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Digital transformation in the NHS

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Summary

Successive Governments have recognised the importance of moving the NHS onto a digital footing. "Digital transformation" encompasses "digitising" services and processes that have traditionally been delivered physically, and greater use of innovative approaches to care that are enabled by advances in technology. Digital transformation is vital for the long-term sustainability of the health service: the Department of Health and Social Care (the Department) and NHS England believe that a shift to digital channels (such as the NHS App) is necessary to delivering priorities such as reducing care backlogs and improving access to primary care. Digital can also deliver improvements in care to patients, ranging from increased convenience to access to cutting-edge treatments and diagnostics.

Past attempts at digital transformation have been frustrated by a number of factors. These include the preponderance of old, out-of-date "legacy" IT systems and hardware that cannot handle the demands of a modern digital health service. Parts of the health service still lack even the most basic, functioning IT equipment. The Government recognises that "levelling up" NHS organisations' digital capacity to a minimum standard is necessary if digital transformation is to proceed across the board. There is reason to be optimistic about the Government's approach, but it will need to address the mistakes of past attempts if it is going to succeed.

Digital transformation is not just about new technology. Equally important is the role of the workforce, from leaders to clinicians and frontline staff. Attracting enough skilled digital specialists to the healthcare workforce has long been a challenge, as it is across the civil service: digital specialists can often command better remuneration in the private sector. We recommend that the Government allow NHS England to move away from Agenda for Change pay scales when recruiting Data, Digital and Technology (DDaT) specialists to ensure it can recruit and retain the people that it needs.

Without wider staff engagement, digital transformation risks being perceived as an unwelcome, time-consuming imposition on an already over-stretched workforce. Coproducing digital initiatives with staff—including, but not limited to clinicians—is essential to ensure that these offer improvements to existing working practices and problems. The Government must ensure that those working in the NHS have the time and headspace to engage with digital transformation. The Government must also address the long-recognised digital skills gaps in the NHS and social care workforces. We recommend that the Department of Health and Social Care work with NHS England and Skills for Care to design training in which digital skills are embedded throughout.

Digital healthcare accelerated during Covid-19. For many patients this worked well, but not for everyone. The Government has a role in addressing the reasons why people might find themselves excluded from, or chose to opt out of digital services: these include problems around access to technology, digital skills and confidence, and motivation to use a digital service. People who are "digitally excluded" from health services are also likely to experience digitally exclusion more widely, making this a much broader problem than the Department can address alone. A cross-government approach will be crucial to success.

Other challenges around exclusion or opting out require a more specific response. The Department will need to clearly set out the benefits of using technology, as well as addressing risks and patient concerns. This is important in encouraging people to use services such as the NHS App, which the Department and NHS England intend to develop as "front door" to NHS services that can alleviate pressure in the wider system. Its success in achieving this will depend on whether it can present a compelling case for using the App, such as when it was used to host the Covid pass in 2021.

More widely, health apps offer an accessible entry point into digital services—but it can be almost impossible for patients to identify quality apps from ones that present risks in terms of efficacy or security. The Department and NHS England should introduce an NHS accreditation scheme for apps, which should be used in their wider communications addressing the risks, and benefits, associated with digital healthcare.

As the Government seeks to tackle digital exclusion, it should not forget that there will always be people who need or prefer non-digital channels. The NHS is a universal service. The Government must ensure that it maintains twin-track digital and non-digital services to prevent people from missing out on healthcare that they are entitled to.

1 Introduction

1. The Department of Health and Social Care (the Department) has identified digital transformation of the health service as a "top priority" for itself and NHS England.[1] In the Department's *A plan for digital health and social care* policy paper (2022), the former Secretary of State for Health and Social Care, the Rt Hon Sajid Javid MP, explained that:

> The long-term sustainability of health and social care is dependent on having the right digital foundations in place […] The aim is something that we can all get behind: a health and social care system that will be much faster and more effective, and deliver more personalised care.[2]

2. Digital transformation encompasses both "digitising" services and processes that have traditionally been delivered physically or on paper (such as offering remote appointments and keeping electronic patient records), and greater reliance on more innovative approaches to care that are enabled by advances in technology. This could include using connected computer systems to share information about patients and the care they have received throughout their lives; apps that could give personalised health support and allow patients to receive care wherever they are, and technology and data collection that supports improvements in individual and population-level patient care.

