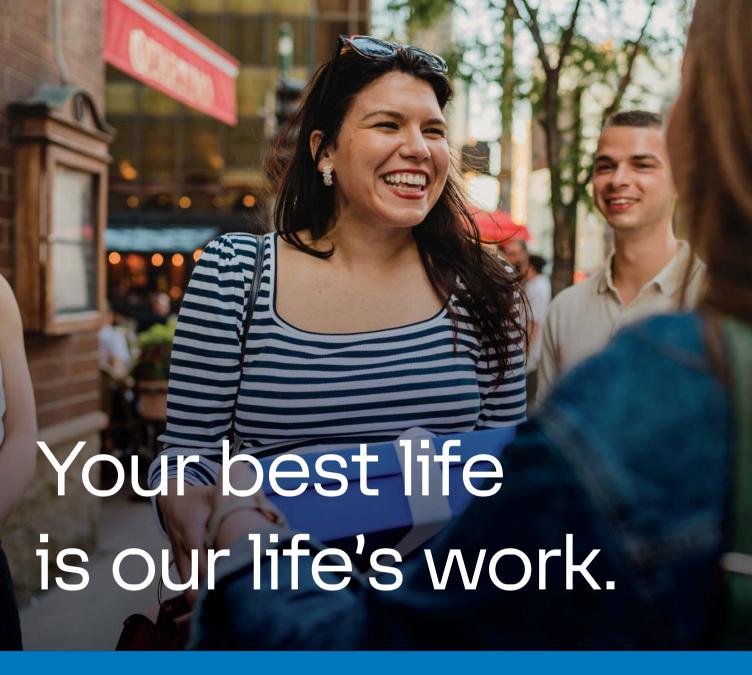
Spotlight

Thought leadership and policy

Healthcare: Transforming the sickness service

Wes Streeting Preet Kaur Gill Richard Torbett





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Better than cure

ot on the heels of his net zero climbdown, Rishi Sunak unveiled more headline-grabbing policies at the annual Conservative Party Conference this month. Not least was one bold preventative health intervention: raising the legal age for buying tobacco in England by one year, every year.

A "14-year-old today will never legally be sold a cigarette [so] that they and their generation can grow up smokefree", the Prime Minister said, while also promising to limit the availability of vapes, which are increasingly popular among the young.

Inspired by a similar ban in New Zealand, the policy seems at odds with Conservative opposition to the "nanny state". And while it may give the illusion of "long-term decisions for a brighter future" – this year's conference slogan – the reality is a lack of strategy on prevention from this government.

The Health Foundation think tank projects that 9.1 million people in

England will be living with major illness by 2040, an increase of 2.5 million from 2019. According to government figures, most people aged 55-64 and older have at least one long-term condition. People with two or more conditions account for half of the NHS's overall costs.

The government has been working on a preventative health approach with its Major Conditions Strategy, expected early next year, which combines a number of white papers that had been expected on issues ranging from cancer to mental health. An interim report, published in August, argued that better prevention strategies are needed to reduce disease rates.

But what strategies is the government proposing exactly? One key issue is funding. While the NHS needs staff and capital investment, local authorities in the most deprived areas need funds for prevention – and the public health grant has been cut in real terms by 26 per cent in England since 2015-2016.

Even the Long-Term NHS Workforce plan has been criticised for a dearth of long-term thinking (see pages 22-23). It makes no mention of restoring realterms pay to 2010 levels, for instance. Without addressing staff retention, the health service will buckle in the face of an ageing, ailing population. As Labour's health shadow cabinet tells *Spotlight* (see pages 6-8) a focus on care in the community, not merely hospital treatment, is sorely needed.

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Spotlight

40-42 Hatton Garden London EC1N 8EB

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Subscription inquiries: digital.subscriptions@newstatesman.co.uk

Director of Client Solutions Dominic Rae

Account Managers Jugal Lalsodagar Katy Pieris Kalpesh Vadher

Senior editor Alona Ferber

Design Erica Weathers Editorial Jonny Ball Harry Clarke-Ezzidio Sarah Dawood Zoë Grünewald Samir Jeraj Megan Kenyon

Cover Illustration Klawe Rzeczy



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Cancellations due to strikes may be twice as high as estimated

s many as two million outpatient appointments may have been cancelled or delayed due to strikes. The NHS Confederation said the true number of cancelled appointments is likely to be higher than the NHS's official figure of one million as many hospitals do not book them on strike days, so they do not have to be rescheduled.

Junior doctors and consultants staged a simultaneous three-day strike from Monday 2 October to Thursday 5 October, with radiographers also walking out on Tuesday 3 October.

The British Medical Association has extended a formal invite to health ministers for talks with the Advisory, Conciliation and Arbitration Service to end the dispute with consultants.

However, the association said that Steve Barclay, the Health Secretary, had refused to meet them because the government's position is to not hold talks on the days when strikes are scheduled.

Before the radiographers' strike on 3 October, Matthew Taylor, chief executive of the NHS Confederation, said that "rearranged and cancelled appointments" would contribute to ongoing backlogs and "could add further delays for elective recovery".

He added that this could have an impact on waiting times in A&E and increase the length of time patients must stay in hospital. Taylor urged the government and the unions to "get back round the table as soon as possible".

WHO approves new vaccine for malaria

n a significant stride towards eradicating malaria, the World Health Organisation (WHO) has given the green light to a second groundbreaking vaccine against the infection.

Developed under the nomenclature R21/Matrix-M by the University of Oxford, the vaccine's approval comes on the heels of rigorous testing and evaluation, becoming the first malaria vaccine to meet the WHO's target of 75 per cent efficacy.

More than half a million people die of malaria every year. The disease, borne by mosquitoes, mostly affects children and pregnant women. This new tool in the fight against malaria is poised to make a substantial impact, especially in regions where malaria is most prevalent, such as Africa, South America, and Asia.

Malaria is a major public health concern, and has long demanded innovative solutions. The new vaccine follows the invention of the RTS,S vaccine, the first malaria vaccine, which was approved by the WHO in 2021. However, as supplies are limited, this second recommended vaccine is expected to make a significant difference to the fight against malaria worldwide.

The world's largest vaccine manufacturer, the Serum Institute of India, is planning to produce 100m doses a year, scaling up to 200m a year, and at least 28 countries in Africa are planning to introduce one of the two vaccines as part of their national immunisation plans.

Dr Matshidiso Moeti, the WHO's regional director for Africa, said the innovation would "help bolster malaria prevention and control efforts, and save hundreds of thousands of young lives on the African continent from this deadly disease".

New study will monitor changes in Covid-19 infections ahead of winter

he UK faces another difficult winter ahead as Covid-19 will "continue to surprise us", the deputy chief medical officer for England has said.

Dr Thomas Waite encouraged anyone eligible for either the Covid-19 or flu vaccine to get jabbed to protect their health throughout the winter months, when the NHS will be under increased pressure.

This winter, a new study run by the UK Health Security Agency (UKHSA) and the Office for National Statistics (ONS) will collect data on changes in public Covid-19 infection levels.

Running from November this year to March 2024, it will involve up to 30,000 people who will take lateral flow tests every week.

The UKHSA has estimated that last year 25,000 people avoided needing to be treated in hospital after taking up the flu vaccine.

The NHS began the Covid-19 and flu vaccination programmes earlier than planned this year – in September rather than October – due to concerns over a new variant of the coronavirus.

Waite urged those most vulnerable, in particular those who are pregnant, to make sure they get the jab. •

UK's first legal drug consumption facility to open in Glasgow

cotland has approved plans for the UK's first official drug consumption facility, to be based in Glasgow.

Backed by the Scottish government, the £7m pilot scheme will allow users to take their own drugs in a clean, safe environment, supervised by trained health professionals.

The facility, due to open next summer, is intended to help tackle the high levels of substance abuse in Scotland, which has the highest drug death rate in Europe (there were 1,051 such deaths in 2022).

Glasgow's Integration Joint Board – comprised of local NHS and council figures – approved the plan on 27 September, following Scotland's most senior law officer confirming that the scheme's users would not be prosecuted for using drugs at the facility.

Allan Casey, the addiction convener for Glasgow Council, said the scheme was "the missing jigsaw piece in the full suite of services required to really make a difference in reducing drugs deaths in the city... We know from experience that networks of safe injecting facilities are what is needed and we would be more than happy to work with other cities. I'm already having questions from different cities around the country looking to learn from us."



Drug-related deaths in Scotland in 2022 – the highest rate in Europe



Estimated number of NHS outpatient appointments cancelled due to strikes



People avoided hospitalisation due to last year's flu vaccine drive

5

Preparing for Power

How will Labour fix the NHS?

