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Levelling Up Health Care: Build the NHS Back Better

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Foreword

The Covid-19 pandemic has pushed every health-care system in the world to its limits. The NHS is no exception. The acute short-term pressures it faces when combined with longer-term challenges like an ageing population are threatening to overwhelm the system. There is much talk of the NHS facing a “winter crisis”, but the truth is that we face a crisis that has been getting worse for years, not just over one season. More money from the government is welcome but on its own it will not solve the multiple problems. Short-term there is a significant backlog because of Covid. The waiting times that have soared to unacceptable levels are merely the tip of the iceberg. The NHS is having to cope with ongoing Covid, a tsunami of mental-health referrals, rising pressures on A&Es, a broken social-care system and acute staff shortages. The burden of chronic diseases is growing and the pandemic has both exposed and exacerbated the deep inequalities that exist in our society. No wonder the system is at breaking point.

The care system’s immediate and deeper challenges must be dealt with in tandem. A long-term plan is needed to address both.

This paper sets out important recommendations on how this can be done. It argues that simply doing more of the same will get the same result: waiting times, for example, had been rising for years before the pandemic hit. The lesson from the 2000s is that only when far-reaching reforms were put in place – alongside the right level of resources – did services improve and waiting times fall. The paper rightly argues that by fully embracing the possibilities of technology, the care system can meet the challenges it faces. It is easy in the midst of day-to-day pressures to lose sight of the fact that the alignment between genomic science and data analytics is opening up the possibility of a system that is better able to prevent disease, personalise care and empower patients. The key job of the system’s leaders is to have the courage to harness these technologies so that outcomes improve and inequalities narrow.

Without urgent reforms, our NHS and care services face existential crises. It is time for bold action.

Alan Milburn

Former Secretary of State for Health

Overview

Covid-19 has put huge strain on a National Health Service already struggling with longer-term structural challenges. Missed appointments over the past 18 months have added to already growing waiting lists, and the pandemic has put further pressure on already stretched NHS workers. Acute pressures are both exacerbating and being exacerbated by chronic problems.

As polling conducted by JL Partners for this paper sets out, improving the NHS is a priority for the public. The need for such improvement is painfully clear: waiting times, which were already lengthening pre-pandemic, are now at record highs. Treatments for critical illnesses are delayed. Important screenings, for instance for breast cancer, have been missed. The structural issues the NHS faced before the pandemic have been exacerbated by the pressure the health system has been under during the past 18 months. Morale has never been lower, with staff physically and mentally exhausted by the impact of the pandemic. There is growing talk of a winter crisis facing the NHS but as this report shows, this is inaccurate. It is more accurate to speak of a crisis that has built up over years and will last several more, rather than a one-off season.

The extent of the chronic problems facing the NHS means there are no simple short-term solutions. The government has set out plans to work through the backlog, increasing NHS elective capacity to 130 per cent of pre-pandemic levels. The NHS has also published a long-term plan. In the absence of deeper and faster reform, it is clear that the 130 per cent target cannot be met and that the NHS Long Term Plan is at serious risk.

What this paper sets out is a path to alleviating the acute problems facing the NHS in the aftermath of the pandemic, while taking the opportunity to implement the structural reforms needed to put our health service on a sustainable long-term footing. It is an incremental plan for permanent structural change. Immediate action should include taking advantage of available private-sector bed space, while longer-term change must involve fully harnessing the possibilities of technology to augment the delivery of health care, as well as moving faster on preventative care. However, as our modelling conducted exclusively for this paper shows, bringing the backlog down to pre-pandemic levels soon is highly unlikely with the current mix of policies on the table. We understand from contacts in the private health sector that the NHS could, with the right partnership with them, achieve 150 per cent of pre-Covid independent sector NHS capacity quickly. In such a scenario, our model suggests that the backlog could be worked through much more quickly than in the government plan.

Across the political divide, there is clarity on the need for action to support the NHS. However, the solutions to date remain confined to traditional tax and spend. Clearly, the NHS does need further

financial support, but this is only a sticking plaster that delays, rather than fully addresses, the deeper reforms needed to tackle long-term chronic challenges.

The obstacles the NHS faces today cannot be viewed through the same lens as in 1948. Public spending relative to GDP has almost doubled and spending on health alone has nearly tripled since the era of Clement Attlee. Simply providing more money for the NHS will not ensure the institution's survival or maintain the principles that were so unifying at the end of the 1940s and the beginning of the 2020s.

The public knows how important this change is, as our polling shows. And despite being nervous about what it could involve, they do hold politicians accountable for delivering this change. While nearly half the population rank the NHS as the most important issue facing the UK today, fewer than one-fifth place the adoption of new technologies in their top-three most effective means of reform. So, the crisis within the NHS is also a crisis of communication because politicians seem unable to relay the problems and, crucially, the solutions to the public.

Speaking in support of this paper, former Secretary of State for Health Alan Milburn said: "The risks to the NHS, both those posed by what has happened during Covid and the underlying structural threat, are high. Our health service cannot recover with piecemeal support, it needs a holistic plan for recovery."

This paper sets out a reform package for the NHS that we believe politicians must embrace to take the public on a journey towards broadly accepting the possibilities of technology. While there is fear of following this path, the electoral price of failing to do so, as our polling data outlines, is high. A credible plan to help the NHS to recover from Covid-19 and put it on a sustainable footing will be key to the next general election. The stakes could not be higher for both public health and party politics.

This report is broken into multiple sections. First, it details the combination of acute problems facing the NHS as a direct result of Covid-19, including backlogs, missed appointments, staff exhaustion and the government's current spending priorities. It then goes on to look at the chronic, structural problems facing the system, which predate the pandemic. Having looked at these two components of the challenge, we then offer a plan for how the NHS can recover from Covid-19, while also making the most of the opportunity to put in place wider and deeper reform.

The Acute Pressures of Covid-19

The NHS faces interlinking acute, short-term pressures and chronic structural issues. These problems are multipronged and escalating, so tackling both is vital. In this paper, we turn first to the acute impact of Covid-19 on the NHS.

Covid has had a dramatic impact on our health service. It has put pressure on intensive care (ICU) beds, led to missed screenings and operations, and put incredible strain on NHS staff, who not only had to cope with increased admissions and care duties but were also stretched by absences of colleagues with Covid. We provide further details below and a bespoke plan to fix these immediate problems, which would then allow space to tackle the structural issues.

Our Public-Health Sector Is Struggling as a Result of Sustained Covid-19 Pressures

The demands of the pandemic, including caring for individuals who fell severely ill with Covid-19 and were admitted to hospital, alongside orchestrating a world-leading vaccine rollout programme, have at times pushed the NHS to absolute capacity. This became particularly pronounced as the health service attempted to maintain routine and non-Covid care – a situation that was made extremely difficult during the three waves of the pandemic.

Covid-19 is likely to continue to put pressure on NHS resources this winter, and possibly beyond. At present, about 4 per cent of general hospital beds, and 19 per cent of ICU beds, are being used to treat Covid patients, with significant variation across NHS trusts. While current hospital admissions are manageable, the latest hospital data also show that elective procedures and routine admissions have recovered to only 80 per cent of pre-pandemic levels. In other words, although the present burden of the pandemic is not in danger of overwhelming most NHS hospitals, it is still impinging significantly on capacity and their ability to deliver routine care. Unless hospital admissions fall away this winter – unlikely given that Covid-19 will be with us for the short to medium term at least – or hospital capacity surges, current NHS capacity may be insufficient to cope with expected seasonal demands, much less be in a position to tackle the growing backlog. Based on present trends, the backlog is therefore set to get worse before it can get better.

Additional pressures on the NHS could easily turn an already difficult situation into a full-blown winter crisis. As hospital wards generally run at 90 to 95 per cent capacity, and ICU wards at 80 to 85, there is little scope to support further Covid-19 admissions without scaling back routine care even further. The prospect of a severe flu outbreak, as flu rebounds following a historically light season last winter, is another major concern. Based on modelling from the Academy of Medical Sciences that shows this

year's flu epidemic could be more than double the size of a "routine" year – as well as best-available hospital statistics on flu admissions from previous seasons – we estimate that peak flu admissions during January 2022 could, in a worst case scenario, plausibly exceed 10 per cent of general hospital beds and 15 to 20 per cent of ICU beds. Therefore, even without a major Covid-19 winter surge, the NHS could easily be reduced to 70 per cent capacity or less, based on expected Covid and flu trends. This would mean a second year of dangerous growth of the NHS backlog.

