well as attract new workers."

"The NHS simply cannot afford to lose doctors at any point"

Ann Paul
Chief Executive, Doctors in Distress

The role of volunteers

The report recommends that the NHS should maintain and expand a national register of retired clinical professionals and those who have left the profession mid-career who are willing to return to work at times of high pressure. This would make it easier for them to come forward at short notice.

Building on the momentum from volunteering during the pandemic, the report also recommends that the NHS should collaborate with voluntary sector organisations to build a significant cadre of volunteers to support staff while improving the patient experience. These volunteer posts should always be complementary to, not instead of, paid staff members.

Director of Services and Deputy CEO at Royal Voluntary Service, Sam Ward, said: "Having seen first-hand the difference that volunteers can make to our communities and the NHS, particularly during in a health crisis, it is vital that we build on the momentum of volunteering during the pandemic. Volunteering brings out the best in our communities and needs to be supported and developed to become a more extensive and permanent resource for the NHS."

A call for reform

PPP's latest report on workforce planning calls for comprehensive reform to the way the workforce is planned, developed and supported. Both the NHS and social care continue to face staff shortages that prevent the workforce from meeting patient needs. With NHS staff facing an enormous backlog of care and the Covid booster push creating a diversion of staff, it is more important than ever that the workforce is adequately staffed to face upcoming pressures.

For more information on PPP's report: *Workforce and Talent Development: More Time to Care*, please write to carl.hodgkinson@publicpolicyprojects.com.

Workforce and Talent Development: More Time to Care

Scan below to access the report

HEALTH POLICY

DAVID DUFFY

Can the UK become a global life sciences superpower?

The latest report from Public Policy Projects and IQVIA highlights a unique opportunity to propel UK life sciences and pharma to new heights.

The rapid deployment of Covid-19 clinical trials and the success of vaccine development has left many experts wondering: why has this speed, efficiency and collaboration not dictated UK life sciences policy till now? Can this country capture the innovative spirit which has defined its response to Covid-19 and use its exit from the European Union as an opportunity to become a life sciences superpower?

These were just some of the questions that were addressed in September as IQVIA and Public Policy Projects (PPP) launched their latest report: *Putting Policy into Practice: Making the UK a Global Life Sciences Superpower.*

The report combines extensive life sciences stakeholder surveys from IQVIA with a detailed policy overview from PPP. Its conclusions and recommendations provide a practical and pragmatic blueprint to expand the sector – paying special focus to the combined impacts of Covid-19 and Brexit.

Progress in the face of unprecedented challenge

Both the webinar and the report itself shared an immense sense of pride over the UK life sciences achievements of the past two years, including the development of the Oxford AstraZeneca vaccine.

"The name with which we refer to as the 'Oxford AstraZeneca Vaccine' actually disguises the partnership which put it together," explained Tom Roach, AstraZeneca's UK President, "this vaccine was only possible because of extensive collaboration across the life sciences sector – from organisations such as the MHRA, COBRA, SES, the Vaccines Task force and of course, the NHS."

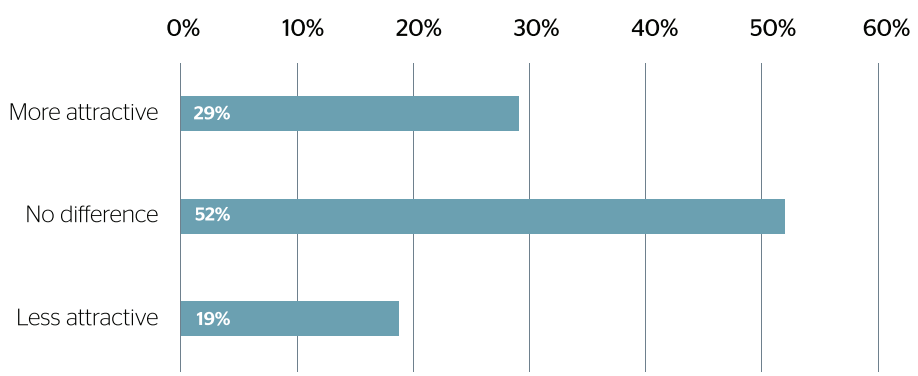
With ongoing genomic sequencing working to identify new Covid variants, the rapid development and deployment of this vaccine is one demonstration of the UK's unique end-to-end research process in action.