The shadow cabinet on creating a health service that is fit for the future

he NHS is facing record waiting lists, patient backlogs and severe staff shortages. Meanwhile, capital investment is insufficient, as hospitals grapple with crumbling buildings and digital infrastructure fails to keep pace with new technology. With the NHS a big focus ahead of the next election, *Spotlight* asked the shadow health cabinet what a Labour government would do differently.

Wes Streeting

Shadow secretary of state for health and social care



Thirteen years of Conservative mismanagement has left the NHS in the biggest crisis in its history, no longer able to be there for us when we need it. Three big shifts are required to restore the service to good health, and to make the NHS fit for the future.

The first is to shift the focus out of hospitals and into the community. We will expand community pharmacy and bring back the family doctor, so people can easily book appointments to see the GP they want, in the manner they choose. And we will tackle the mental health crisis, recruiting 8,500 more mental health professionals, with support in every school and mental health hubs in every community, funded by closing tax loopholes for private equity and private schools. Fixing the front door to the NHS will mean catching problems earlier and treating them faster, which is better for patients and less expensive for taxpayers.

The second shift we need is away from simply treating sickness, to prevention. That starts with giving every child a healthy start to life. We will put breakfast clubs in every primary school, paid for by scrapping the non-dom tax status, so children start school with hungry minds not hungry bellies. And we will tackle childhood obesity by banning junk-food ads targeted at children.

Finally, we've got to shift from the analogue service we see today to one that is equipped with cutting-edge technology. By cutting red tape to speed up the adoption of new artificial intelligence, which can rapidly read scans and interpret X-rays, we can diagnose patients faster and free up precious staff time. Underpinning this will be the biggest expansion of NHS



increasing training places and keeping the excellent staff already in the health service, we will get the NHS treating patients on time once again.

Preet Kaur Gill

Shadow minister for primary care and public health



As shadow minister for primary care and public health, I want to engage with and learn from GPs, pharmacists and dentists - the front door of our health service - to build an NHS fit for the future.

After 75 years, the front door to the NHS is suffering because primary care is overwhelmed and inaccessible. I saw first-hand the brilliant work that the primary-care sector does during my time as a social worker and in my role as cabinet member for public health and protection at Sandwell Council. Yet, after 13 years of Tory incompetence, GPs are majorly overstretched because there simply aren't enough of them: the Conservatives have cut 2,000 GPs since 2015. As a result, more than a quarter of

or sooner, according to this year's GP Patient Survey.

This crisis in primary care is not incurable. Labour will reform primary care by shoring up community services while reducing the burden on hospitals.

Labour will improve GP access by training more GPs to take the pressure off those currently working in the system. We will also guarantee face-toface GP appointments for all who want them, and bring back the family doctor so that patients can see a regular clinician if they prefer or need to.

We also know patients want new and more varied opportunities to access the healthcare they need. There are pockets of great practice across the country that we should be building on: for instance, in the Jaunty Springs Medical Centre in Sheffield, a shared care agreement between the pharmacy and GP surgery means a majority of health interventions can be delivered in the pharmacy consultation room, freeing up the GP and cutting waiting times.

Labour will further expand the role of community pharmacy, accelerating the

will ensure pharmacists can work to the top of their licence and focus on their expertise in prescribing and medicines management.

Labour will also encourage integrated care systems to identify opportunities, to join up services, including by colocating them on a single site where existing capacity allows. This will reform healthcare for those who have more than one condition, providing them with one point of contact for appointments, with a range of professionals and services, including their family doctor, carer, district nurse or mental health specialist.

Andrew Gwynne Shadow minister for social care



My first priority will be addressing the chronic workforce shortages in the social care sector, which have been allowed to spiral out of control under the government's watch.

The deputy leader of the Labour Party, Angela Rayner, has announced

◀ that the social-care sector will be the first to benefit from a fair pay agreement in adult social care. This will deliver better rights at work, fair pay and proper training that offers opportunities for progression. This will be key in filling gaps in the workforce, but also in retaining social care staff who are leaving in droves. I'm also acutely aware that too many unpaid carers feel neglected and ignored, so I'll be working really hard to ensure that they are properly supported and recognised for the invaluable work that they do.

Alongside this, I'll be relentlessly focusing on driving up standards right across the sector. The next Labour government will require all care providers to demonstrate financial sustainability and responsible tax practices, to value their staff, and to deliver high-quality care for service users before they are allowed to receive contracts from local authorities and before they can gain registration from the Care Quality Commission. There are providers backed by private equity firms making a fortune overcharging users for substandard care. The next Labour government will put a stop to that.

Ultimately, all this work will feed into my long-term ambition, which is to work with users, their families and the social care workforce to co-produce a plan to build a National Care Service; one that is separate from the NHS, but powered by far better local partnerships between the NHS and social care on things such as hospital discharge, home-first care and prevention. That means people getting the joined-up health and care services they need, as well as a greater use of technology to support independent living.

Social care has enormous potential. If done right it can empower people to live the life they choose, in the place they call home, with the people they love. Realising that potential will be a key priority of the next Labour government.

Abena Oppong-AsareShadow minister for women's health and mental health



A recent report from the Chartered Institute of Personnel and Development shows that British workers are taking more days off sick than at any time over the past decade. This is a symptom of a crisis in public health, especially in mental health. Improving public health, through prevention, earlier diagnosis and faster treatment, will be a priority for the next Labour government.

With the longest waiting times for adult and child mental health patients since 2010, it is clear we face a mental health crisis. Changes in medical expertise and treatments, as well as evolving public attitudes, mean that the way we should deal with mental health conditions has changed. We will give mental health the same priority as physical health.

Patients are waiting months, at risk of their health worsening. We must revolutionise mental health treatment. So, Labour will recruit more than 8,500 more mental health professionals to cut waiting times for children and adults, funded through closing tax loopholes. Every school will have specialist support, and every community will have an open access mental health hub for young people, to boost prevention through early intervention.

Labour will tackle the health inequities across our country, especially in women's health. The UK has the largest female health gap in the G20 and the 12th-largest globally. These stark inequalities are linked to ethnicity and income. It is a scandal that black women are four times more likely to die just before, during or after childbirth than white women. According to figures from the Office for National Statistics, girls born in the most deprived areas of England will have almost 20 fewer years of good health compared with those in the least.

As the party of equality, Labour will seek to end these shocking disparities. We will train more midwives and health visitors to care for mothers, babies and partners. We will incentivise continuity of care in general practice and improve course content for medics on the presentation of illness and pain among different groups. We will set an explicit national target to end the black maternal

"We need to fundamentally change how the NHS works" mortality gap and we will support women through the menopause, including by requiring large firms to publish and implement menopause action plans.

Karin Smyth

Shadow minister for health



We know that our healthcare system is struggling and that Labour is more trusted by the public on the NHS than the Conservatives. So the responsibility of making the NHS fit for the 21st century, to maintain public support, is enormous.

My priority will be ensuring access to care, tackling the problem of long waiting times, and supporting innovative ways to improve outcomes for individuals and population health.

I joined the NHS as a junior manager in 1988, working on and off in the service until I was elected in 2015, including as a non-executive director of a primary care trust. I have been part of multiple reorganisations. While I have seen improvement and progress over the past 30 years, I also know that each restructuring process takes years away from reforming and developing services. Each iteration leads to a huge loss of organisational focus and experience. And at this time, we can ill afford to lose any more focus or experience.

Most people experience the NHS very locally, via their GP and in using community services. If we are to build a 21st-century NHS, it has to be responsive locally. This is about better access but also better accountability. The Hewitt Review of integrated care systems is a helpful contribution to this debate. It is my experience, borne out by evidence, that relationships locally are more important than structures. Developing local systems within a national system will be key to our reform agenda.

If we are to ensure the survival of the NHS and make it fit for the future, we will need to fundamentally change the way the service works. The next Labour government will shift the focus of healthcare out of the hospital and into the community; we will support the NHS into the digital age; and we will move our focus from treating sickness to preventing it in the first place, to help people live healthier lives.

That will be the basis of the next Labour government's ten-year plan for health and care.

Comment



Pat Grey
Sexual health clinical nurse
specialist and RCN member

"Nurses are highly skilled workers, and should be paid as such"

his month nursing students across the country will be starting their three-year university courses – but there will be far fewer of them than in recent years. Figures from the Universities and Colleges Admissions Service (Ucas) show that 12 per cent fewer people are expected to take up nursing courses in England this September. This will have serious long-term consequences for the NHS.

Nursing staff like myself have been at the heart of the NHS since its inception 75 years ago. We are a highly skilled profession, and our role has evolved over the last three quarters of a century. Yet our pay has not, and the simple fact is that we will never attract enough new nurses – or retain the staff we have – until we are paid fairly for our high skillset.