Backlogs Caused by Covid

The shutdown of most non-Covid services in the first wave of the pandemic, combined with drastic changes in patient behaviour and fluctuating numbers of Covid-19 patients in hospital over the past 18 months, has led to significant backlogs across other care.

As of May 2021, there were more than 5 million people waiting for routine operations and procedures in England, the highest figure since current records began in 2007.¹ This is despite the fact that approximately 7.2 million fewer people joined waiting lists for elective procedures between March 2020 and June 2021 than would have been expected based on pre-pandemic numbers. If this trend is now realised, the backlog could grow to 13 million.

As the NHS recovers from the pandemic, and patients who have been holding off seeking care begin to come forward, waiting lists are likely to grow rapidly. Owing to the diversion of resources towards Covid-19 services and the infection-control measures that have been implemented, it is likely that this backlog will continue to build even as the health service works to reduce it.

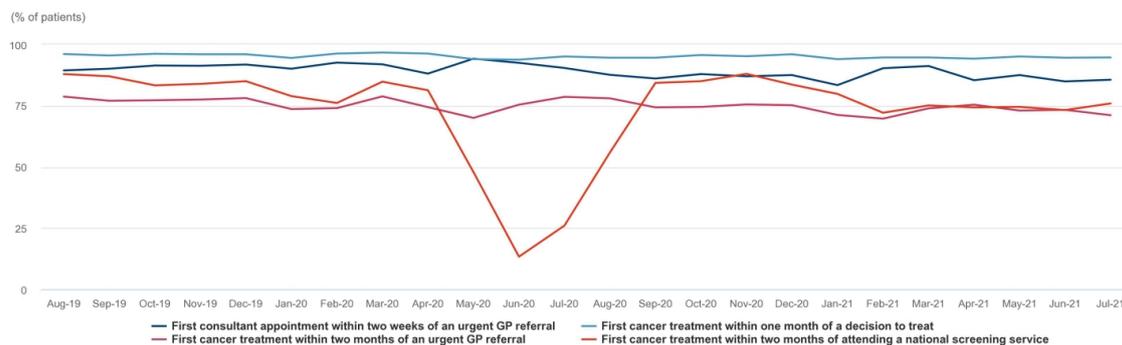
Vice President of the Royal College of Surgeons Fiona Myint has said that reducing the backlog in elective care should focus on training and recruitment of more NHS staff, improving infrastructure and, crucially, increasing bed capacity in the NHS. She stated that: "The reality is that we require more staff and hospital beds to bring down the elective waiting list. This includes nurses and operating department assistants who are part of the team in the operating theatre. We must also look at how we can retain the staff we have. We need to improve morale in the NHS after the past two years which have been very tough."²

Missed Screenings

Screenings for conditions such as cancer are essential for catching the disease early on and maximising chances of survival. However, since the start of the pandemic, it is estimated that more than 300,000 people have missed urgent checks as of May 2021. Cancer Research UK found that the number of women referred for breast-cancer checks alone dropped by more than 20,000 in 2020–2021.³

This fall in diagnoses could mean that more people who will eventually be diagnosed with cancer will have later-stage, more lethal or chronic forms of the disease. According to a report published in March 2021, just 41 per cent of cancers in England were diagnosed while still highly curable, a stark comparison to the 2028 target set by the NHS Long Term Plan, which aims to diagnose 75 per cent while still highly curable. This has led to 4,500 preventable cancer deaths, largely attributable to the disruption of care caused by the pandemic.⁴

Figure 1 – Waiting times for cancer: targets and performance from August 2019 to May 2021



Source: NHS Digital/<https://www.bma.org.uk/advice-and-support/nhs-delivery-and-workforce/pressures/pressure-points-in-the-nhs>

Meeting targets for cancer treatments had been a challenge facing the NHS long before the pandemic interrupted care. For example, May 2021 was the 67th consecutive month in which the government missed its target of 85 per cent of patients receiving cancer treatment within two months of referral.⁵

Waiting Times Have Increased

According to a report published in late 2019, essential parts of NHS England were experiencing the worst performance against targets for waiting times since many of these targets were set under the last Labour government. This included the highest proportion of people waiting for more than four hours in accident and emergency (A&E) departments since 2004, and the highest proportion waiting more than 18 weeks for non-urgent, but essential, hospital treatment since 2008.

The target for treating cancer patients within 62 days of urgent GP referral has not been met for more than five years, and survey evidence suggests that more people are experiencing longer delays in getting GP appointments.

Naturally, waiting times have increased as a result of the pandemic. However, the data clearly show that this was an issue predating the pandemic.

The Pandemic Has Exhausted the Workforce

Even before the pandemic began, one-third of the doctors who responded to a survey published by the British Medical Journal (BMJ) in January 2020 described themselves as burned out, with those in emergency medicine and general practice the most impacted.⁶

So, it is unsurprising that the stress and uncertainty of working on the front lines through a global pandemic has taken its toll on already exhausted health-care workers. Burnout and workload levels are at an all-time high, and research has found that many staff members could emerge from the pandemic with post-traumatic stress disorder (PTSD). One survey reported that 32 per cent of respondents said they, or clinical colleagues in their department, have been on sick leave due to anxiety, stress, depression or PTSD – directly caused from working during the pandemic.

This is further highlighted in a 2021 study that details the poor mental health of front-line health workers, with 45 per cent affected by one or more of the following: severe depression (6 per cent), PTSD (40 per cent), severe anxiety (11 per cent) and problem drinking (7 per cent). It also found that 13 per cent had suicidal thoughts or considered self-harm in the two weeks prior to the survey. According to this study, doctors had better mental health than nurses, suggesting that staff with greater patient interaction were more vulnerable while simultaneously having to deal with a lack of resources and support.⁷

Meanwhile, 51 per cent of respondents to the latest COVID tracker survey from the British Medical Association (BMA) reported a worse state of overall health and wellbeing than during the first wave of Covid-19. Coupled with the staff shortages driven, at least recently, by the number of health-care workers isolating, this has added additional pressure to an already stretched workforce.

As a result, morale within the NHS is understandably low. When asked if they have changed their career plans for the next year, 26 per cent of doctors said they were more likely to take an early retirement, another 26 per cent said they were more likely to take a career break, and 18 per cent said the same about leaving the NHS for another career.

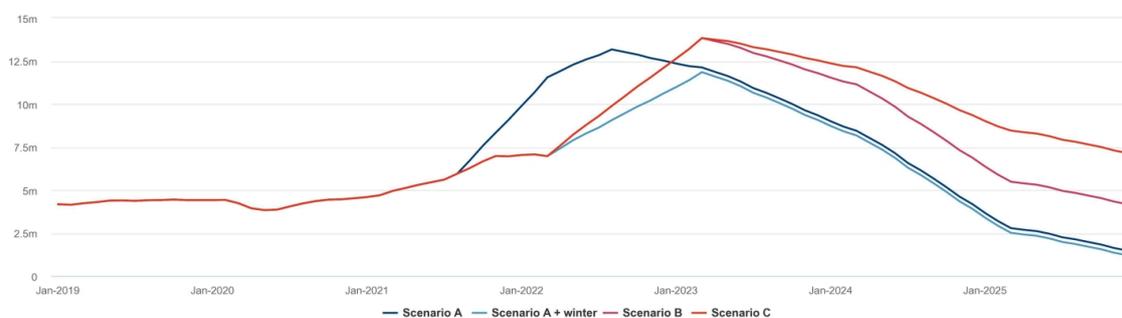
We Must Reduce the Backlog

The government's Plan for Health and Social Care, published on 7 September, sets out a strategy for reducing the short-term backlog that has built up over the pandemic, and which is likely to grow as those who delayed seeking treatment enter the system. The plan contains an aim to increase elective-treatment capacity by 30 per cent relative to pre-pandemic levels "after accounting for the impact of an improved care offer through system transformation, and advice and guidance ..." This seems a challenging

target, but contacts in the private health-care sector suggest that it could add 50 per cent of pre-pandemic independent sector NHS capacity if the private sector’s capacity were fully harnessed. If the NHS were able to work alongside the private sector at its pre-pandemic capacity, the backlog could be cleared far more quickly.