3. The Department says that by "taking the right national and local decisions on digital now" it will be able to deliver on four goals of reform, up to 2025 and beyond. These are intended to ensure that the health service is equipped to:

a) prevent people's health and social care needs from escalating;

b) personalise health and social care and reduce health disparities;

c) improve the experience and impact of people providing services; and

d) transform NHS performance.[3]

4. Ambitions to digitally transform the NHS are not new. The Department acknowledges that there have been "many attempts to digitally transform the health and social care sector over the last 20 years". It claims that these—combined with the sector's "extraordinary deployment of digital technologies during the pandemic"—have provided it with "a wealth of learning".[4] In a report published in 2020, the National Audit Office (NAO) evaluated previous attempts, concluding that they had been "expensive and largely unsuccessful" and pointing out that key targets (such as a "paperless" NHS by 2020) had been missed.

1 Following the merger of NHS Digital and NHS England on 1 February 2023, NHS England is responsible for designing and operating national data infrastructure and digital systems.
2 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022
3 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022
4 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022

According to the NAO, digital transformation of the NHS is challenging because of factors including:[5]

- A lack of infrastructure with appropriate digital capability ("legacy" systems). The NAO says that this is "a major constraint to improving and modernising government services".[6]
- A lack of interoperability, meaning that different systems for storing data cannot "speak to" each other. Data that is collected is often not readily available or amendable outside of the setting that collected it, making delivering joined-up care challenging.[7]
- A lack of digital leadership and specialist digital skills, and a lack of digital skills in the wider workforce.
- The risk of excluding from care patients who cannot or prefer not to use digital services.

5. The Department says that "strong digital foundations" will be required to achieve its goals. The *Plan for digital* contains a roadmap that should support NHS organisations to implement foundational "core digital capabilities and skills that underpin safe and effective care", as well as encouraging innovation and "continuing on that upward digital trajectory". Key priorities include:

a) Constituent organisations of Integrated Care Systems (ICSs) should have core digital capabilities in place, including electronic records, resilience to cyber attacks and fast connectivity.

b) Increasing availability, usage of and access to digital care among patients, including enhancing the functions of the NHS App (see Chapter 2).

c) All NHS trusts should have an Electronic Patient Record (EPR) by March 2025 (with an interim target of 90% by December 2023). GP surgeries should work towards ensuring that existing EPRs conform to data standards to support "lifetime joined-up" patient records (see Chapter 3).

d) Developing a national workforce strategy to upskill current NHS staff, and growing the NHS's specialist Digital, Data and Technology (DDaT) workforce (see Chapter 4).

e) Working across Government to lower barriers to digital uptake, including for those most at risk of exclusion (see Chapter 5).[8]

6. Digital transformation is taking place alongside significant change within and competing pressures on the NHS. Pressures on the workforce, the need to reduce care backlogs, and substantial organisational changes such as embedding the introduction of ICSs could all contribute to "crowding out" digital transformation as a priority. Simon

5 National Audit Office, Digital transformation in the NHS, 15 May 2020
6 National Audit Office, Digital transformation in Government: addressing the barriers to efficiency, 10 March 2023. Legacy systems are systems that are operationally embedded, but which have been superseded by more effective technologies or changed business needs.
7 National Audit Office, Digital transformation in the NHS, 15 May 2020
8 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022

Bolton, the former Chief Executive of NHS Digital, told us that organisational changes such as the February 2023 merger between NHS England and NHS Digital (and Health Education England) were intended to help ensure that digital transformation is prioritised and to "create some coherent leadership around technology for the whole of the NHS".[9] In our report on Integrated Care Systems we said that the Department and NHS England will need to be "constantly mindful of how immediate pressures might crowd out longer-term work" as they move towards establishing ICSs.[10] We believe that the same is true of digital transformation.