Since nurses took strike action over the winter

and spring, a lot of the discussion around pay has focused on the need for a fair rise because nurses are struggling with the cost-of-living crisis – especially after 13 years of real-terms pay cuts. This is entirely valid, but the discussion has rarely covered how highly skilled this job has become. We haven't spoken about how we now do many of the roles that were once carried out by junior doctors.

Nurses are university graduates and many have additional qualifications. Yet a lot of people's impressions of nursing are stuck in the past and often they perceive nursing to be solely about working to a doctor's instructions or giving basic personal care. While kindness and compassion are at the core of nursing, rapid advances in scientific knowledge in healthcare have resulted in a graduate workforce that is almost unrecognisable in its role compared to even just 20 years ago.

Nursing is a highly skilled profession, with nurses working autonomously in their own sphere of expertise, whether that's clinical care, research, education, or leadership. These roles require a huge amount of continuous training, which often goes unrecognised and unrewarded. It is often said that nursing is both an art and a science – the art of caring backed up with scientific evidence.

In many jobs that require you to study and acquire more qualifications, there's a high chance you will be remunerated for that. With nursing it doesn't matter if you have more than one clinical speciality qualification, including multiple master's degrees; you may stay a "band 5", the same band that nurses are when they first qualify. The salary for a band 5 nurse is between £28,500 and £34,500 in England, while the average nursing student debt is £48,000, according to research from the Nuffield Trust.

I've seen this ever-growing scope of practice throughout my career. I've worked in sexual health, HIV and contraception for over 30 years. For a long time, nursing staff have been carrying out procedures that were traditionally the responsibility of doctors, and they aren't fully recognised for it.

They probably have prescribing qualifications and carry out many roles, such as fitting contraceptive implants, which require practitioners to sit the relevant doctor's examinations and hold a diploma. Patients also often access nurse-led clinics, which are delivered by skilled nursing staff.

Yet we are not always awarded additional pay for taking on more responsibility, and we often have to pay to maintain our qualifications. Not all employers are willing to help with these costs, which come on top of compulsory regulatory fees and student loan repayments.

Ensuring nursing pay accurately reflects our qualifications, skills and workload would be an effective way to promote nursing to the next generation as a viable career with a long-term future. For the sake of patients, it's crucial we attract and retain more nurses – and we also simply deserve to be respected for the highly skilled work that we do.

Advertorial

Partnership is the path to better health outcomes

Why we must work together to transform care

By Kylie Bromley

In association with



wenty years ago in the UK, health and care services for people with multiple sclerosis (MS) were patchy, with patients often seeing uneven access to services and a lack of specialist care across the country.

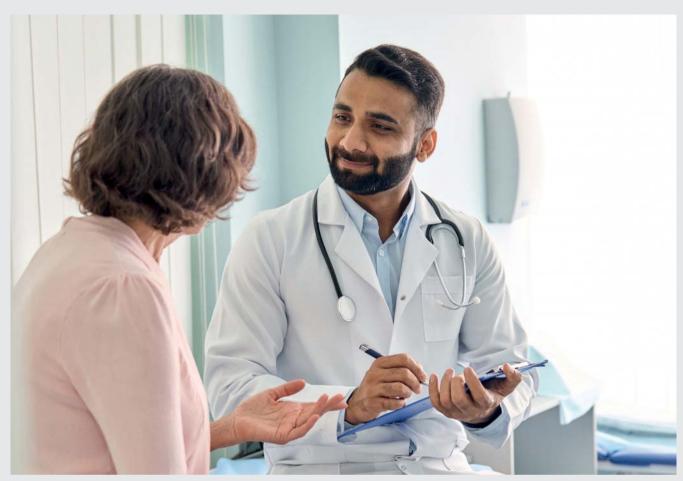
However, the introduction of the early disease-modifying treatments dramatically changed the picture, not purely through their impact in improving patient outcomes, but through the urgency that they gave to system reform. The outcome was the Risk Sharing Scheme (RSS) – a powerful partnership between the government, the patient community, clinicians and the pharmaceutical industry. In essence, the RSS was set up to gather more evidence on the medicines' impact. At the same time, it led to major investment in MS services.

Over seventy MS centres were set up across the UK, and the number of MS specialist nurses increased more than threefold. Beyond that, there was an increase in the coordination of care, and major growth in numbers of physiotherapists, occupational therapists, and neurologists specialising in MS.

Ultimately the combination of the new treatments and services had a positive impact on outcomes by, for example, delaying the time when patients needed walking aids for an additional four years. The RSS also showed that diagnosing and treating earlier gave improved outcomes to people living with MS. Today, people diagnosed with MS enter a completely different service to that available at the start of the millennium. They will find a multidisciplinary team with a broad range of treatment options ready to help them live with their condition.

What can we learn from this? There's no harm in seeing the most obvious message here: it was this partnership approach that enabled reform and unleashed innovation in the service. The risk sharing made all parties more comfortable with that step into the unknown and the uncertainty it brought. Ultimately that improved the story for the patient community.

All of us engaged in any aspect of the delivery of better health and care face a version of the same problems – we are trying to deliver great services and innovation in treatments, diagnostics and pathways. However, we are doing so



Working together can bring about better patient outcomes and access to care

in the context of an over-burdened and cost-constrained healthcare system. In this setting, I believe that the answer to improving outcomes in healthcare conditions with major unmet need lies in learning the lessons of brave partnerships, meaning we can share the risk and move forward to better services and better health outcomes.

Some of the grand, strategic challenges that were once distant on the horizon are now with us. The number of people expected to develop Alzheimer's in the UK is predicted to rise to 1.6 million people by 2040.

There are potential new therapies in development, but we know that the patient pathways are currently not set up for people to be quickly and adequately diagnosed or to be referred to services that are appropriate to manage them. For healthcare services to evolve, collaboration will be critical to ensuring the system can develop the health service infrastructure that enables the improvement in the

management of patients in the future.

Another of the significant questions to address is the management of rare diseases. Individually, these conditions may affect only a handful of people and, as a result, patients and their families often struggle to access the quality care they need.

However, collectively around one in 17 people are estimated to be affected by a rare disease at some point in their lives; and partnership is again crucial to the evolution of care with these conditions to ensure that no one is left behind because of where they live or the condition they have. A risk-sharing mentality is essential to ensuring small patient groups are prioritised alongside the grand population health challenges.

I believe that the UK has a fantastic chance to be a leader in connecting the science, the data and the healthcare system. With initiatives such as the UK Biobank and Our Future Health (OFH) – both incredible schemes that are utilising healthcare data with the aim of

providing personalised care for patients – we need to continue to partner to shape the system capabilities that will deliver the transformational change all the way through to patient outcomes. We have to remember the lessons of the MS Risk Sharing Scheme and think beyond medicines.

We must think about how we can share the responsibility to improve outcomes between partners to enable real change. Our joint objective must be to translate the innovation of the upstream (such as Biobank and OFH) to the downstream – improving real patient outcomes through better and earlier diagnosis, connected management and a wider range of treatment options.

The opportunity is there. Let's be bold, work as true partners and deliver for those who need it most.

Kylie Bromley is Biogen's managing director for the United Kingdom & Ireland. Biogen has provided funding support for this activity

Private Medicine

The 12 per cent More Britons are paying for healthcare. Will this help or hinder the NHS?



livia, 27, began battling debilitating bowel issues more than seven years ago. The symptoms were mild at first, and her GP diagnosed her with irritable bowel syndrome (IBS). But her condition grew worse over the years, and life became a constant struggle.

"Going places became more difficult," Olivia tells *Spotlight*. "I would get stuck at the pub or gym toilets for hours, and it would take a long time for the medication to work. I became terrified of being out and not making it to a bathroom in time."

Despite the increased severity of her symptoms, Olivia faced an agonisingly long wait for a specialist consultation through the NHS. Because of a backlog for treatment, her GP couldn't expedite an appointment with a gastroenterologist. The earliest scheduled slot was in 2024.

Faced with deteriorating health, Olivia chose to use the private sector. "In spring [2023], I realised I [couldn't] wait that long," she recalls. "I want to be

By Zoë Grünewald





Rishi Sunak visiting North Devon District Hospital in September this year

certain it's IBS, and if it is, I want to figure out a treatment that works or at least improves my quality of life."

Olivia is one of many individuals who have turned to private providers because of waiting times in the NHS. In January, Prime Minister Rishi Sunak pledged to cut waiting lists, but the number of people waiting for treatment has since soared to 7.7 million in September this year, up from 4.6 million in October 2019. As a result, the number of those seeking treatment and diagnostics privately has grown rapidly. One in eight Britons (12 per cent) had paid for private healthcare in the previous 12 months, according to a survey published in April. Recent data from the Private Healthcare Information Network (PHIN) indicates a significant rise in private admissions across the UK, with 227,000 in the first quarter of this year - 17,000 more than in the same period in 2022.