In Figure 2, we outline four more realistic scenarios for relieving the backlog. Each of these scenarios considers different levels of pressures on the NHS, as well as varying increases in capacity as a result of these pressures. If additional capacity were ramped up to 110 per cent of 2019 levels in 2022–2023, 120 per cent in 2023–2024 and 130 per cent in 2024–2025, waiting lists would fall well below pre-pandemic levels by the end of 2024 (scenario A, shown below).

Figure 2 – Modelling alternative scenarios for waiting lists based on additional capacity



Source: TBI calculations based on NHS England Referral to Treatment Waiting Times (RTT) data

Ongoing pressure from Covid-19 and the potential of a worse flu season this winter may put the government’s proposed plan in even greater jeopardy. A further wave of infections could lead to 30 per cent of hospital beds being taken up with Covid patients, just as they were in January 2020. This could further reduce the ability of the NHS to offer elective treatments. If capacity is reduced to two-thirds of its 2019 level – equivalent to the situation in January 2020 – for three months over the winter, this will delay attempts to clear the backlog (scenario A + winter). It is also likely that this would further delay those who would ordinarily have come forward for treatment during the pandemic from finally entering the system. Although this would lead to the headline waiting-list number peaking at a lower level, further delays in treatment for this group would not be a positive outcome.

Yet even with this further disruption over the winter, the backlog can be cleared relatively quickly if capacity can be increased in the following years.

If Covid-19 continues to put pressure on the health service beyond the end of this financial year, however, this may reduce the health service’s ability to clear the backlog, even with the additional capacity promised in September. The latest data from July 2021 suggest that the number of elective treatments is running at 80 per cent of pre-pandemic levels, even with much lower Covid-19 hospital

admissions compared to the previous winter. If this pressure continues over the next two years to prevent elective treatments going above 2019–2020 levels in 2022–2023, to increase by 15 per cent in 2023–2024, but still reach 130 per cent of 2019 capacity by 2024–2025, it would take considerably longer to clear the backlog, although the waiting list would return to pre-Covid levels by the end of 2025 (scenario B).

If the pressure from Covid remains more permanent, it would take longer still. In the case where the pandemic only allowed elective-treatment capacity to increase to 110 per cent of pre-Covid capacity in 2022–2023 and then 120 per cent by 2023–2024, waiting lists would remain elevated for many years, even staying above pre-Covid levels into the late 2020s (scenario C).

So, we need a solution in which waiting lists are brought down, but not by individuals delaying seeking treatment. This is one reason why greater collaboration with the independent sector should be encouraged. While there are multiple ways in which to move forward with greater cooperation, utilising long-term NHS contracts is one option for bringing down costs per patient referral, which can also be implemented across all regions with large independent-sector capacity. This should be done in a careful way, commanding public support by, for instance, including a sunset clause or expiry date on any such provision.

The aim would be to use spare private-sector capacity to support the NHS as it presently works through the acute backlog, rather than as a solution to the chronic problems the health service faces, which require much deeper reform. Although full utilisation of the independent sector would greatly speed up backlog recovery, it is unlikely we will achieve such high levels of collaboration. There still exists a strong political stigma against deeper public- and independent-health-sector partnerships.

However, as NHS England CEO Amanda Pritchard has said: “The independent sector has been critical to our ability in particular to maintain cancer services throughout the pandemic. About half the beds we have been using in the independent sector have been for cancer patients.”⁸ The government should continue to pursue more utilisation of the private sector in its recovery plans.

This view is also shared by Lord Prior of Brampton, the chairman of NHS England, who has argued that the majority of extra spending should be put towards reducing the backlog and effectively utilising the private sector to ensure extra capacity. Addressing a Royal Society of Medicine panel, he said: “We’ve got to deal with the waiting list, and that will mean as well, I’ll say it completely openly, that means working with the private sector. Frankly, I’ve got no problems with doing that, I think the private sector performed incredibly well during Covid. So I think between the NHS and the private sector, we’ve got to really go for productivity, and really hit that waiting list hard.”⁹

Despite reports of negotiations between government and the private sector, no formal deal has been announced, but given the weight of evidence in favour of increasing capacity through a public and private partnership, it is a practical necessity that should be pursued. ¹⁰

Prioritisation

Alongside using extra-NHS capacity to work through the backlog, there is also a clear need for prioritisation of cases. Those most urgently in need of care should be higher up the waiting list, with the public confident that critical care will be received in time. Without clear action on this front there is a real danger that confidence will be lost in the NHS to deliver care fairly and on time, driving those who can afford to do so to go private. A recent poll by Engage Britain found that, while 77 per cent of those surveyed were proud of the NHS, 21 per cent had been forced to go private and 25 per cent said waiting times had damaged their mental health. ¹¹

To address this we believe the NHS should, on the basis of making use of extra independent-sector capacity, review the waiting list and set out a clear categorisation of cases. This should be a clinical-led decision, segmenting the backlog based on a risk-stratification strategy and should look to employ the latest data analytical and AI capabilities in doing so. The basis for which category an individual is designated should be published on the NHS website: for example, “urgent”, “routine”, “two-week wait”, and so on. The individual appointment time someone receives would be based on their priority categorisation and depend on local availability.

Addressing the backlog in this way would, we believe, give all those waiting for care confidence that the urgency of their case has been reviewed and categorised, based on publicly available criteria.

Short-Term Reform and the Role of Technology

Technology has an important role to play in increasing efficiency and releasing capacity. Covid-19 has acted as a catalyst to fast-track new technologies to deliver health care. Now we must build on this opportunity and momentum to help alleviate immediate pressures, and to deliver a more sustainable health-care system for the future.

Telemedicine and Online Services

Over the course of the pandemic, digital technology has been implemented at scale to offer an alternative to face-to-face consultations between doctors and patients, especially during lockdowns. Both primary- and secondary-care settings now routinely use video, telephone and online consultations, often as a prerequisite to an in-person appointment. The number has grown exponentially. According to NHS Digital, 15 per cent of 23 million primary-care appointments took place by phone or online in December 2019, but more than 90 per cent were being delivered virtually by May 2020.¹²

There has also been an enormous surge in patient uptake of online services, including registrations for the NHS App, NHS login and e-prescription services.¹³ More than 10 million people have downloaded the NHS App, with numbers continuing to rise.¹⁴ These services can be used to find advice, book appointments, and order prescriptions more efficiently for both patients and the NHS. They are also a decisive step towards comprehensively digitising health records, which will bring enormous efficiencies in its own right.

Decentralising and Expanding Diagnostics

The pandemic has dramatically expanded our capacity and capabilities in diagnostics. Harnessed correctly, this could leave a positive legacy, which is desperately needed considering that in critical areas, such as cancers and metabolic and autoimmune diseases, the UK continues to fall short. Additionally, an increase in bio-infrastructure, such as laboratories, manufacturing and logistics, would be critical for improving outcomes.

Covid-19 has also driven forward another important social change: the widespread use of at-home diagnostic kits. Covid-19 at-home tests are now commonplace, and similar technologies could be used to identify other diseases outside clinical settings. Such home-test kits are already available to diagnose or monitor a range of diseases and chronic conditions including different cancers, diabetes, coeliac disease

and sexually transmitted diseases, among others, and it is feasible that similar kits could be rapidly developed for other diseases, as has been the case with Covid-19.¹⁵ Adopting a broad definition of diagnostics, this logic could be extended to include at-home screenings and the wider use of wearable technologies to detect and monitor disease risk and emergence at earlier stages.

Decentralising aspects of health care in this way could significantly alleviate pressure on the health service in the short term but, used regularly for a broad range of issues, also bring benefits further down the road by helping to identify the emergence of diseases earlier, saving lives and negating the need for more costly and timely long-term treatments.