The successful response of UK life sciences to the pandemic has not gone unnoticed by pharma and life sciences stakeholders globally. IQVIA's latest global survey on the perceived attractiveness of the UK, featuring feedback from over 200 c-suite pharma and biotech executives, suggests that the UK remains a crucial launch location for new medicines. According to the findings, 79 per cent of stakeholders believe that the UK will remain a priority launch country for new medicines – with 77 per cent of the same cohort stating that this had historically been the case.

"These figures highlight a tremendous success story for UK life science policy and a growing sense of attractiveness of the UK for conducting trials and launching medicines," said Angela McFarlane, IQVIA's Vice President, Strategic Planning, North Europe.

The perceived impact of Brexit also features heavily in the report (see figure 1 below). Promising for the sector is that, rather than weaken the UK's

Question: **In your opinion, did the UK leaving the EU make the UK a more or less attractive market for your organisation's product launches?**



position in this highly competitive market, c-suite executives have noted that Brexit could potentially come with a reduction in bureaucracy and regulation. The report states that 81 per cent of life sciences and pharma stakeholders believe that leaving the EU has made the UK at least the same or a more attractive destination for medicine launches. This, Angela stressed, is great news for the sector – a reduction in red tape, supplemented with enhanced government support could improve the UK's standing as a life sciences and research innovation hub.

Further enhancement of the UK's global life sciences standing stems from its regulatory framework. 65 per cent of respondents were aware of the latest activity from the Medicines and Healthcare Products Regulatory Agency (MHRA) with 34 per cent confirming the organisation as their "primary regulator". Participating in the webinar, Dr June Raine, Chief Executive of the MHRA highlighted the organisation's innovative "end to end regulatory process".

While warning against complacency, Dr Raine was keen to stress that the ambition of being first choice regulator for global pharma and biotech is "within reach". Achieving this goal, she argued, will help facilitate a "tsunami of life sciences innovation" in the coming months and years.

A vibrant policy environment

The challenge for policy makers is to build on this position of strength and develop UK life sciences into a globally mobile industry. Over the last few years, UK government agencies published a total of 114 policy documents (illustrated by figure 2 below) designed to address and improve the attractiveness of the UK Life Sciences sector in a globally competitive market.

A shrinking window of opportunity

These findings provide a snapshot into the UK life sciences sector with apparently limitless potential.

"The exam question is taking the opportunity presented by Covid-19 and creating a long-lasting global life sciences hub in this country"

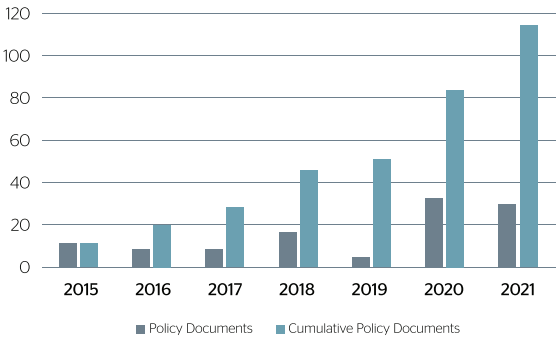
Tom Roach
UK President, Astrazeneca

However, demonstrating potential and capitalising on it (i.e. putting the policy into practice) are two distinct goals.

As Angela had previously warned, the "window of opportunity" presented by an optimistic market and a seemingly enthusiastic policy base, will not be open forever. "We feel the optimism of the IQVIA survey," said AstraZeneca UK President Tom Roach, "but the UK has consistently suffered from a historical lack of success in turning rhetoric into action."