The top private procedures include cataract surgery, diagnostic colonoscopy, epidural injections – a common treatment for chronic back pain

– and hip and knee replacements, though other conditions are also seeing rises in private provision. Rehabs UK, a charity, reports that more people are using the private sector to treat drug and alcohol issues as NHS admissions fall. The government itself is relying on privately run healthcare, recently launching 13 new community diagnostic centres, eight of which are independent, in order to cut NHS waiting lists.

Concerns persist, however, about the implications for the NHS of increased reliance on private healthcare. Experts warn against allowing the emergence of a two-tier system.

Siva Anandaciva, chief analyst at The King's Fund think tank, elaborated on this risk. The word "choice" is "incredibly important", he tells *Spotlight*, "because it speaks to people who have the assets to pay for faster access to care for services that are important but still optional. The warning signs start to flash when people who can't easily afford care feel like they have no other option than to try and pay for the treatment they need."

For Olivia, and others, private healthcare is more a necessity than a choice. "I wish I didn't have to," she says. "It's not like I have a lot of money for private healthcare. I changed jobs this year to get a better salary, and I've been saving, but it still makes me anxious about how much it will cost."

The expense of private healthcare can be a barrier to access. Though some appointments may be no more than the price of a haircut, routine procedures such as knee or hip operations can cost in the region of £10,000 to £15,000. David Hare, the chief executive of the Independent Healthcare Providers Network, points out that people increasingly view their healthcare as a commodity: "If they need to purchase healthcare privately, they will prioritise that over lots of other things, like going on holiday or meals out."

But even a £30 GP appointment is too much for those who can't afford it. As the cost-of-living crisis continues, a quarter of households in the UK now report having no savings.

And cost is not the only concern. With more money flowing into the private sector, some experts worry about widening disparities in standards between private and public healthcare. Olivia says that private healthcare made her feel that "someone is finally taking my concerns seriously[...] appointments are scheduled quickly, often within the same week. They respond to emails within hours. I get to see the same doctor."

In comparison, her experience with an NHS GP was fraught with frustration, delays, and a dearth of empathy. "It doesn't inspire confidence that your health issues are being addressed," she says.

The government and experts argue that those who can afford private healthcare help ease the burden on the NHS. "One fewer person on the NHS waiting list is one fewer person that the NHS has to treat," Hare says. "If all of those people who were being treated privately now slipped into the NHS overnight you would be adding nearly a million people minimum to the NHS waiting list."

But, as Anandaciva highlights, the increased demand for private healthcare may add to the strain in other ways. As of June 2023, there were 125,572 vacancies





Junior doctors striking at University College Hospital, London in September

◀ in secondary care in England, with
10,855 of these being medical positions
– about 7.2 per cent of all medical posts
in England. Since both sectors draw from
the same pool of medical staff, as
clinicians in the UK opt to work privately
NHS services can become more
stretched, with waiting times increasing,
and patient experience worsening. In
2021/22, 38 per cent of nurses who left
their NHS registered nursing job but
stayed in work moved into roles in
private hospitals, agencies, or charities.

"I speak to clinicians all the time who are reducing their NHS commitments and offering more time through the independent sector," Anandaciva explains. "There is clearly an impact on NHS resources, even if it is hard to quantify."

The private sector can often offer shorter or more flexible hours, and both doctors and nurses earn more there than they do in the NHS. Given the real-terms pay cut faced by NHS staff over the past decade, some healthcare workers choose to supplement their income with private work or to leave the NHS altogether. Sarah Scobie, acting director of research at the Nuffield Trust, explains that "if a

nurse has time to do a shift in a private hospital, then they might choose to do that rather than doing overtime in the hospital where their main job [is]."

\hough the independent sector cannot fully act as a substitute for the NHS, it offers some overlapping services and complementary treatments, such as cosmetic procedures, osteopathy and ear cleaning. Some treatments are also not available in the private sector, in part because they are not profitable. Spotlight spoke to one individual, who preferred to remain nameless, with haemorrhagic telangiectasia, a rare hereditary bleeding condition. They explained that they could not access private healthcare for their condition, even if they wanted to.

"I could have had this sorted two years ago if it existed in the private sector, but I can't go private as it's such a rare condition it requires specialist equipment and nascent methods of operating, that only the NHS do," they say. "It's not profitable enough for the private sector to do it, and the equipment too expensive, the condition too rare, for it to ever be."

This individual's inability to access private treatment has caused them frustration and delays, but experts point out that this is the reason why the NHS exists as the primary health service in the UK. The public still relies on the NHS for a substantial portion of healthcare needs, and this keeps up the political pressure for resource allocation and improvement.

Hare, as the representative of a network of independent health providers, is definitive that the NHS still has a vital part to play. The private sector is not only there as a complementary service, he says, but also to enhance NHS capabilities.

"Nothing about the private sector's role in the NHS means that patients will have to pay for NHS services or that anything is being sold off," Hare says. "It retains a free-at-the-point-of-use, general taxation service, and we're adding important capacity and capability."

He also highlighted how the private sector provides important training for healthcare professionals. "The sector trains thousands of junior doctors every year and other medical professionals as well," he says. "A number of providers have things like nurse apprentice schemes. Those nurses will often then go and work in the NHS, having been trained by the private sector."

For Hare, private and public healthcare are part of a single British system, with doctors working across both. "There is a one-healthcare mentality, with a symbiosis between the NHS and the private sector," he adds.

Anandaciva remains confident that the NHS still has political will behind it and believes that the government should take a longer-term approach to ensuring its future. "We have an elective care strategy that is based around the next two to three years, rather than a broader strategy of what role we want the independent sector to play with the NHS over the next ten years, how that then affects everything from staffing to financing to planning decisions, and how you know if things are heading in the right direction or not," he says.

For the NHS to survive, he adds, the government needs to have a clear vision of where it wants the system to be, because "a lack of long-term strategy comes to bite you in the end."



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Advertorial

Solving the NHS productivity puzzle

Why streamlining digital services is key to tackling the backlog

By Julian Hunt and Matthew Rutter

In association with



The NHS cannot ignore the multitude of challenges it currently faces. From an ageing population with rising prevalence of preventable disease to growing waiting lists and staff shortages, to the unequal distribution of new digital technology across the country, our health service is facing the most difficult period in its history.

The pandemic had a detrimental impact on the delivery of healthcare services, lengthening existing backlogs in appointments, diagnostics, treatment and surgery. Productivity in the health sector has declined over recent years – the Office for National Statistics reported a 25.6 per cent fall in NHS England productivity in the 2021 financial year, compared to the previous one.

There is no easy fix to this problem. As the government and NHS collectively look at how they can create a health service fit for the future, the challenge will be in devising viable solutions while maintaining high quality care. The role that digital technology can play in helping to do this, by enabling healthcare staff to understand and meet patient needs and demand on services, is critical.

Indeed, the legacy of the pandemic was not purely negative, as digital technology gave patients a new level of autonomy in the transition to hybrid and remote services. It showed a rapid step-change in patients being more empowered to manage conditions in their own homes and fit healthcare needs flexibly around their lives. In coming years, "virtual wards" will contribute to this, as more patients get the care they need at home safely and conveniently, and hospital care can focus on those who need it the most.

However, the flipside is that many patients who did need face-to-face care were unable to access it during the pandemic. Chances for early intervention were missed, and many patients are now presenting with more acute, complex and serious problems. This ultimately hampers productivity – due to increased hospital admissions, and longer hospital stays, outpatient appointments and surgery times – and results in worse outcomes for patients.

To improve patient outcomes, we need to see a paradigm shift from a sickness service to a wellness service, from reactive to proactive care.

This shift will take time, and further modernising the NHS's digital technology

systems is at the heart of it. In many cases, NHS trusts are running on legacy technology – a survey by the *British Medical Journal* (BMJ) found that a staggering 71 per cent of NHS trusts still use some paper notes, while 4 per cent only use paper. Only a quarter of trusts use fully electronic records.

Given how technology is now fully integrated into our personal and professional lives, such as through hybrid working, we need to consider how digital solutions can better support the entire chain of patient care, from receptionists through to consultants. We also need to design and roll out digital solutions that allow patients to proactively access advice, guidance and treatment, in the most appropriate care settings.

At PwC, while we have a strong track record of advising clients in the health sector, our Managed Services teams have increasingly been stepping in to support implementation as well. The NHS has significant capacity constraints, so we can help to provide that capacity to transform services.

Often, we do this through assessing where operational processes can be streamlined, or where existing NHS technology can be used to its full potential, rather than requiring NHS trusts to invest in new, expensive systems. For example, we helped one large trust with four hospitals get on top of growing patient waiting lists and staff shortages caused by sickness. We streamlined the trust's existing appointment booking and scheduling system, without requiring it to implement new technology. We also provided much-needed additional support capacity to maintain the booking service while the process was being improved.