Capitalising on the newly emerging social acceptance of this model by accelerating the development of diagnostics in local settings would reduce immediate pressure. Fostering the development of novel diagnostics more widely (see the Galleri Test case study below) could also be vital in advancing health care. The government should seek to incentivise industry to speed up innovation in this area through targeted interventions and advanced market commitments.

More radical solutions beyond traditional settings could be employed to significantly reduce existing diagnostic backlogs. For example, the Danish model for a three-pronged approach to diagnostics has been influential on recent UK health-care proposals, including the creation of rapid-access diagnostic centres as part of the national cancer programme.¹⁶ We could also utilise technology to outsource diagnoses using digital imaging (such as radiology scans) to countries in which health-care systems have been less overburdened by the pandemic, such as Australia and New Zealand.

Increased end-to-end bio-infrastructure, coupled with a focus on embedding behavioural change, could prove to be a positive disruption to medical diagnostics in the UK. Alongside the expansion of genomics and data infrastructure, this is an area in which radical implementation of tech, and new pathways for diagnostics inside and outside of conventional health-care settings, could lead to far greater prevention and early detection of disease.

Artificial Intelligence and Robotics

Alongside the advances that became necessary during the pandemic, there are other opportunities for technology to bring more efficient and effective short-term services. Artificial Intelligence (AI) and robotics are two, both with vast potential.¹⁷ If deployed safely, AI-driven technologies could greatly improve efficiency and patient outcomes through a wide range of applications, from the analysis of patients' medical data to predict their disease risk or determine effective treatments to using AI in operational settings in order to triage patients with the most acute needs. The government has invested significantly in the NHS AI Lab to accelerate adoption of AI technologies across health and social care, and it has also announced its intention to create a National Strategy for AI in Health and Social Care.

While these are welcome developments, the NHS must also consider how AI could deliver quick wins today to help reduce backlogs as quickly as possible. Robotics is another area of promise, with particular opportunities in precision surgery, facilitating rehabilitation, monitoring and assistance roles in care settings, and providing social interactions to combat loneliness in isolated patients.¹⁸ These technologies can provide significant opportunities to release capacity, deliver immediate efficiencies and improve health-care, and the NHS should urgently assess how robotics can be most effectively utilised in the short-term.

While technology has a significant role to play in streamlining NHS treatment and improving quality of care, these advantages need to be clearly communicated to the public. A recent poll by the BMA reported that of the 2,400 medics surveyed, two-thirds were experiencing rising levels of abuse from patients struggling to access help or who were unhappy with the service available.¹⁹ Many people are frustrated because they feel they are unable to receive medical attention in person that, at times, is of course necessary. Striking the right balance between virtual and in-person services is essential.

Educating the public on the benefits of a more virtual health-care system for standard appointments – both on practical usage of new virtual-appointment technologies and the overall role it could play in reducing the burden on the NHS – could be linked with a bigger government-led education campaign on best practices in public health.

The Galleri Test

Galleri is a new blood test that screens for abnormal DNA in the blood in order to detect the early stages of multiple cancers. Alongside this proposed use, the goal is to deploy the test in combination with existing routine screenings for breast, cervical, colorectal, lung and prostate cancers. Studies in November 2020 found that the test correctly predicts the location of tumours 89 per cent of the time, with a false positive rate of 0.5 per cent. While this research is promising, further testing in larger trials is needed.

This will begin with the NHS-Galleri trial in autumn 2021, in partnership with health-care company [GRAIL](#). NHS records will be used to invite 140,000 people between the ages of 50 and 77 to participate in testing, with all participants given an annual blood test over two years. The trial will seek to determine whether the blood test can significantly reduce the number of cancer cases diagnosed late, at stages three or four, compared to those whose samples aren't tested. The NHS-Galleri study is a randomised control trial (RCT), meaning that half the participants will have their samples screened and the other half will simply be stored as a control group. Initial results will be released in 2023. If positive, the study will be expanded to 1 million participants between 2024 and 2025.

An important consideration is how acceptable and effective the test is across a diverse population, with the NHS focusing on recruitment of participants from different backgrounds and ethnicities across eight areas of England. Participants asked to give a blood sample will do so at a locally based mobile clinic.

These new services would need to be implemented over time, requiring significant investment in facilities, equipment and workforce as well as the replacement of outdated testing machines. Yet these same services, such as community diagnostic hubs and Galleri blood tests, would also bring significant benefits to the NHS, increasing economic and logistical efficiency. Reductions in costs of CT and MRI scanners through bulk buying, and increased use of same-day emergency care through improved access to diagnostics in A&E departments, would both contribute to reducing backlogs. Shorter hospital stays would also be guaranteed through localised tests undertaken on the day of request.

Prepare for Long-Term Reform

Over the past 18 months, the NHS has been under immense pressure. Not only has this led to staff exhaustion, longer waiting lists, and missed screenings and appointments, it has exacerbated the systemic challenges that have been building up over years. A bespoke catch-up plan is urgently needed to address the issues exposed by the pandemic in addition to wider, long-term reforms aimed at future-proofing the health service.

The BMA has estimated that, even if the NHS were to run at 110 per cent of its pre-Covid capacity, it could take up to five years to reduce the backlog of elective care in England to 2019 levels, which were already relatively high. The government can use the pandemic as a flashpoint to incite wider reform, and provide the NHS with the resources and support necessary to restore non-Covid care in a sustainable way – now and into the future.

Unfortunately, many of the pressures facing the NHS are not new; Covid-19 has merely highlighted systemic issues in the public-health sector that have been requiring attention for years. While addressing the immediate concerns highlighted by Covid, the government can use this opportunity to begin long-term reforms too. Below, we explore some of the key long-term issues facing the NHS and avenues for reform.

Staff Vacancies Are Growing

The World Health Organisation estimates there will be a global health-care workforce gap of around 14.5 million by 2030. ²⁰ In high-income countries, this is the result, in part, of a mismatch between the specific jobs needed in the health-care workforce and the positions actually filled. The NHS is no exception. The workforce crisis has been described as the worst problem facing the NHS, and the Care Quality Commission's State of Care report (2018–2019) said the crisis is having a direct impact on care.

As background, providers across NHS England were reporting a shortage of more than 100,000 FTE (full-time) staff as of January 2020. Adult social care is facing even starker recruitment and retention challenges, with an estimated 122,000 FTE vacancies. This equates to a vacancy rate of around 8 per cent for both the NHS and adult social care, compared with a vacancy rate of under 3 per cent for jobs across the UK economy.

Outside the long-standing vacancy gap, there are other systemic issues that are causing shortages within the NHS. One is the use of temporary workers and agency staff to plug gaps in unfilled shifts. In order to better insulate the NHS from this challenge in the long-term, more should be done to bring part-time

and temporary staff into the workforce full-time. This could take the form of increased pay more closely associated with rising inflation and cost-of-living expenses, as well as a deeper examination of how NHS and medical staff are trained and educated in the UK. Reforms that better maximise both the efficiency of the education pipeline, as well as an increased emphasis on which positions will be in higher demand further down the road, could better protect the NHS from future shortages. For example, the government could require Health Education England (HEE) to make independent, annual, long-term forecasts of the numbers of doctors, nurses and carers needed in each speciality. This could provide long-term Office for Budget Responsibility-like discipline that outlasts the political cycle and ensures that we are training enough people.

NHS Workforce Reform

Not only is the question of having the right level of staffing vital (and we make recommendations on that subject in this paper), but it is also critical that the NHS has the right type of staff. If this report is embraced by the government, it would see our health system revolutionised by the possibilities of technology. This would mean that a health service emerges in the coming years that could look and feel quite different to today's NHS. The patient will be at the centre of care decisions and technology will expedite access to treatment and expand the types of treatment available. Technology itself should be integral to strategic workforce planning, taking advantage of the vast power that advanced analytics and AI can bring to bear. To prepare for this the NHS, and government, must take urgent steps to set out a pathway not just to deal with existing shortages but a plan for how to develop the skills that will be required over the coming years.