Despite its enviable end-to-end research capacity and innovative regulatory framework, the UK has long suffered from an "adoption problem" when it comes to new medicines and therapeutics. Tom pointed to the decrease in UK life sciences exports and research levels in recent years. "In vital areas such as data integration, even countries like Scotland, Estonia, Sweden and Iceland are in fact leagues ahead of us. Without increasing UK competitiveness in these areas the sector will fall short of true 'global competitiveness'".

For all the positives to be taken out of the UK's research response to Covid-19, the pandemic has still caused a substantial drop off in non-Covid clinical research. This was already in steady decline prior to the pandemic with the UK dropping from third in the world for exports almost six years ago to seventh in 2020. The UK today only accounts for two per cent of the global total for clinical research. "Let's catch up on re-establishing services following the pandemic," said



Tom, "but we must leap ahead in our treatment of chronic disease, diagnostic pathways and integrating our approaches to data."

Dr Louise Wood, Director, Science, Research & Evidence, Department of Health and Social Care, described the juxtaposition between rhetoric and action, stating that: "we know what needs to be done, but have hesitated at the point of action." Louise called for greater decisiveness on the part of UK life sciences to capitalise on what she described as an "unprecedented consensus" amongst key stakeholders. "We must be bold and cut through political reluctance," she stressed.

"The NHS needs to be included as a crucial participant of life sciences, of core workstreams, timelines and working groups," said Louise, who lamented previous indecision that has prevented the NHS from taking a more central role as an innovation partner.

Seizing the moment

For all the potential of its life sciences sector, the UK has fallen short of what can be described as true global leadership. Accordingly, *Putting Policy into Practice* does far more than praise the UK life sciences. More fundamentally, the report is a callout to the UK government to build on this position of strength and deliver innovative treatment to patients. There is a unique opportunity to do so. Not only has the Covid-19 experience galvanised the life sciences community, but the development of Integrated Care Systems presents a chance to grapple life sciences processes and enhance care delivery.

"This country is still capable of doing great things," insisted Tom, "but the exam question is taking the opportunity presented by Covid-19 and creating a long-lasting global life sciences hub in this country." As Tom went on to say, the UK must create an environment for industry to grow and patients to benefit, turning the life sciences sector from strategic forum to delivery and innovation hub.

Key recommendations of *Putting Policy into Practice: Making the UK a Global Life Sciences Superpower*

- The Life Sciences Council should be given the responsibility to carry forward the partnership model that evolved during the Covid-19 pandemic
- The Life Sciences Council should be obligated to issue a report each year on UK life sciences development. This report should be presented to Parliament by government members of the council
- The annual report to Parliament from the Life Sciences Council should include a chapter that reports the progress of implementing the 30 recommendations of the Public Policy Projects Clinical Research Coalition
- The annual report should include a chapter that reports on the progress of implementing the recommendations of the Public Policy Projects Rare Diseases Coalition
- The UK should develop a coherent policy for using health data to improve outcomes for citizens, this policy should become a cross-government priority
- The new management team at NICE should continue to build on the Five-Year Strategy and continue as an active member of the Life Sciences Council

LOTTIE MOORE

Will merging the NHS increase the pace of digital change?

The latest reorganisation of the NHS poses major implications for digital innovation in the NHS.

More organisational changes are on the horizon for the health sector as NHS Digital and NHSX are to be merged into NHS England. Amanda Pritchard, Chief Executive of NHS England described the decision in a letter to staff as a move to "further accelerate the digital transformation of the NHS". While the basic argument in favour of giving NHS England more centralised power over digital decision-making might appear attractive, there are more than a few concerns about the impact of yet another major NHS reorganisation.