7. In February 2023 our Expert Panel published its report evaluating the Government's commitments on the digitisation of the NHS.[11] It considered commitments in four areas, including upskilling the workforce, improving the health of the population and the cost and efficiency of care. It concluded that the Government's overall progress was "inadequate" and said:

> Although we recognise the significant progress made in the area of digitisation in the health and care system, we conclude that some key commitments have not been met or are not on track to be met. Much of the evidence we heard indicated that progress towards national standards and frameworks within the NHS is happening but is too slow overall. […] We commend the efforts of individual staff and providers but regret that they have not been able to achieve the digitisation that the system needs.[12]

Variation between organisations

8. There is variation in progress towards digital transformation in the NHS and its constituent organisations. NHS Digital told us that some areas of the NHS have been quicker to digitise than others. They described primary care, where almost all providers have electronic patient records, as a "flagship", while highlighting that only 77% of acute hospitals have the same system.[13]

9. Several witnesses highlighted foundational barriers to digital transformation that help to explain the extent of variation between different trusts. This includes "legacy" IT systems: hardware and software which may not provide the necessary infrastructure to support a range of digital technology.[14] Liquidlogic, a software company, explained:

> Many NHS Trusts are still kitted out with old, poor-quality PCs and laptops. They run old versions of Microsoft Windows. It can take over 15 minutes

9 Q67
10 Health and Social Care Committee, Seventh Report of Session 2022-3, "Integrated Care Systems: autonomy and accountability", HC 587
11 The Expert Panel is a group of independent health policy experts appointed by the Committee. At the request of the Committee, the Expert Panel examines the Department's progress on meeting key commitments in specific policy areas. The Committee published the Expert Panel's report on Evaluation of Government commitments made on digitisation of the NHS in February 2023
12 Health and Social Care Committee, Fourth Special Report of Session 2022-23, Evaluation of Government commitments made on digitisation of the NHS, HC 780
13 NHS Digital (DTN0061)
14 See for example: Liquidlogic (DTN0001), The King's Fund (DTN0020), Royal College of Physicians (DTN0036), Nuffield Trust (DTN0051), Cisco (DTN0064)

> just for a PC to turn on, before people can start logging-on to their clinical system. Wi-Fi provision is often inadequate. These problems need fixing alongside IT system procurements.[15]

NHS Providers, the membership organisation for NHS hospital, mental health, community and ambulance services, suggested that this problem has resulted in part from a lack of consistency and focus in the health service's approach to digital transformation, and a lack of emphasis on the need for basic infrastructure. It said:

> Mixed messaging and long shopping-list asks from national bodies […] distracts from the foundational focus on fixing basic infrastructure that is needed.[16]

10. One of the aims of the *Plan for digital* is to "level up" this progress, supporting all NHS trusts to meet "a minimum level of digital maturity" by 2025.[17] This is set out in the *What good looks like* framework and is focused on implementing electronic patient records in trusts.[18] NHS England re-iterated that achieving a core level of digital maturity across constituent organisations should be a priority for ICSs in its 2022/3 Priorities and operational planning guidance.[19] It has allocated approximately £2 billion multi-year funding to ICSs to support trusts most "in need" (i.e. those that do not currently have electronic records).[20]

11. This is a change of approach to funding: previously, the *Global digital exemplar* programme directed funding towards the most digitally advanced trusts, with the aim of encouraging them to innovate further and spread good practice.[21] The NAO commented that while this approach had worked well for a small number of trusts, it was "less clear" whether good practices would spread to other trusts beyond those prioritised for funding.[22] The Nuffield Trust, a research organisation, commented that although this change of approach on initial funding was helpful, "long-term, sustainable investment is required for organisations to maintain this progress and react to the latest digital advancements".[23]