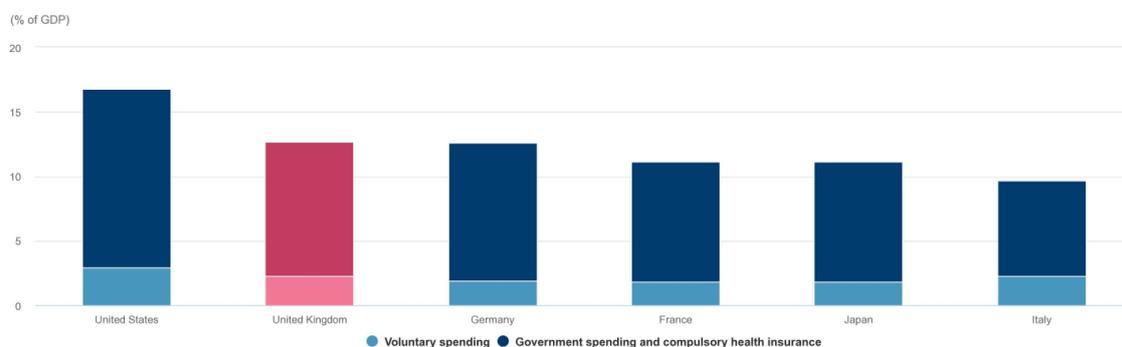
The NHS must also look at its culture and seek to employ a diverse workforce that not only has the right skillsets, but also the right mindset. Leveraged in the right way, workforce should be a greater driver of change, and it is critical that the NHS builds and entrenches a culture that values and incentivises self-disruption and innovation to drive efficiency and improve outcomes.

International Comparisons

Comparisons between health-care systems, and spending across different countries and types of system, can provide insight into areas in which the UK is doing well and in which it could improve.

For example, one statistic that became critically important during the pandemic was the number of available hospital beds. According to a report from 2019, shortages in hospital beds are another potential indicator of under-investment; the UK has fewer beds per capita than many other Organisation for Economic Co-operation and Development (OECD) countries. ²¹

Figure 3 – Health spending as a percentage of GDP for 2019 to 2020, broken down into total, government/compulsory and voluntary spending



Country	Total health-care expenditure as percent of GDP	Government spending and compulsory health insurance as % of GDP	Voluntary spending (voluntary health insurance and private funds such as households' out-of-pocket payments, NGOs and private corporations) as % of GDP
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France	11.1%	9.3%	1.8%
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Germany	12.5%	10.7%	1.9%
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Italy	9.7%	7.4%	2.3%
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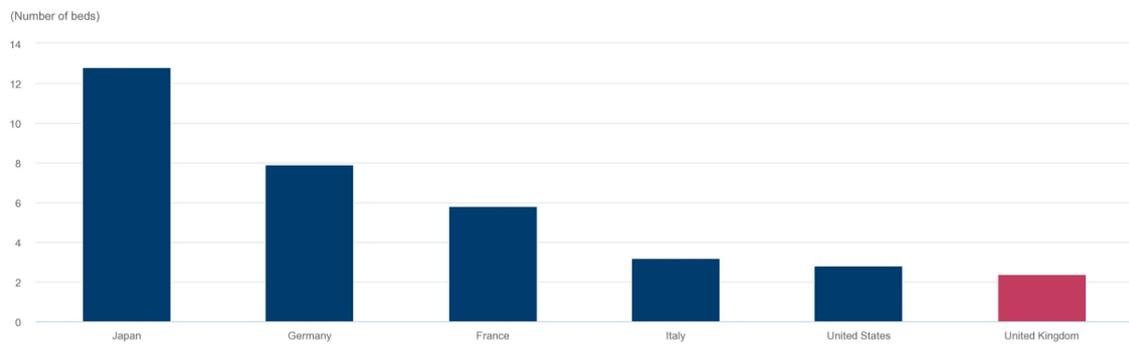
Japan	11%	9.3%	1.8%
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United States	16.8%	13.9%	2.9%
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United Kingdom 12.8% 10.4% 2.3%

Source: <https://data.oecd.org/healthres/health-spending.htm>

Figure 4 – Total number of hospital beds per 1,000 inhabitants in 2020 (or latest available)



Country	Number of hospital beds per 1,000 inhabitants	Latest available data
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France	5.8	2019
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Germany	7.9	2019
---------	-----	------

Italy	3.2	2019
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Japan	12.8	2019
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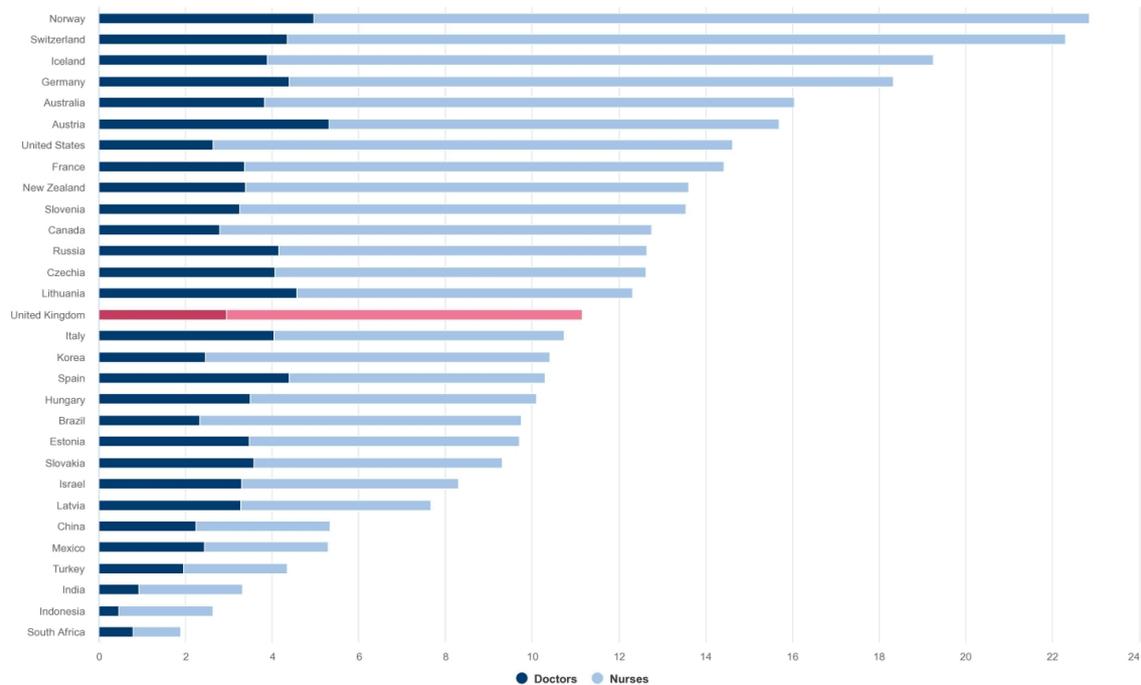
United States 2.8 2018

United Kingdom 2.4 2020

Source: <https://data.oecd.org/healthqt/hospital-beds.htm>

Another important measure that highlights health-care underinvestment is the number of doctors and nurses, which is particularly illuminating in an international context. According to the OECD, the UK has fewer doctors and nurses than France, Germany, the US and Lithuania.