By standardising the booking process across its hospitals, we helped to add 3,480 referrals, 2,211 outpatient bookings and 1,270 patient discharges in 12 weeks. We then looked at ways to transform the service to make it more efficient in future, such as by transitioning to a lower-cost booking provider, or by using an Al-powered chatbot.

We then handed the now improved and more efficient service back to the trust. NHS teams are facing a challenging and demanding work landscape – they don't have the bandwidth to deliver systemic change themselves, so bringing in an external partner like PwC can help to introduce new



During the pandemic, digital technology gave patients a new level of autonomy

processes and ways of working quickly.

It's important to recognise that increasing productivity relies on improving the well-being of healthcare staff, who are experiencing high levels of burnout. At Ramsay Health Care UK, we deployed a delivery team to streamline the patient call system and boost patient bookings and revenue, but we also introduced incentives to help staff feel valued. We started weekly awards to incorporate positive feedback from patients, and recognise how many difficult situations staff had handled; we could see the morale building over time.

But improvements at a trust level aren't enough – institutional reform is needed to drive change. We have two key recommendations that we believe could help to modernise the health service's integration of digital technology. First, digital and technological experts should be appointed on to the NHS's new integrated care boards, and the boards of NHS provider organisations. Second, more time, attention and funding need to go towards improving the digital maturity

of organisations and their workforces.

According to the King's Fund, only 6 per cent of the Department of Health and Social Care's health spend goes towards capital investment, and of this, only 10 per cent (£1.2bn) goes towards IT and software. While the government's focus is understandably on tackling the immediate NHS backlog, it is crucial it also looks more long-term at digital and physical infrastructure.

Removing the burden of transformation from NHS staff gives them the time back to focus on what they do best – helping patients and saving lives. Streamlining digital and administrative processes leads to reduced waiting lists, improved services and happier employees and patients. Health workers make a difference every day – so the more that we can collaborate with them to enable them to do that, the better.

Julian Hunt is health services sector leader and Matthew Rutter is director of health at PwC

The Debate

Is it time to lose the BMI scale?

The Body Mass Index has become a defining metric for good health – but is it outdated?

Annabel Sowemimo | Barbara McGowan

FOR

Annabel Sowemimo

Sexual and reproductive health doctor, and author of *Divided:* Racism, Medicine and Why We Need to Decolonise Healthcare

The precursor to the Body Mass Index (BMI) scale was invented more than 150 years ago by a Belgian statistician, Adolphe Quetelet. Named the Quetelet Index, it was designed as a sociological rather than medical tool, to study the average proportions of the "ideal" human body, based on a European physique. In 1972, the American physiologist Ancel Keys developed this into the BMI as a measure of obesity and its health risks.

The BMI is now used to assess whether someone has a "healthy" body weight and if they are worthy of treatment. But the scale is outdated, flawed and Eurocentric. It is a poorly evidenced metric for good health.

BMI is a simplistic measurement, calculated by dividing a person's weight in kilograms by their height in metres squared, then categorising them into underweight, normal weight, overweight or obese. In a cash-strapped NHS, an "obese" BMI (that of 30 or above) is consistently used to inform care pathways that are more cost-effective but often discriminatory – denying people treatment or surgery.

As a sexual and reproductive health doctor, I regularly see it limit people's access to contraception, such as the combined hormonal pill. In some cases, these people are otherwise perfectly healthy – take athletes, who have an elevated BMI due to high muscle mass. Sometimes it's used as a cost-cutting strategy – a report from the British Pregnancy Advisory Service (BPAS) found that people are pushed towards expensive private in-vitro fertilisation (IVF), because 96 per cent of NHS trusts restrict access based on female BMI, despite guidance not mandating this.

In other cases, its use is unhelpful and counterintuitive. Those seeking breast reduction surgery often have an elevated BMI due to having more breast tissue –

ironically, they end up being denied surgery that would reduce their weight.

The BMI may have more robust evidence in areas such as cardiovascular disease and stroke, as studies are much larger (albeit Eurocentric). But data indicates that reproductive health receives less than 2.5 per cent of research funding in the UK, so study sizes are typically only hundreds of people.

Some doctors are researchers, but most are not – we simply work to guidelines that other people have produced. Often, these guidelines are grossly simplified and outdated. This isn't a left-field view – the American Medical Association has acknowledged that the BMI is problematic, and that doctors need a more holistic approach.

Much better tools already exist. People can go into a gym and use a fat analysis machine, which shows where their fat is distributed. With chronic diseases such as diabetes, this is a more essential metric than overall BMI. But in pressurised NHS environments, the BMI's redeeming features are that it's cheap, easy and can neatly categorise people to make quick clinical decisions.

This does not justify its isolated use, and continuing to do so does patients a disservice. For certain patients, more detailed analysis of multiple factors may be required to ascertain their true risk for treatments or operations.

There is no doubt that such precision medicine will be a challenge in the NHS. But amid so much technological innovation, we need a more progressive approach that stops the systemic mistreatment of those deemed to be overweight. Using an outdated tool only exacerbates this discrimination.

AGAINST

Barbara McGowan

Consultant and professor of endocrinology at King's College London, and chief medical director of Roczen

MI remains an important measurement system, particularly at the population level when assessing health with regards to body mass. To calculate BMI, only a height and weight measurement are needed, which means that it is an inexpensive, accessible, and easy-to-measure metric. These factors are important when trying to assess lots of people in a population, either when screening or assessing risk. Even though BMI is not a perfect measure of obesity, it can help to indicate that further screening is required.

Deposition of visceral fat around organs such as the liver and the pancreas leads to insulin resistance, pre-diabetes, and Type 2 diabetes. Unfortunately, it is challenging to measure visceral fat, and this is why, as clinicians, we use additional measures to supplement BMI, such as waist circumference, which correlates with visceral fat and can provide clinical clues to the presence of a metabolic disease such as Type 2 diabetes.

Two individuals from different ethnic backgrounds can have the same BMI but different amounts of visceral fat, hence we need to individualise screening and use additional measures such as waist circumference and consider factors such as ethnicity to look for the metabolic sequelae of obesity – in other words, conditions that can arise from obesity. However, BMI is a good starting point for the assessment.

BMI is a very good measure of the mechanical complications of obesity – people with a higher BMI typically present with higher prevalence of chronic back pain, knee osteoarthritis, and obstructive sleep apnoea. It also correlates well with an increased risk of at least 13 types of cancers.

Early intervention to achieve or maintain a healthy weight is important to prevent other conditions associated with obesity, such as Type 2 diabetes, fatty liver disease, and high blood pressure.

At the diabetes and weight management app Roczen, we use BMI as part of the initial screening tool for eligibility for our programmes and to give an indication of someone's weight related to height. We also use the BMI to ensure we are prescribing obesity medications such as semaglutide responsibly – National Institute for Health and Care Excellence (Nice) guidelines have safety criteria regarding such medications, such as a requirement to have a BMI of at least 35, or 30 in some exceptional cases.

Given that obesity is a problem of epidemic proportions, rather than replacing BMI completely we must consider it as one of many measures to determine individual risk and apply it where appropriate. BMI can be a good first indicator as to whether a further assessment is warranted, because alternatives to BMI to assess the amount and distribution of fat (such as DEXA scans – a medical imaging test that can analyse body composition) can be expensive and are not as accessible to most of the population.

Additionally, most health systems internationally use BMI as it is recommended by the World Health Organisation, offering the further advantage that its benefits and limitations are easily understood across the world. While it is not a panacea, when used in conjunction with other tests the BMI has a place in clinical care as an important starting point to assess risk and inform the prevention of disease.



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Advertorial

How digital innovation can unlock a healthier future

The rapid advancement of technology must be used to fight disease

By Antonio Payano

In association with



The Department of Health and Social Care's 2022 plan titled *Data Saves Lives* envisioned a future where the NHS fits in people's pockets to support independent and healthier lives. A startling fact from a report from the Health Foundation in 2018 is that one in four adults in England are living with at least two health conditions. Recent projections indicate that this will rise over the next two decades, and lead to increased time spent living with these conditions.

The recently published major conditions framework, an interim report published ahead of the Major Conditions Strategy being released next year, emphasises the need to move from treating single conditions in isolation, towards integrating care for individuals living with multiple conditions such as cancer, mental health issues and heart disease. To meet current and future demand, digital technologies, innovation, research and leadership are essential. The report highlights a significant issue: approximately ten million people lack the digital skills to manage their care.

A data-driven, tech-savvy NHS

I firmly believe that a data-driven, tech-savvy NHS can revolutionise patient care, by freeing up clinical time, enhancing healthcare accessibility, and increasing efficiency.