12. **Successive Governments have attempted digital transformation of the NHS. Progress has been slow and uneven, and there is now substantial variation between organisations. This attempt has the potential to be different, with clear intentions and funding to address factors that have frustrated progress in the past. These include the preponderance of "legacy" IT in the NHS, the skills of the workforce, and the challenges of building an inclusive digital health service. The Government will only succeed this time if it can respond robustly to all of these challenges.**

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15 Liquidlogic (DTN0001)
16 NHS Providers (DTN0009)
17 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022
18 NHS England, "What good looks like framework", accessed 17 May 2023
19 NHS England, 2022/23 Priorities and operational planning guidance, 22 February 2022
20 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022
21 NHS England, "Global Digital Exemplars", access 17 May 2023
22 National Audit Office, Digital transformation in the NHS, 15 May 2020
23 Nuffield Trust (DTN0051)

2 Innovation in digital healthcare

13. Throughout our inquiry, we heard examples of innovative digital health services being developed and deployed across NHS settings for a range of purposes. We also visited San Francisco in February 2023, where we heard how companies such as Google, Apple and Nike are working with organisations including the NHS to drive forward innovative digital healthcare, and saw how digital patient records are used in US hospitals.

Box 1: Examples of digital health initiatives

Smartphones, wearables and apps. This includes products such as activity trackers (e.g. FitBit), smart watches (e.g. Apple Watch), or connected patches (such as glucose monitors or heart rate sensors). They are typically worn for a long time and gather large amounts of data from the wearer on specific biometrics or behaviours. App stores already feature thousands of health and wellbeing apps, encompassing everything from diet diaries and mindfulness guidance to period trackers and musculoskeletal rehabilitation support.

Genomic sequencing. The NHS is aiming to be the "first national health care system to offer whole genome sequencing as part of routine care", via the Genomic Medicine Service. It says that this will enable quicker diagnosis and prescription of appropriate drugs, meaning that the number of people surviving cancer will go up.

At home or portable diagnostics can range from common initiatives, such as remote appointments and connected devices such as blood pressure monitors, to hospital-level diagnostics in the home or community. These include portable x-ray machines, ultrasound equipment and blood-testing kits.

Digital therapeutics: Digital therapeutics are evidence-based health or social care interventions delivered either entirely or mostly through a device. Computerised Cognitive Behavioural Therapy has been used for a relatively long time in the NHS, but has been seen as somewhat ineffective. New automated digital therapies are more promising: for example, Sleepio, a personalised programme to address insomnia, has been delivering positive results in randomised controlled trials.

Source: https://www.kingsfund.org.uk/publications/digital-revolution

14. Witnesses told us that the pace of digital transformation in the NHS had accelerated during the Covid-19 pandemic. The King's Fund said that prior to the pandemic, the health service had a "poor track record in adopting digital technologies at scale". In response to the pandemic, however, the health sector "rapidly implemented new tools, many technology-based", allowing care to be delivered when physical contact was not possible.[24] NHS Confederation further explained:

> The COVID-19 pandemic has highlighted the many benefits of rapidly developing and utilising digital systems and sharing data, including creating more flexible services, capacity and widening access. New models of collaboration and pooling of information have been critical to facilitate the uptake of these innovations, particularly from diagnostic, prevention, and treatment perspectives.[25]

24 The King's Fund (DTN0020)
25 NHS Confederation (DTN0021)

15. Evidence from the Wellcome/EPSRC Centre for Interventional and Surgical Sciences at University College London commented on the impact of this expansion of digital services on the service that patients receive:

> The COVID-19 pandemic has resulted in a paradigm shift on multiple aspects of healthcare provision and accelerated the introduction of digital platforms (and pathways) within the NHS. Although virtual medicine will never replace direct patient contact, the widespread use of these platforms during the pandemic have made parts of the NHS more "user-friendly" (albeit paradoxically) and have made the public much more aware of the benefits of digital approaches within the NHS.[26]