Figure 5 – Number of doctors and nurses in OECD countries



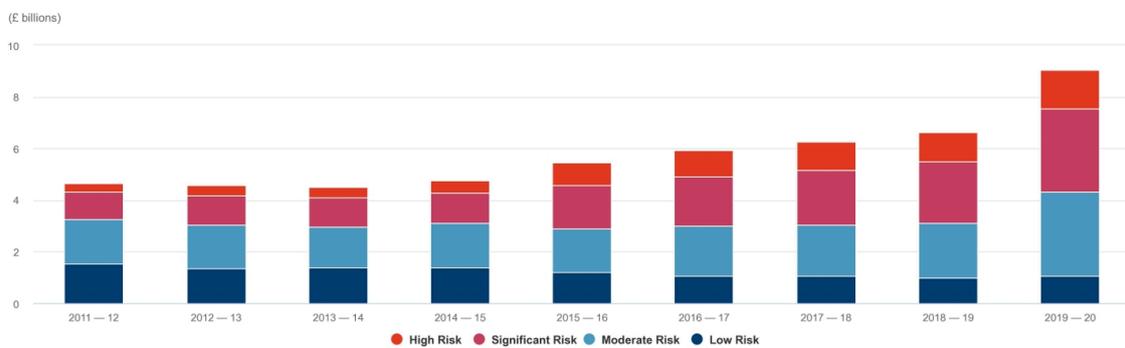
Source: <https://www.oecd.org/coronavirus/en/data-insights/number-of-medical-doctors-and-nurses>

Building and Maintenance Backlogs Are Getting Worse

In terms of the physical infrastructure in which the NHS operates, “building back better” needs to cover more than just building new NHS facilities: it must also extend to fixing some of the existing sites that desperately require maintenance and decent equipment.

As Figure 6 shows, the cost and severity of the backlog maintenance issues for the NHS is rapidly increasing – and has been for several years now.

Figure 6 – The cost in billions to eradicate the maintenance backlog, broken down by risk



Source: NHS Digital/<https://www.kingsfund.org.uk/blog/2021/01/nhs-estate-backlog-grows-again>

The maintenance costs set out above indicate how much the NHS needs to spend to get its rundown buildings and equipment back to a suitable condition, with the figure on the rise since 2013. This backlog needs to be addressed because dilapidated buildings and outdated or unreliable equipment can lead to poor patient care and low productivity.²²

For example, the UK has the fewest CT and MRI scanners per capita among comparable countries, with less than a third of the number found in Germany. These scanners are vital for screening and diagnosing conditions, including cancer at an early stage.²³

A Growing Challenge: The Ageing Population

One of the biggest challenges many health systems across the world are facing is an ageing population. While increased life expectancy as a result of medical advancements is something to celebrate, it is also adding huge pressure on the NHS. Left unaddressed, the UK’s ageing population profile, coupled with increasing prevalence of chronic diseases among the elderly, could potentially emerge as the biggest long-term issue facing the NHS.

Life expectancy in the UK is now 13 years longer than it was when the NHS was created.²⁴ Not only are people living longer, record numbers of older people are living with chronic diseases, including diabetes, heart disease and dementia. These conditions tend to demand more long-term care than short-term “cures”, which in turn means long-term support from the NHS.

This means that caring for the elderly tends to be more expensive than caring for those in younger age groups. According to the Institute for Fiscal Studies (IFS), the average 65-year-old costs the NHS an estimated 2.5 times more than the average 30-year-old; a 90-year-old costs more than seven times as much.²⁵

Ageing and chronic illness are on course to eat up ever-greater proportions of public finance in the coming years, squeezing out funding for other priorities, or requiring significant tax rises. The IFS estimates that by 2024–2025, health spending will account for 44 per cent of day-to-day public-service spending, up from 42 per cent in 2019–2020 and 27 per cent in 1999–2000.

This needs to be taken into account when considering reforms of and investment in the NHS. One such reform could be major investment in translational research that aims to deliver new diagnostics and treatments in order to keep older populations healthy for longer, rather than just extending the number of years lived, without improving the quality of living.

The pandemic has also confirmed the reality that life expectancy is far more fragile for the disadvantaged, with Covid-19 mortality approximately 1.5 times higher among those with a learning disability compared to those without. Age-standardised rates of death among males and females aged between 30 and 100 years, per 100,000 of the population at risk, show that individuals who were disabled in 2011 had statistically significantly higher mortality than those who were non-disabled, in the period to 20 November 2020.²⁶

Prior to the pandemic, ethnic-minority groups had lower overall mortality rates than white people, but this has been reversed as a result of BAME people having higher susceptibility to Covid-19. The highest age-standardised diagnosis rates of Covid, per 100,000, were in black ethnic groups (486 in females and 649 in males), and the lowest among the white population (220 in females and 224 in males).²⁷

The Impact of Chronic and Preventable Diseases

The NHS defines chronic conditions as health problems that require ongoing management over a period of years or decades. These conditions cannot currently be cured, but can be controlled by the use of medication and/or other therapies.²⁸ Additionally, preventable conditions such as obesity can lead to other chronic health conditions. For example, obesity is linked to type 2 diabetes, high blood pressure,

high cholesterol, and an increased risk of respiratory, musculoskeletal and liver diseases. Obese people are also at increased risk of certain cancers, including being three times more likely to develop colon cancer. ²⁹

Chronic diseases affect a significant and growing proportion of the global population, and managing these conditions comes at a very high cost. In the UK, chronic diseases could be afflicting nearly 40 per cent of the adult population, with around 70 per cent of health-care expenditure spent on managing these conditions. ³⁰

Diabetes is one of the most telling examples of a chronic disease that has a significant impact on the NHS. A report published in 2019 found: ³¹

1. The cost to the health service of treating diabetes stood at a record £1.07 billion for the period 2018–2019.
2. Providing treatments for people with diabetes to manage their condition has almost doubled from the £650 million recorded ten years ago.
3. Treating diabetes costs more than any other health condition, amounting to 13 per cent of the total cost of prescribing across England.
4. This amounts to an average spend of £327.78 for diabetes drugs per patient, including insulin, testing strips and medicines taken to control blood-sugar levels.

Considering it is estimated that more than 5 million people in the UK could be diagnosed with diabetes by 2025, it is likely the overall cost of treating the condition will continue to rise. Prevention and management of these types of disease need to be at the forefront of NHS recovery. For example, wearables could be critical here, with their ability to provide continuous, real-time physiological information via dynamic, non-invasive measurements of biochemical markers, and to monitor glucose levels.

Another area of major concern is the rise in alcohol-related diseases and complications emerging from the pandemic. One expert on preventative medicine we spoke to estimates that he has seen an increase of between 60 and 70 per cent in issues related to drinking. A further estimate suggests that within the near future, 50 per cent of all patients will be presenting with preventable diseases and associated issues. In order to ensure a stable NHS in the future, preventable diseases closely related to personal decision-making and lifestyle should be included in the conversation. Digital innovation, such as the emergence of “digital therapeutics” or software interventions that focus on changing patient attitudes and behaviours to achieve clinical benefits, will also be critical here.

Declining Mental-Health Care

The NHS Long Term Plan (LTP) makes a renewed commitment to mental-health services, stating that they will grow faster than the overall NHS budget, with a ring-fenced investment worth at least £2.3 billion a year by 2023–2024.³² However, mental-health care is also facing exceptional pressures from the pandemic backlog and from the number of people who have sought associated treatment as a direct result of the pandemic and multiple lockdowns.

A report published in October 2020 found that one in four people with mental-health problems had to wait at least three months to start NHS treatment, and some weren't getting help for up to four years.³³ In all likelihood, the number of people waiting for mental-health care has increased significantly since October 2020 because lockdowns and the pandemic continued throughout 2020 and well into 2021.

An integrated approach, which focuses on multi-level interventions for those most at risk of mental-health problems, is key. This means first having a horizontal approach, where coordination between the traditional mental-health sector and services like housing and social welfare is actively encouraged. A holistic approach will mean better treatment and more long-term solutions to the problems often facing those suffering from poor mental health. A particularly effective example of this is the INTEGRATE approach, an NHS-voluntary-sector collaboration and mental-health service in north London. This involves community-based work with those vulnerable to or experiencing mental-health problems, focusing on both changing social environments and offering key services. Part of the approach involves clinicians actively seeking out situations where disengagement is likely, including youth centres and working men's clubs, hence bringing the service to those who are unlikely to access support before a crisis is reached. Such approaches, which effectively decentralise care, are vital to reaching people who are digitally disengaged, to improve preventative care and to reduce the strain on the NHS.³⁴

The Role of Technology in Managing Future Pressures and Improving Health Care

The primary focus for the NHS is rightly on managing the immediate pressures that have been heightened as a result of the pandemic. However, we must also simultaneously look forward and ensure we are employing strategies today that will manage pressures, reduce demand and improve patient outcomes in the future, especially as we face the consequences of an ageing population. Rapid advancements in technology are offering unprecedented opportunities and strategic but significant investment must be at the heart of future health-care plans.