On top of these concerns is the uncertainty for the 6,000 staff that make up the NHS Digital workforce and the 900 of NHSX. While in the short term these staff are to be integrated into the wider team of NHSE/I, the duplication of work caused by the merger will inevitably lead to layoffs in due course. In the context of the achievements made by NHSD/X staff over the course of the pandemic, the news will have come as a bitter blow.

The merger is a direct recommendation of Laura Wade-Gery, the non-executive director of NHS England and chair of NHS Digital. She was commissioned by the Health and Care Secretary Sajid Javid in the summer of 2020 to review digital transformation within the NHS – with the resulting report published on 23 November. The move is designed to improve co-operation between the two digital organisations by bringing them under one roof.

"By merging these three organisations with NHS England and NHS Improvement, government and the NHS are ensuring the health and care sector is fully equipped to face the future and deliver for patients" the government said.

Amanda Pritchard noted health inequalities as a key driver for the move, asserting that: "As a single

organisation, we can further accelerate the digital transformation of the NHS and redouble our efforts to address health inequalities." Pritchard is expected to drive digital transformation within the NHS, and she is the first NHS executive to be expected to place digital development front and centre of the NHS's future.

Was the writing on the wall?

NHS Digital was originally created in 2013 to provide digital services for the NHS and social care, including the management of large health informatics programmes. The organisation will now become the NHS' CIO directorate, with current NHSD Chief Executive Simon Bolton to become the new NHS CIO. The sudden integration into the wider NHS family could far reaching implications – not only due to its sheer size of its workforce but because of the hugely sensitive role the organisation has in managing health data processes across the country.

"The government is yet again performing a balancing act between claiming to facilitate localised integration while also seemingly enhancing centralised ministerial decision making"

Lottie Moore
Senior Policy Analyst, Public Policy Projects

While NHSX was only created in 2019, it is perhaps far less surprising that the organisation is to be axed. The group was largely an idea driven from then Health Secretary Matt Hancock – the current Health Secretary is rumoured to not have been a fan of the organisation and has so far been keen to break with much of his predecessor's vision.

Mr Javid will doubtless be looking to build on digital momentum seen during the pandemic. Covid-19 has forced the hand of providers, who have had to increase the pace of implementing data, digital and wider tech to support staff and boost capacity.

The government has insisted in its recent digital white paper *Putting data, digital and tech at the heart of transforming the NHS*, that the move was "not about centralisation" but rather giving the NHS the "operational capabilities" it needs to enhance care and further develop integration.

In a similar vain to its Health and Care Bill, it seems the government is yet again performing a balancing act between claiming to facilitate localised integration while also seemingly enhancing centralised ministerial decision making. One can only hope this juxtaposition comes good in time.

"A shock, but not a surprise"

Speaking to *Hospital Times* anonymously, a source at NHS Digital said: "The findings of the Wade-Gery review came as a shock, but not a surprise. From the moment it was announced there would be a review of the digital responsibilities within NHS agencies, it was clear that there would be changes, and that some organisations would not survive.

It does make sense to rationalise the digital capabilities within the NHS to a central directorate. But from a purely selfish perspective, I do fear what it means for me and my colleagues.

It was hard to get information about the review while it was ongoing, and there has been a bit of an information vacuum from the centre in the past few weeks around timelines, potential structures and any possible impact on jobs. We have been assured that job cuts are not planned, but when three organisations are brought together, there will be duplication of work, and it feels inevitable that there will be reductions in headcount over time.

What is clear is that NHS Digital's reputation for delivery has been enhanced during the pandemic, and colleagues can be massively proud of what they have delivered over the past two years, and more."

MORE INFORMATION

Public Policy Projects
lottie.moore@publicpolicyprojcts.com

Final Word

The digital era of the NHS won't be realised without a cultural transformation

Well before Covid-19, efforts were being made to drive digital technology in the NHS and it was widely acknowledged that more should be done to increase uptake of digital tools in healthcare. In January 2019 the NHS Long Term Plan laid out aspirations for digital care to "go mainstream across the NHS", and in early 2019 NHSX was established, with the responsibility of developing best practice for NHS technology, digital and data. However, it wasn't until the events of the pandemic left little other option that a digital culture truly began to emerge.