16. The King's Fund notes that digital innovation in the NHS tends to lean more towards "digitising" than "transformation", despite the recent adoption of new technologies in some areas: many tools "[replicate] physical approaches and processes rather than taking advantage of what makes digital different". This might include, for example, the shift towards fewer in person GP appointments, with appointments instead offered via phone or video. The King's Fund concluded:

> Few [new technologies] are systematically deployed in the health and care system and none have reached their full potential. Each could represent an opportunity to achieve better outcomes or more efficient care and improve patient experience.[27]

17. We did, however, hear about more transformative digital technology. For example, the Department told us about the NHS AI Lab, which is supporting research and innovation into new technologies that could substantially affect the way that the health service carries out imaging, leading to greater efficiency and effectiveness.[28] Given the variation in trusts' digital maturity, it is unsurprising that there is also a wide variation in the availability of digital services. Trusts that are less digitally mature are likely to focus on meeting foundational milestones, while those that are further ahead may have more space to innovate. Pritesh Mistry, Digital Technologies Fellow at the King's Fund, summarised:

> Organisational readiness [for digital working] across the NHS is variable. That impacts the scalability of technology and whether it can spread […] the national agendas have tended to focus on the installation of technology. If you are a highly digitally mature and capable organisation, you will meet that milestone much more easily and quickly than a less digitally mature organisation.[29]

26 Wellcome/EPSRC Centre for Interventional and Surgical Sciences (WEISS) (DTN0034)
27 The King's Fund, "The digital revolution: eight technologies that will change health and care", accessed 17 May 2023
28 Department of Health and Social Care (DTN0029)
29 Q19

The NHS App

18. The NHS App provides people with a way of accessing NHS services, information and support via their smartphone. The *NHS Long term plan* says that the App will "provide digital services and tools to give people more control over their own health and the care they receive from the NHS".[30] As part of this, the App will provide:

> […] a new digital 'front door' to give people secure digital access to their own medical records; find trusted information about their health online; allow patients to conveniently book appointments and view test results online. In time it will also provide medical advice and consultations securely.[31]

19. The *Plan for digital* says that the NHS App will be "at the heart of" digital transformation and provides a "roadmap" for its ongoing development and improvements to functionality up to 2025 (see Box 2, below). The central outcome measure is numbers of users of the App. The Department says:

> The NHS App and NHS.uk website already offer millions of people in England a fast and convenient way to interact with the NHS–showing their COVID status, ordering repeat prescriptions and accessing their health records.
>
> Our aim is that, by 2024, 75% of adults will have registered for the NHS App with 68% (over 30 million people) having done so by March 2023.[32]

30 NHS England, The NHS Long term plan, January 2019
31 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022
32 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022

Box 2: The Department's roadmap for the NHS App

By the end of 2022:

- Users able to receive more notifications and messages via the NHS App, including secure messages sent by GPs
- Improved user design
- Booking and managing Covid-19 vaccinations via the NHS app

By March 2023:

- Users can receive notifications and messages relating to secondary care appointments if their hospital is participating
- Blood pressure monitoring via the NHS app

By March 2024:

- Receiving notifications regarding health checks and screening appointments through the NHS App
- Register for the NHS App even without registering with a GP
- Use the NHS App for video consultations

From March 2025:

- Access NHS 111 through the NHS App

Source: Department of Health and Social Care, A plan for digital health and social care.