As we have set out previously, breakthroughs in genomics, gene-editing and computer science have put us on the cusp of a bio revolution. From understanding biology on a systems level through to being able to edit the code of life itself, we have within our grasp a generational change in being able to shift from health care to health.

Underpinning this shift requires a new set of health principles, as follows:

- **Predictive**, with wearables, smartphones and multi-omics able to provide early warnings about the onset of infection, as well as the risk of disease onset.
- **Preventative**, so that when wearable/digital alerts are issued, action can be taken, whether through therapeutics and treatment or lifestyle changes.
- **Personalised**, so that treatment is based on individual profiles, rather than on population-based assessments.
- **Participatory**, so that individuals have more meaningful relationship with their health-care providers as well as with their own health. One of the lessons of the current crisis has been a need to take on greater responsibility as an individual.

Building this model requires a complex systems change, with the collection of data at its heart. Data is today a digital specimen, and the NHS has a potentially unique role at the centre of the biotech revolution if it can create the right architecture. We have already discussed how increased use of telemedicine, online services, decentralised diagnostics, AI and robotics could significantly release capacity and improve health outcomes in the short term, but they should play an increasingly larger role in long-term strategies too. Beyond these examples, there are other areas where significant capital investment now would bring efficiencies and improved health care outcomes in the future.

Investing in digital infrastructure. Despite accelerated use of some digital services during the pandemic, the NHS is, in many ways, still operating as a 20th-century organisation. Many day-to-day processes are paper-based or rely on outdated IT systems that are not fully interconnected. Moreover, there is no

single, digital data repository of patient information across the health- and social-care systems. This creates vast inefficiencies and can lead to suboptimal patient outcomes. The government's NHS Long Term Plan and NHS-X (the digital-transformation unit) recognise the need to invest in basic IT infrastructure over a ten-year period, but this must be prioritised and given sufficient capital to complete, and continuously improve, the health service's digital transformation as soon as possible. ³⁵

Investing in smart hospitals. These hospitals utilise integrated, innovative technologies to provide better health care and patient experiences, as well as improved operational efficiency and workflow, compared to traditional hospitals. ³⁶ This is the future, and alongside basic IT infrastructure, the NHS should also seek to invest in new smart hospitals: first, as part of the government's commitment to build 40 hospitals by 2030; and second, as part of plans to upgrade existing hospitals with smart infrastructure. ^{37 38}

Investing in preventative, personalised medicine technologies. Over the past 20 years, there have been unprecedented advancements in biomedicine and technology that offer the promise of precision medicine. As costs reduce, the NHS must look to increasingly utilise these technologies to realise this promise and shift towards more preventative health-care strategies. Genomics is one such technology that can provide powerful insights into individuals' disease risks, enabling early preventative action. With the cost of whole genome sequencing down to around \$1,000/genome, individual genomic analysis should increasingly become part of routine health-care. Meanwhile, novel wearable technologies can provide unparalleled insights into, and greater autonomy over, our own individual health. ³⁹ The cost of these devices has also reduced considerably, so the NHS should campaign for their wider adoption (it is estimated that currently only around 15 per of the UK population owns a wearable device), and consider subsidises, where appropriate, to help improve the nation's overall health. ⁴⁰

Aligning life sciences and industrial strategies to NHS needs. Beyond investing in existing technologies, the government must also ensure its life sciences and industrial strategies are enabling and incentivising the development of technologies that will bring greater efficiencies and improved health outcomes to the NHS in the future. Beyond genomics, multi-omics – which measures a more comprehensive set of biomolecules – is one area that could provide a much more detailed view of health and disease at both individual and population levels, enabling more targeted and effective therapeutic approaches, once more fully developed. ⁴¹

Accelerating the development of novel, early and, where possible, decentralised diagnostics for different diseases as well as the use of AI in drug discovery should also be a priority. Basic and translational biomedical research – including into novel therapeutics such as gene-, mRNA-, stem cell- and immunotherapies, as well as into the underlying causes of holistic ageing and longevity – also offers immense opportunities to make health-care more preventative and effective. ⁴²

The Politics of Health Care

Countless studies, as well as an October poll conducted by JL Partners on behalf of the Tony Blair Institute, have shown that the NHS is the key public priority in the UK. The NHS was chosen as a top-three issue by 45 per cent of respondents in the recent JL Partners poll. This is true regardless of party affiliations; while 56 per cent of Labour voters formed part of this statistic, the same was true of 43 per cent of those who voted Conservative.

Data also show that given this prioritisation of the NHS as an institution, there is variation in public opinion on what should be tackled first. Improving waiting times, increasing staff numbers and making it easier to get GP appointments were, however, the most common, coming in the top-three priorities for 40 per cent, 34 per cent and 31 per cent of respondents, respectively.

There is also no doubt that the public largely holds the government responsible for the NHS. When asked who they blame for the current pressures, 44 per cent and 39 per cent of respondents placed “lack of investment” and “government decisions during the pandemic” in their top-three answers, putting these secondary only to the pandemic itself. This trend is particularly profound among the younger generations, with 18- to 34-year-olds putting the actions of the government above the pandemic in terms of whom to blame for the pressures on the NHS.

So, the key political question is how the government and politicians deal with the NHS. Answering this is vital both in order to address the significant short- and long-term problems facing the institution, as outlined in this paper, but also to respond to rising public pressure.

A key solution is the effective adoption of new technologies, but current polling shows that just 12 per cent of respondents placed this as a top-three priority for action. It is therefore the job of politicians to bridge this gap, and develop a strategy that can show the public how their primary concerns, including waiting times and getting access to appointments, can be achieved through the harnessing of technology.

The state of the NHS will have a significant impact on the voting decisions of a UK public that largely holds the government responsible for the institution’s failures. It is clear that technological advancements on their own do not have the necessary public support, but this need not be the case if they can be seen as the solution to the fundamental priorities that people already have. Technology can, and must, be at the heart of an ambitious strategy that addresses these priorities, and it is the role of politicians to build a plan to both achieve this and prove to the public that it is the best approach.

The data show that this is a prime political opportunity, but leadership and commitment will be key.

Conclusion

As this paper shows, the NHS faces both acute and chronic pressures. These are interlinked and complex and, in combination, pose a significant challenge to the NHS. We cannot tackle the chronic problems in the health service without addressing the acute pressures. The acute pressures cannot be fully solved in the absence of addressing the chronic problems. Our National Health Service therefore needs the right mix of immediate reform and longer-term structural reform if it is to be put back on a sustainable footing. As our modelling shows, even with a properly executed recovery plan, the timetable for bringing the backlog down to below pre-pandemic levels is still years away, without further and faster action by government.

Former Secretary of State for Health and Social Care Jeremy Hunt, who also serves as chair of the Health Select Committee, addressed this point when reviewing our paper. In his view: “The challenges the NHS faces are complex and multifaceted. As this paper sets out, they range from short-term pressures because of Covid, to longer-term structural issues like chronic diseases and an ageing society. It is right therefore, as the authors show, that the solutions are thought through in terms of immediate action required, as well as decisions needed to put the system on a long-term sustainable footing.”

As the polling conducted for this paper shows, the public believes that improving health care is a critical priority. Members of the public view reducing waiting times, increasing staff numbers and improving accessibility to GPs as vital reforms that are needed in the immediate future. Fewer people, however, view technology as central to improving the NHS. Accountability for improving the NHS lies with politicians yet across the political divide, the right plan for the NHS is absent.

What is clearly required, based on our polling and research, is for politicians to fully communicate to the public the scale and nature of the change that the NHS requires – particularly the role that technology should play. While this no doubt seems a political risk, credibility on the NHS is a key hurdle to electability in the next election.

Our paper sets out a clear set of reforms that we believe are required both to solve the acute problems facing the NHS, as well as to begin to tackle the chronic long-term issues. We believe that fully committing to a short-term partnership with the private sector would help bring down the backlog of cases faster. Alongside this, embracing the possibilities of technology will help put the NHS on a sustainable footing for the future.