With around 30 million registered users of the NHS app as of January 2023 the opportunities of providing accessible health information are already on the way to being realised. A shift is needed to support preventing or delaying the progression of conditions like chronic kidney disease (CKD) and high blood pressure. Through harnessing population health data, the challenge of tackling the gap of health inequalities becomes possible. For example, being able to identify those most at risk of heart attacks and strokes, and therefore who would benefit from early detection of risk factors to prevent them.

Bayer's vision for partnership with the government and NHS

At the heart of Bayer's vision is "Health

for all; Hunger for none". We are passionately committed to creating opportunities, nurturing innovation and aligning with the NHS vision of making healthcare accessible to all.

Our journey began in 2012 with the Grants4Apps (G4A) programme in Berlin, which evolved into an accelerator for digital health start-ups. Then in 2019 we established LifeHub UK to drive collaborative innovation between the NHS, academia, and industry. In 2022 we expanded the programmes in the UK, partnering with the Office for Life Sciences and NHS Englandcommissioned Health Innovation Networks. Our focus is on identifying and nurturing digital health start-ups in areas like cancer, long-term conditions such as diabetic kidney disease, and women's health. We aim to facilitate adoption within the NHS through mentoring, providing grants, and nurturing the growth of the digital health ecosystem.

Improving women's mental health during menopause

Our collaboration with the mental health and menopause platform Lumino via our G4A programme exemplifies how digital innovation can make evidence-based treatments recommended by the National Institute for Health and Care Excellence (Nice) accessible to more people. Nice reports that most women experience some menopausal symptoms for around four years with up to 10 per cent of women affected for around 12 years. Lumino is developing a digital solution which offers access to cognitive behavioural therapy, improving quality of life at a low cost, at scale, and with minimal waiting times.

Empowering people to manage diabetic kidney disease

With up to 40 per cent of people with type 2 diabetes eventually developing kidney failure, a disease awareness digital application is under development by a third party, in cooperation with Bayer.

This app will enhance patients' understanding of their CKD risk, the importance of regular tests, and allows them to monitor their condition. The goal is to slow disease progression.

Helping radiologists to optimise diagnosis and save lives

Drawing on over a century of expertise in

radiology, Bayer focuses on realising the value of artificial intelligence (AI) to aid the NHS workforce crisis: there is forecast to be a 40 per cent shortfall in consultant radiologists by 2027, according to the Royal College of Radiologists. Our investment in platform technology offers integrated AI tools to support radiologists in deciding which urgent scans to look at first, find diseases such as cancer or stroke, make measurements and check how well the AI is working. Platform technology has the potential to accelerate adoption, ensure scalability, and support the safe use of AI in diagnostic imaging.

Opportunity

The opportunities digital health offers must be balanced with acknowledgment of the barriers to adoption and use. We want to support appropriate solutions to address the digital divide, to ensure quality health apps are accessible and relevant to all.

Surveys show that people want to manage their own health and they are more likely to engage with digital options "prescribed" by their healthcare professional. Therefore, training is important to ensure that healthcare professionals are confident in understanding which apps are approved by the nationally agreed Digital Technology Assessment Criteria (DTAC) developed by NHS England.

Innovators can find the NHS complex to navigate, and regional health innovation networks play a key role in support. Integrated care boards can also provide support by prioritising the digital capability of front-line teams to transform healthcare.

Final call to action

As the NHS celebrates 75 years of service, there are challenges in workforce, funding, and the increasing number of people living longer with multiple conditions. This requires collective action at pace, to find solutions.

Embracing digital innovation is crucial and, I firmly believe, can make healthcare accessible to all.

This article has been developed and fully funded by Bayer Plc for a UK audience. Dr Antonio Payano is CEO at Bayer UK & Ireland. RP-OTH-GB-1455/Oct 2023



A data-driven NHS could revolutionise patient care

Infographic

Staff numbers up, prospects down

By Harry Clarke-Ezzidio

In June, after a year's delay, the government revealed the NHS Workforce Plan – its strategy to address the chronic staff shortages in the health service.

Tackling Britain's ageing and increasingly ill population is one of many challenges the NHS faces: there are record job vacancy levels (131,596 as of September 2022) and staff turnover (169,512 in 2022). How does the 15-year NHS Workforce Plan aim to counteract this?

The three pillars of the plan – which will cost £2.4bn for its first five years – are "train, retain and reform" for a deadline of 2031.

On training: a new generation of NHS workers are to be brought into an expanding workforce – with the new funds set to double medical places for doctors and increase places for trainee nurses and midwives by 24,000. Other initiatives include establishing an apprenticeship scheme for doctors.

Retention and reform can be rolled into one: in order to stop its brain-drain of talent and personnel, the NHS plan offers better opportunities for career development, and more options for flexible working. There's no word on meeting the pay demands of unions in ongoing industrial disputes.

Will it be enough to counter deteriorating public health? By 2037, if current negative public health trends continue, the NHS warns that "two-thirds of those over 65 will have multiple health conditions and a third of those people will also have mental health needs," which will lead to "increasing complexity of service delivery".

Though the NHS workforce has increased by 263,000 since 2010, the last few years have made clear that the current supply isn't enough to meet demand. And that trend could continue.

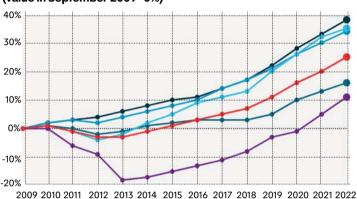
The government has called the NHS Workforce Plan a "once-in-a-generation opportunity to put staffing on a sustainable footing and improve patient care". But without major, holistic interventions to improve public health – therefore reducing the load that the service has to deal with – the opportunity may be squandered.

CURRENT WORKFORCE

Total NHS headcount has grown by 22 per cent since 2010

The overall NHS workforce has continued to grow since 2009, although some staff groups have experienced different growth rates.

Percentage change in staff growth indexed to September 2009 (value in September 2009=0%)



- Hospital and community health services
- Nurses, health visitors and midwives
- Scientific, therapeutic and technical staff
- Support to clinical staff
- NHS infrastructure support
- Total hospital and community health services staff

1.43 million

the number of people working in NHS hospitals and community health services in England as of March 2023. This includes:

133,800

full-time equivalent (FTE) doctors

328,500

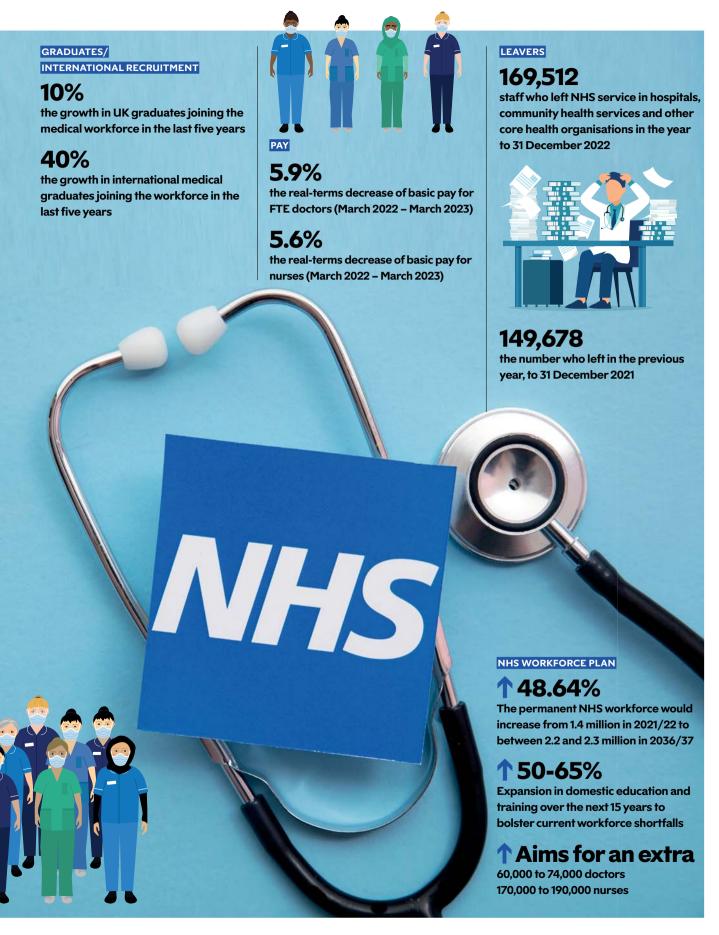
FTE nurses

26,600

FTE GPs (35,200 permanent, qualified GPs working for the service overall) 53%

percentage of NHS staff who are professionally qualified clinicians





Advertorial

Building a new future for people with epilepsy

It's time to embrace the entrepreneurial spirit of charity

By Clare Pelham

In association with



harity has always begun at home, but today we rely more heavily than ever on old cardigans and jackets to play their part in funding scientific discovery, hopefully leading to medical breakthroughs.