20. Stakeholders told us that the NHS App could help users access healthcare and information and to better manage their health, offering a "seamless entry point" to the NHS.[33] For example:

- Age UK told us that GP practices currently have a "variety of approaches" to digital booking, prescriptions and consulting. The NHS App "has the potential to iron out some of those inconsistencies in approach and ensure that services are more universally available". They cautioned, however, that "care should be taken […] to ensure that access to healthcare advice is not dependent on access to a smartphone", pointing out that a third of people over 65 do not use smartphones.[34]
- Microsoft said that the App could enable "the integration of a package of patient-centric applications that will enable patients to better manage their own health and care". It suggested this could include "digital triage [and] behavioural interventions to support better health and wellbeing".[35] The Health Tech Alliance

33 The British Medical Association (DTN0032)
34 Age UK (DTN0056)
35 Microsoft Ltd (DTN0057)

agreed that the App could usefully host "health prevention advice based on medical history (AI predictive analytics), patient wellness and wellbeing support".[36]

- The Association for the British Pharmaceutical Industry said that given its broad user base, the NHS App is "an ideal platform for patients to learn more about clinical research, its benefits to participants and the NHS, and how they could get involved in research".[37]
- Healthwatch England said that allowing access to medical records via the App would "[empower] patients to understand their own health, keep track of the progress of any referrals or procedures, and correct any inaccuracies". Healthwatch linked transparency in this area to the NHS's wider use of patient data for research and development purposes, saying that giving patients "sight of and control over their own health records" is "essential" to "future developments in the NHS's data strategy".[38]

21. There was a spike in NHS App downloads during the pandemic, when the App hosted the Covid-19 pass from May 2021. Using the App (and nhs.uk) to host the Covid-19 pass provided a clear motivation for people to download it. By June 2021 six million people had downloaded the App, and by October 2022 it had been downloaded over 30 million times.[39]

22. The Department recognises that to sustain progress on the App and achieve its longer-term ambitions, it will need to demonstrate the App's continuing value to patients. Lord Markham CBE, Parliamentary Under-Secretary of State at the Department of Health and Social Care, told us that the success of the App in future will depend on whether patients perceive it as something that can offer "basic improvements" or greater convenience to their lives. Illustratively, he said that the improved functionality of the App could mean:

> I don't have to hang on the phone at 8 in the morning to try to get an appointment for myself or my child. Sometimes, yes, we can get excited by the whizzy stuff […] but it is the basic functionality of being able to make an appointment or to be told that my prescription is now ready for me in the pharmacy and that I can pick it up locally. Those basic utilities will overcome a lot of the barriers [to people using the App].[40]

23. In May 2023, the Department announced further plans for the App. These included:

a) An extension of patient choice in booking hospital care. Patients will be able to decide where they receive care, viewing information about providers (e.g. waiting time and quality) to help them chose and booking via the App or NHS

36 Health Tech Alliance (DTN0063)
37 Association of the British Pharmaceutical Industry (DTN0069)
38 Healthwatch England (DTN0066)
39 NHS Digital, "Milestone hit with over 30 million NHS App sign-ups and almost 450k organ donation decisions", September 2022. Accessed 13 June 2023
40 Q157

website. The Department says that this "will expand the way that the NHS App and website are used to improve how patients choose to receive their care", which it hoped would help to cut waiting lists.[41]

b) The Department and NHS England's *Delivery plan for recovering access to primary care*, which aims to "tackle the 8am rush and make it easier and quicker for patients to get the help they need from primary care". It envisages the App playing a substantial role through increased usage for services such as bookings and prescription requests. The *Delivery plan* contains an additional ambition for patients at 90% of GP practices to be able to access medical records (including results), messages, appointments and repeat prescriptions via the NHS App by March 2024.[42]

Commenting on the plans to extend patient choice, the Secretary of State for Health and Social Care, the Rt Hon Steve Barclay MP said that this would continue to demonstrate the value of the App. In turn, increased usage could help to relieve pressure on services:

> Millions of people downloaded the NHS App during the pandemic. Increasing use of this fantastic resource will enable them to exercise more choice and get access to essential information about the options for their care including journey time, length of wait and quality of service–all at the swipe of a smartphone screen.
>
> This will not only give patients more control over their own care but could also wipe months off their wait by finding a hospital or clinic with a shorter waiting list.[43]

Both sets of changes will be accompanied by communications campaigns on the benefits of using the new services.