Recommendations

Tackling the Backlog in the Short Term

The immediate pressures facing the NHS require immediate action. This report calls on the government to:

- Cut down waiting times and backlogs, particularly for A&E and cancer referrals, by committing to short-term collaboration with independent health-care services to help the NHS with capacity pressures.
- Alongside this, the NHS should make a review of cases and categorise each on the basis of publicly accessible criteria. This would, we believe, give patients confidence the urgency of their case has been assessed and a prioritisation given to them transparently.
- Support health-care staff suffering from burnout and mental health issues, including by ensuring they have access to holistic support as part of a post-Covid support package.
- Be bold and tackle the crisis of communication, educating the public on the benefits of tech-based health care and the need for structural reform.
- Set out a clear pathway on how technology, such as e-prescriptions, online appointments and at-home diagnostic testing, can be harnessed in the short-term to relieve pressure.

Embracing Longer-Term Structural Reforms

Now is the time to start thinking beyond Covid-19. The government should also develop a long-term strategic vision for the NHS through the following priorities.

1. Use technology to manage future pressures, reduce demand and improve health care and wellbeing by:

- Investing in digital transformation, particularly to develop a unified health- and social-care repository for patient data.
- Embracing the long-term role of telemedicine, online services, decentralised diagnostics, AI and robotics.
- Prioritising preventative and personalised medicine, especially genomic sequencing, which allows for greater individual autonomy over health.
- Investing in smart hospitals and integrating innovative technologies into new and existing hospitals.
- Aligning the UK's life-sciences sector and industrial strategies to NHS needs.

2. Address the growing vacancy gap in NHS and adult social-care services by:

- Requiring Health Education England (HEE) to make independent, annual, long-term forecasts of the numbers of doctors, nurses and carers needed in each speciality.
- Attracting UK residents into the NHS by raising pay and improving working conditions for all NHS and social-care staff.
- Ensuring all staff for adult social-care services are on the shortage occupations list.
- Bringing more temporary and agency staff in health- and social-care services into full-time employment.
- Establish clear plan for the recruitment of NHS “jobs of the future”, ensuring the health service has the right type of recruits it will need as it transforms to embrace all the possibilities of tech.

3. Provide a more equitable health- and social-care service by:

- Preparing for an ageing population, with a focus on early diagnostics and improving quality of life for those with chronic conditions.
- Addressing health inequalities among ethnic-minority groups and disabled patients, starting by identifying any historical, cultural or access issues that exacerbate differences in health outcomes.
- Adopting a horizontal and decentralised approach to mental-health care, with support for community-based work and better coordination between key services.

Polling conducted by JL Partners for the Tony Blair Institute looked at the importance that the public places on the NHS, the biggest challenges it faces and the causes of those challenges. You can explore this data in detail in the [online version of this paper](#).

Footnotes

1. ^ <https://news.sky.com/story/covid-19-nhs-waiting-list-at-record-high-but-hospitals-admitting-more-patients-figures-show-12351537>
2. ^ <https://inews.co.uk/news/health/nhs-waiting-list-approaches-6-million-people-as-it-hits-new-record-high-1248277>
3. ^ <https://www.telegraph.co.uk/news/2021/05/23/cancer-crisis-replacing-covid-crisis-300000-miss-urgent-checks/>
4. ^ <https://www.ippr.org/research/publications/state-of-health-and-care>
5. ^ <https://www.bma.org.uk/advice-and-support/nhs-delivery-and-workforce/pressures/pressure-points-in-the-nhs>
6. ^ <https://bmjopen.bmj.com/content/10/1/e031765>
7. ^ <https://academic.oup.com/occmmed/article/71/2/62/6072139>
8. ^ <https://www.hsj.co.uk/download?ac=3044895>
9. ^ <https://www.telegraph.co.uk/news/2021/09/09/private-sector-enlisted-cut-record-high-nhs-backlog/>
10. ^ <https://www.telegraph.co.uk/news/2021/09/09/private-sector-enlisted-cut-record-high-nhs-backlog/>
11. ^ <https://www.bbc.co.uk/news/uk-58517295>
12. ^ <https://www.scwcsu.nhs.uk/news-and-views/blog/can-digital-technology-be-the-saviour-for-cancer-care>
13. ^ <https://www.nuffieldtrust.org.uk/files/2020-08/the-impact-of-covid-19-on-the-use-of-digital-technology-in-the-nhs-web-2.pdf>
14. ^ <https://www.gov.uk/government/news/more-than-10-million-people-now-using-the-nhs-app>
15. ^ <https://academic.oup.com/jpubhealth/article/28/4/370/1622725?login=true>
16. ^ https://www.macmillan.org.uk/documents/aboutus/health_professionals/earlydiagnosis/aceprogramme/thedanishthreeleggedstrategy.pdf
17. ^ <https://www.pwc.com/gx/en/industries/healthcare/publications/ai-robotics-new-health/transforming-healthcare.html>
18. ^ <https://www.nhsx.nhs.uk/ai-lab/ai-lab-programmes/the-national-strategy-for-ai-in-health->

and-social-care/

19. ^ <https://www.telegraph.co.uk/news/2021/08/10/gps-suffer-increasing-abuse-patients-struggling-access-care/>
 20. ^ <https://commonslibrary.parliament.uk/the-health-and-social-care-workforce-gap/>
 21. ^ <https://www.health.org.uk/sites/default/files/2019-10/20191024%20-%20Long%20read%20-%20International%20comparisons%20of%20capital%20in%20health%20>
 22. ^ <https://www.kingsfund.org.uk/blog/2021/01/nhs-estate-backlog-grows-again>
 23. ^ <https://www.health.org.uk/sites/default/files/2019-10/20191024%20-%20Long%20read%20-%20International%20comparisons%20of%20capital%20in%20health%20>
 24. ^ <https://www.bbc.co.uk/news/health-50290033>
 25. ^ <https://www.bbc.co.uk/news/health-42572110>
 26. ^ <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/articles/coronaviruscovid19relateddeathsbydisabilitystatusenglandandwales/24januaryto20november2020>
 27. ^ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/908434/Disparities_in_the_risk_and_outcomes_of_COVID_August_2020_update.pdf
 28. ^ https://datadictionary.nhs.uk/nhs_business_definitions/long_term_physical_health_condition.html#:~:text=A%20Long%20Term%20Physical%20Health%20Condition%20
 29. ^ <https://www.longtermplan.nhs.uk/online-version/chapter-2-more-nhs-action-on-prevention-and-health-inequalities/obesity/>
 30. ^ <https://institute.global/policy/role-digital-technology-combating-chronic-disease>
 31. ^ <https://drwf.org.uk/news-and-events/news/new-report-reveals-nhs-bill-treating-diabetes-has-doubled-over-last-decade#:~:text=The%20recently%20published%20NHS%20Digital%20report%20calculated%20the,doubled%20>
 32. ^ <https://www.longtermplan.nhs.uk/wp-content/uploads/2019/07/nhs-mental-health-implementation-plan-2019-20-2023-24.pdf>
 33. ^ <https://www.theguardian.com/society/2020/oct/07/one-in-four-waiting-three-months-or-more-for-mental-health-help>
 34. ^ <https://www.kingsfund.org.uk/sites/default/files/2021-03/nhss-role-tackling-poverty.pdf>
-

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35. ^ <https://www.longtermplan.nhs.uk/>
 36. ^ <https://store.globaldata.com/report/gdhc-tr-s024--smart-hospitals-thematic-research/>
 37. ^ <https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/finding-the-future-of-care-provision-the-role-of-smart-hospitals>
 38. ^ <https://www.gov.uk/government/news/pm-confirms-37-billion-for-40-hospitals-in-biggest-hospital-building-programme-in-a-generation>
 39. ^ <https://www.genome.gov/about-genomics/fact-sheets/Sequencing-Human-Genome-cost>
 40. ^ <https://www.kantar.com/uki/inspiration/technology/the-adoption-of-wearable-tech-in-the-uk-and-beyond>
 41. ^ <https://institute.global/policy/beyond-human-genome-what-multi-omics>
 42. ^ <https://institute.global/policy/banking-bio>
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