In 2019, charities in the UK funded £1.9bn in research and development. That was the equivalent of the combined efforts of the Medical Research Council and the National Institute for Health and Care Research.

Epilepsy affects 626,000 people in the UK. That is 1 in 100 people. One third of them – 200,000 – live with uncontrolled seizures as their epilepsy fails to respond to current treatment options. Yet just 0.3 per cent of government funding for medical research is invested in epilepsy.

But the number of old skirts that we can dig out and cakes that we can bake is finite. It is time to think big, think bold and embrace the entrepreneurial spirit that forms the backbone of charity.

I never envisaged the day I would consider building on green belt land. As for many of us, the countryside is our DNA. It is where the concrete stops and the woodpecker begins. But this is a far cry from the reality of a deepening housing shortage, people living with chronic conditions and a green belt that increasingly can only be accessed by the well-off. Few buses or trains swing by the countryside for a picnic, and even fewer come back later that day.

We have an enviable legacy at the Epilepsy Society – 300 acres of land, much of it green belt – though not the verdant rolling hills the phrase may conjure up. It is a Victorian legacy from the days when our founders invested in land to provide employment for people with epilepsy whose trajectory in the cities would otherwise lead to the workhouse and asylums. A farm in the country offered new life, new hope and a future where there had been none.

But people with epilepsy no longer farm the land. Those with controlled seizures now live fulfilled lives, working in offices and laboratories, running their own businesses, teaching and working for constituents in parliament. For the 200,000-plus people whose seizures don't respond to medication, they don't need farmland; they need research that will accelerate the field of discovery leading to better diagnosis, better treatment and better jobs.



New treatments and faster diagnosis are within our reach

We want to turn our legacy land into a true legacy for people with epilepsy, and research that will lead to more personalised treatments. Not a buzz word but an achievable goal in a field where treatment today, of necessity, relies too much on trial and error. New and better treatments are within our grasp – subject only to research funding.

Government often works in silos. In one department there is a housing crisis with a crippling shortage of affordable homes. In another there is scientific expertise and genomic data but not the funding to turn it into better diagnosis and treatment for people with epilepsy.

Here, in a corner of Buckinghamshire, we have a potential solution to both: 300 acres of land, part of which could make a big dent in the housing shortage, including homes for young people who want to continue to live in the community where they grew up. Those homes could fund groundbreaking, innovative research that could

transform lives across the UK and ultimately the world.

And it's important to say that quite a lot of green belt land is not beautiful landscapes. On our site we have tumbledown buildings we can no longer maintain. If anyone believes these are more beautiful than a flat that is fully accessible for a wheelchair user, or an affordable house with a small garden and swing for the family of a care worker, that seems to me to be a failure of imagination and empathy.

I have lost count of the number of commentators who say that charities should "stick to their knitting" and "honour the wishes of their donors". Well, this is our knitting. Every penny raised will go to research to benefit people with epilepsy. And that is what the land was given to us for.

We could be using our legacy land to enable new fathers with epilepsy to hold their babies safely without anxiety about a seizure; for parents to wave their child off to university without sleepless nights; and for everyone with epilepsy to be able to lead a full life and plan a family without fear of terrifying seizures or that the drugs they take will cause disabilities in their unborn child.

We are hoping to build 1,000 homes on 40 per cent of our land. It could help solve the housing crisis locally. Nationally, it will bring personalised medicine closer to more people with epilepsy. Just imagine the difference if we could offer a newly diagnosed teenager medication to control their seizures within weeks rather than years.

We have all found a certain magic hidden within our own wardrobes that is helping to fund the hopes and dreams of others. Now we need to look beyond those second-hand clothes to take funding for innovation and lifetransforming science to a new level.

Clare Pelham is chief executive of the Epilepsy Society

Innovation

The AI diagnosis

New technology is cutting the wait for disease detection and treatment

aiting is usually the worst part of receiving medical care. "When you're staring down the barrel of a gun, and you've just been told you've got a cancer of the tonsils, or something like that, any day that you have to wait to start treatment is devastating," says Dr Rajesh Jena, an oncologist at Addenbrooke's Hospital, Cambridge.

For some conditions, waiting can dramatically shift the odds against recovery. With the fastest-growing cancers, each day without treatment reduces the likelihood of controlling the tumour by 2 per cent, says Jena.

The oncologist is one of a growing number of clinicians using AI to work faster, and better. In clinical oncology. bottlenecks occur when doctors manually mark up CT and MRI scans to show what cancerous tissue needs to be targeted with treatments such as radiotherapy. Jena has long been interested in AI and coding - even studying it at university - but it was a chance encounter that led him to develop an AI to solve this workflow problem. When Jena saw a Microsoft engineer giving a talk in Cambridge about using Al to better recognise the human pose in 3D in order to improve the experience for gamers, he saw the potential the technology had for medicine.

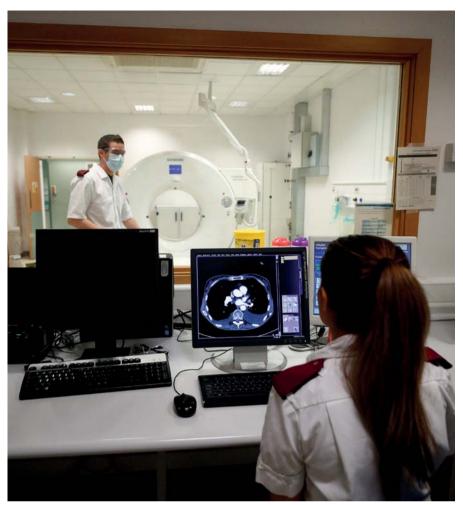
"I said to [the engineer], 'No, you don't want to be doing that. You need to use this inside the body to recognise structures within the body,'" he recalls. That led to more than a decade of collaboration, which has now come to fruition.

With funding and support from Microsoft, Jena and his team developed an AI tool that could look at the data from a scan and mark it up around 13 times faster than the human eye.

Al could save billions for healthcare systems, while improving quality of care. But in the year that ChatGPT and other Al tools have taken over the world, and as the UK government gears up for its Al safety summit in November, take-up on medical Al remains slow. Research in the US suggests that only 5 per cent of healthcare organisations there make use of it. Earlier this year, the UK government announced it would be investing £21m in Al for the NHS, adding to the £123m already invested since 2020. These efforts are led by the NHS Al Lab, which has 86 live projects,

By Samir Jeraj





Staff prepare to receive a patient for a CT scan at Royal Blackburn Teaching Hospital

including initiatives to reduce antibiotic use, scan for skin cancers, and predict the risk of certain eye cancers. In August, nine AI technologies were approved by the National Institute for Clinical Excellence (NICE) for use in radiotherapy. The NHS AI Lab did not respond to requests for data on AI uptake across the health service.

plethora of healthcare data is available to clinicians, and AI can analyse that at speed. "My sweet spot is in medicine, where you build systems that can stratify patients at scale," explains Dr Peter Fish, chief executive of Mendelian, a UK med-tech company. Ultimately, he says, it would provide more personalised care.

Mendelian has developed an AI tool to interrogate large volumes of electronic patient records to find people with symptoms that could be indicative of a rare disease. Fish is focused on shortening the "diagnostic odyssey",

as he calls it, that many patients go through when they have a rare condition such as Ehlers-Danlos syndrome – a group of conditions that affect connective tissues – and Behçet's disease, which causes chronic inflammation of blood vessels. Such conditions affect less than 2,000 people in the UK, and can take up to seven years to diagnose due to their rarity.

Mendelian's AI has been piloted in the NHS for three years, winning an NHS AI award to trial it at a larger scale. The second phase will look for 40 rare diseases in 750,000 patients over the next year. The focus of the project is on diseases in which early diagnosis and intervention can lead to significantly better outcomes. This approach could also help address problems with access to care. Patients who live near a specialist centre are more likely to get a diagnosis. Fish believes AI can help promote health equality in deprived and remote areas.

The danger of algorithmic bias is well known, and, in healthcare, experts are beginning to discuss this risk. In May the World Health Organisation issued a statement urging caution in the development and use of AI in healthcare due to the potential for unfairness.

In 2019, a study in the US found an algorithm developed to predict healthcare needs was biased against African Americans, for instance, because data used to train the AI was inaccurate. As a historically marginalised group, African Americans were underrepresented in the data set. But there is a lack of research outside the US on how common this is, says Niki O'Brien, a visiting researcher in the Faculty of Medicine, Department of Surgery and Cancer at Imperial College London.

O'Brien's research looks at digital technologies and how they can address global health inequalities. Her work highlights the importance of ensuring equity while the use of AI grows. "The benefits of these technologies, both on systems and for patients, have the potential to create a wider divide between high-income and low-income settings," she says.