The inability to see patients face to face has increased the use of triage and remote appointments in both primary and secondary care. At the beginning of the pandemic, remote outpatient appointments were recommended where appropriate to free up capacity in acute hospitals as well as to reduce the risk of Covid infection. Around 10 per cent of outpatient appointments were classified as telemedicine in March 2020, which was just 3.5 per cent of appointments in March 2019.

Digital tools are also being increasingly embraced by patients and end users. As of October 2021, the NHS login app has almost 28 million users, up from around 2.2 million in September 2020. While much of this uptake is likely due to necessity, virtual clinics and telephone and video triage tools can also empower patients through self-care and the convenience of choosing their own suitable location.

The recently published Government policy paper, *Putting data, digital and tech at the heart of transforming the NHS*, seeks to build on the digital momentum beginning to grow within the NHS. It draws particular attention to how this acceleration requires the workforce to swiftly expand its digital skillset. The paper states that: "Understanding the importance of data and digital and being able to use them effectively must become a requirement for staff at all levels in NHS England and Improvement (NHSEI) and in the wider NHS." What this process of digital upskilling looks like in practice has been helpfully outlined in this magazine by Dr Neil Ralph from Health Education England (on page 52).

It was also announced by Amanda Pritchard, Chief Executive of NHS England, on 22 November that NHS Digital and NHSX are to be incorporated into NHSEI, with the former becoming the Chief Information Officer (CIO) directorate and NHSX evolving into the strategy function of the transformation directorate. Pritchard wrote in a letter to staff: "As a single organisation, we can further accelerate the digital transformation of the NHS and redouble our efforts to address health inequalities."

Now more than ever the NHS needs this digital transformation to work. As I write this, it has been announced that the elective care backlog has now reached six million people. Further heightened service demand and operational pressures looks set to place yet more pressure on a beleaguered health service. Along with the current rise in cases of the Omicron variant, NHS services must be braced for another arduous winter. Digital transformation is a necessary and vital tool in the belt of recovery from the pandemic, but is also essential for reform of services and for the future of the NHS.

Niamh Macdonald
Deputy Editor, *Hospital Times*
| @NiamhMacdonald7

Community Diagnostic Centres

Partnering to deliver your vision

siemens-healthineers.co.uk/CDC

Siemens Healthineers optimises patient pathways and designs the ideal layouts in which to deliver them.

Working in partnership with the NHS, we can support with planning, design, construction, equipping and digitalising your community diagnostic centre (CDC), helping to perfect processes throughout.

We can wrap all required equipment and services in a financially innovative Value Partnership that's tailored to your unique community and healthcare requirements.

Discover how your CDC could benefit from a Value Partnership

SIEMENS Healthineers

1 IN 6 PEOPLE IN THE UK ARE SURVIVORS OF RAPE, SEXUAL ABUSE OR ASSUALT

The Survivors Trust is working to improve access to **trauma-informed care** to help survivors feel comfortable and empowered when accessing healthcare.

Find out how you can become a #CheckWithMeFirst champion and how your NHS Trust can support trauma-informed healthcare

You and your colleagues will have access to:

- CPD-accredited, trauma-informed online workshops
- A suite of online resources for multiple healthcare disciplines
- Ongoing support from The Survivors Trust
- Networking with NHS champions across the UK.

After completing our trauma-informed workshop **100%** of survey respondents told us they would **definitely recommend the training** to a colleague.

> "I wish I'd had this training 25 years ago when I started my nursing career"

For more information scan the QR code or email
NHS.checkwithmefirst@thesurvivorstrust.org

THE SURVIVORS TRUST

Supported by NHS England Health and Justice London

Charity Number: 1169999