For example, solutions developed for use in Western healthcare systems may not work with available healthcare services and treatments, or even be affordable to healthcare providers, in low- and middle-income countries. And the issue of bias in the data used to train Als can hurt public trust in healthcare services. O'Brien wants to see more funding to develop Al outside of wealthier nations. "Critically, though, with an emphasis on country-led skills and homegrown innovations," she says.

Jena is working in partnership with another company to develop their Al into a tool that can help surgeons plan operations. The aim is to enable clinicians to use virtual reality environments to collaborate with colleagues on the most effective treatment. "That would be truly disruptive; that wouldn't then just be a workflow acceleration, which is what our Al does at the moment – it would actually transform the way that we work together," he says.

Jena is no "evangelist for AI", but he tries to encourage people to lose their fear of it. Some of the most useful AI, he says, "is doing really, really simple things". ●

Advertorial

Lessons from the pandemic

Tackling Covid-19 in its endemic phase requires long-term planning and vision

By Silvia Taylor

In association with



he UK government's announcement in September that it will allocate £200m in new funding to support frontline NHS services is intended to ensure preparedness for another difficult winter. For the last three years, Covid-19 has created an unprecedented level of pressure on NHS capacity and resources. While the pandemic phase may be over, Covid is still here, as demonstrated by a recent increase in hospitalisations linked with newly emerging strains.

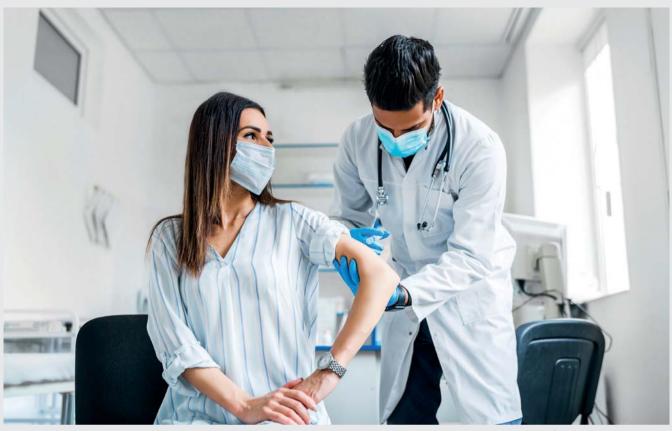
To be ready for this new phase, it is important that we take onboard the lessons learned from the management of the pandemic and the delivery of a mass, national Covid vaccination programme in the past few years.

This new endemic phase will continue to require vaccination but, based on guidance from UK policymakers, will take a more targeted and seasonal approach, focusing on the most vulnerable populations including the elderly and people with underlying conditions. The UK's ability to successfully protect the population in this new phase relies on three lessons.

First, we need to ensure ongoing and effective public communication about the importance of vaccination. The public needs to be aware of the ongoing need for Covid-19 vaccination, as vaccine-induced immunity wanes over time and new variants continue to emerge. Communications campaigns, especially targeted to those who fall into high-risk groups, are needed not only to increase vaccine confidence, but also to tackle complacency.

Second, the more a virus circulates, the more chances it has to evolve. To address this, in summer 2023, global regulators recommended that manufacturers adapt their vaccine to the latest XBB.1.5 sub-strain. In the future it is likely that manufacturers will be required to regularly update the strain composition of vaccines, just as they do for flu vaccines. This requires clarity from health authorities on the process and timing for updates. To ensure that vaccines can be available in time for a campaign, different technologies' production timelines need to be taken into account and all relevant stakeholders need to have an opportunity to provide input.

Third, it is essential for the UK to



Novavax sponsored the UK's largest ever double-blind, placebo-controlled trial for its Covid-19 vaccine

offer a diverse portfolio of vaccines to bolster supply chain security and best meet the varying needs of an entire population. Regulatory authorities are reviewing updated vaccines that use different technologies - mRNA and protein subunit - each of which has its own unique characteristics, and governments should make multiple vaccine technologies accessible. Healthcare providers should be empowered to recommend the option that is best suited to an individual's clinical needs and preferences. Such an approach is critical for optimising UK vaccine uptake and ensuring there is not an overreliance on one type of vaccine technology.

Novavax remains committed to partnering with the UK government in reaching the goal of a healthier, more resilient future. We have updated our vaccine to help protect against the latest strain mutations and we are expecting authorisation from the Medicines and Healthcare products Regulatory Agency (MHRA) later this autumn. We continue to advocate for the inclusion of our vaccine in the UK government campaigns in Autumn 2023 and Spring 2024.

As we look ahead to 2024 and the upcoming general election, it is vital that politicians and policymakers continue to prioritise efforts to protect the public. The UK's Covid Inquiry provides an additional opportunity to not only evaluate the successes and failures of the government's pandemic response, but to consider how the lessons learned can be applied to sustain and improve the country's long-term management of this infectious disease and others. Ultimately, it is through collaboration, communication, and coordinated action that we can accomplish a successful transition out of the pandemic and move towards a healthier, more resilient future.

About Novavax

Novavax promotes improved health globally through the discovery, development, and commercialisation of innovative vaccines to protect against serious infectious diseases. Our protein-based Covid-19 vaccine has received regulatory authorisations across the globe, including in the UK. Novavax is a global leader in vaccine

development and research. In the UK, the Novavax study supported by the National Institute of Health and Care Research, led by researchers at St George's, University of London, was the largest double-blind, placebo-controlled vaccine trial to be undertaken, recruiting 15,203 participants from 33 research sites in just eight weeks between September 2020 and November 2020.

Our company's vaccine combines the power of a well-understood approach with an innovative nanoparticle technology. It is intended to help protect against some of the world's most pressing viral diseases, including Covid-19 and influenza.

Novavax is collaborating with leading organisations across the global vaccines landscape, including research institutions, government agencies, foundations, and industry, to help ensure access and increase uptake of vaccines worldwide.

Because protecting one of us can help protect all of us.

Silvia Taylor is executive vice-president, chief corporate affairs and advocacy officer for Novavax

Richard Torbett: "The pandemic really demonstrated what the pharma industry does for the world"



The chief executive of the Association of the British Pharmaceutical Industry – the trade body representing UK life sciences companies – on joining Horizon, R&D policy, and his morning run

How do you start your working day? If I don't have a breakfast meeting, I'll go for a run first thing because if it doesn't happen then, it just won't happen – and the day's always better after a run.

Next would be consuming a huge amount of news. Running a trade association means keeping on top of what is happening in the world, the industry and our members.

What has been your career high?

Being chief executive of ABPI [Association of the British Pharmaceutical Industry] at the height of the pandemic with the pharmaceutical industry pushed completely into the spotlight, was a really exhilarating time.

It was a crisis which showed the true social and economic value of the industry and what it can do for society and for the world.

What has been the most challenging moment of your career?

Possibly right now. The last few years have been more challenging for the UK industry than I can ever recall. We have got great opportunities to grow the sector but face some really significant headwinds on the horizon.

Trying to navigate that in a way that is realistic and gets us on a good path to growth is very challenging but also very rewarding, and I hope that we can get there.

If you could give your younger self career advice, what would it be?

Get a coach – and take their advice. Very often I see brilliant colleagues struggle to understand that what made them successful early on in their careers isn't quite enough to get promoted or move to the next level. Leadership is an entirely new skill set for most people, and it takes work and the ability to listen to advice.

What policy or fund is the UK getting right?

The UK is doing some really exciting work around antimicrobial resistance (AMR), which is a looming worldwide health crisis, where the overuse of antibiotics has given rise to drugresistant diseases, threatening the foundations of modern medicine.

The UK is one of the only countries in the world to change the way it purchases antibiotics to try and encourage the development of new medicines.

And what policy should the UK government scrap?

Not necessarily to scrap, but the government needs to change how it thinks about health data and how companies and the NHS can work together to support better care, research and innovation, while also ensuring good governance and privacy.

What international government policy could the UK learn from?

There are some features of the R&D system in the US and Switzerland that the UK could learn from. For example, companies have clearer incentives in Switzerland to develop new indications for medicines, which is when a new use for an existing medicine is approved.

What upcoming UK policy or law are you most looking forward to, and why?

The UK joining Horizon Europe is a significant positive milestone for UK research and development. This offers numerous advantages for medical research and development, including enhanced competitiveness, talent attraction and overall advancements in the field.

I'm looking forward to seeing the benefits of the new arrangement and how it translates into the UK being more involved in international scientific collaborations.

If you could pass one law this year, what would it be?

I would like to see a law or policy that is focused on addressing the deep health inequalities that exist across the UK. We ought to be able to guarantee that all patients, regardless of where they live, have timely access to high-quality care and support to prevent future illness.

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