24. Written evidence suggested that at the moment, the benefits of using the App over non-digital services are not clear to many existing users. Witnesses agreed that the current integration of the App with NHS services is limited, and suggested that this limits usage. For example, the LIFT Council pointed out that just 8% of GP appointments are booked via the App, while Pharmacy2u noted a lack of integration with the pharmacy sector that inhibited the App's use for managing prescriptions.[44] While there is plenty that the App could do in future in supporting a wider shift towards digital channels, its current functionality is limited and the benefits of using it are not always clear.

41 DHSC, The Rt Hon Steve Barclay MP and the Rt Hon Rishi Sunak MP, "News story: More choice to help cut hospital waiting lists", 25 May 2023

42 Department of Health and Social Care/NHS England, Delivery plan for recovering access to primary care, May 2023

43 DHSC, The Rt Hon Steve Barclay MP and the Rt Hon Rishi Sunak MP, "News story: More choice to help cut hospital waiting lists", 25 May 2023

44 The LIFT Council (DTN0040), Pharmacy2u (DTN0038). See also: PAGB (DTN0007), Professor Helen Atherton (DTN0014), Diabetes UK (DTN0027)

Future uses of the App

25. Several witnesses highlighted potential future features for the App that go beyond those in NHS England's initial roadmap: for example, as a source of personalised health or self-care advice, drawing on data from the user's smartphone. Dr Tim Ferris, National Director for Transformation at NHS England, explained that some limitations on the App's functionality are "primarily […] around the use of the native architecture of whatever device you are on to provide insight based on the data that it has access to".[45] The current NHS App is a "portal": when a user opens the App they are directed to nhs.uk, where they log in to the NHS website using their NHS login. As the App is not integrated with the phone's native architecture, its capacity to draw on other data collected by the phone to provide personalised information and services is restricted. This also means that features that could make the App more user-friendly (such as automatic integration with a phone calendar) are not available.[46]

26. NHS England plans to replace the existing App with a new "native" app—one that is present on the phone and integrated with the phone's architecture, rather than being accessed via the internet—that will better support additional services and functionality.[47] In the longer term moving to a native app will help to enable the App's capacity to make use of the data collected by the phone to provide personalised health advice and information, which the King's Fund says would "improve prevention, treatment and help people make sustained behaviour change".[48] Patients will need to download this App anew, even if they already have the older, portal version.

27. **The pandemic provided a unique incentive to download the NHS App, because it hosted the Covid-19 pass. The new version of the App should bring benefits in terms of functionality, integration and personalisation, but it will require people to download it anew. The Department and NHS England announced improvements to the range of services available via the App in May 2023, but they need to ensure that people use them. The Department and NHS England therefore need to demonstrate the continued value of the App, particularly to existing users, otherwise they may increase functionality while decreasing the number of sign-ups.**

28. ***We recommend that the Department and NHS England set out in response to this report:***

(a) ***A timetable for introducing the new, "native" NHS App, and***

(b) ***Their plan for communicating the benefits and features offered by the new App to users of the current "portal" version.***

(c) ***Further detail of the proposed communications campaign on changes to the App announced in May 2023.***

45 Q120 (Dr Tim Ferris)
46 Q120 (Dr Tim Ferris)
47 Q120 (Lord Markham)
48 The King's Fund (DTN0020)

3 Systems and interoperability

29. Moving towards a "paperless" NHS is an important foundational step towards wider digital transformation. The NAO says that by 1998 the NHS had "identified the importance of seamless sharing of data between IT systems and the use of national standards to achieve this": i.e. the importance of interoperability.[49] Between 2002 and 2011 the Department paid four suppliers to provide electronic records via the *National programme for IT*, but the programme was wound down after "escalating costs and delays".[50] In 2015, the then-Secretary of State for Health, Rt Hon Jeremy Hunt MP, outlined a timetable, initially set out in the 2014 *Five year forward view*, which envisaged fully digitised, shared health and care records by 2020:

> By 2016 all patients should be able to access their own GP electronic record online in full, seeing not just a summary of their allergies and medication but blood test results, appointment records and medical histories. By 2018 this record will include information from all their health and care interactions.
>
> […] In addition, by the end of 2018 all doctors and nurses will be able to access the most up-to-date lifesaving information across GP surgeries, ambulance services and A&E departments, no matter where a patient is in England. By 2020 this will include the social care system as well.[51]

30. The "paperless by 2020" target was revised in 2016 when a Government-commissioned review found that it was unrealistic and recommended 2023 as a realistic timeframe.[52] Subsequently, the NHS *Long term plan* (2019) said that all providers would be expected to advance to a core level of digitisation, including electronic health records, by 2024. Specific objectives set out in the *Plan for digital* included:[53]

- By March 2025, all constituent organisations of an ICS should have met a minimum level of digital maturity. The key milestones are:
  - 90% of NHS trusts to have electronic health records by December 2023, and 100% by March 2025
  - 80% of CQC-registered adult social care providers to have digital care records by March 2024
- All constituent organisations of an ICS should be "connected to an integrated life-long health and care record by 2024, enabled by core national capabilities, local health records and shared care records, giving individuals, their approved caregivers and their care team the ability to view and contribute to the record".

49 National Audit Office, Digital transformation in the NHS, 15 May 2020

50 Parliamentary Office of Science and Technology, "Electronic health records", accessed 17 May 2023

51 National Information Board and National Data Guardian, "Health secretary outlines vision for use of technology across the NHS", September 2015, accessed 17 May 2023; NHS England, "NHS Five Year Forward View (2014)", accessed 17 May 2023

52 Department of Health and Social Care, Making IT work: harnessing the power of health information technology to improve care in England, 7 September 2016

53 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022

Digitising health records for interoperability

31. Every interaction that a person has with the health service creates data. This can range from communication preferences, to clinical notes, observations and details of treatment. A lack of digital connectivity in the NHS means, however, that this data often sits in silos where it cannot be viewed or added to by clinicians in other organisations (or even other parts of the same organisation)—if it is collected digitally at all.

32. This can lead to a lack of joined-up care, which can be frustrating or even dangerous for patients. Evidence from BCS, the Chartered Institute for IT, explained that poor communication between and within different systems means that patients "sometimes receive suboptimal care".[54] Age UK told us that many people that they support would "benefit immensely from a more seamless transfer of information between the numerous professionals that they are likely to encounter and better scheduling and coordination of the services they receive", especially as relying on the patient to accurately and repeatedly give details of medication or care plans is not always appropriate.[55] Splunk, a software company, said there were wider benefits to moving away from a siloed approach that went beyond the service offered to individual patients: this would mean the NHS "can provide more comprehensive and sustainable" services, making "better use of untapped healthcare data to improve prediction, prevention, and automation".[56]

33. Electronic records are not the same as shared records, and we heard that having electronic patient records in place does not automatically mean that patient data can be edited and viewed outside of the organisation that initially collected it. To enable joined up care, electronic records must also be interoperable. The National Pensioner's Convention explained that "if all records could be digitised tomorrow, this would not necessarily mean that all records would be interoperable" and that "to achieve full interoperability across primary, secondary, and social care a common language […] must be agreed upon".[57] The *What good looks like* framework makes clear that ICSs are expected to work towards records that are interoperable by ensuring that their shared care records conform to the Professional Records and Standards Body (PRSB) core information standard.[58] This "defines a set of information that can potentially be shared between systems in different sites and settings, among professionals and people using services".[59] Records that do not meet the standard are unlikely to be interoperable.

34. Cisco, a software developer, suggested that adherence to standards that would enable interoperability remained "fragmented" and "frustrated by legacy [electronic records] and continued reliance on paper and simple electronic forms". This means that a "significant portion of the health service does not have access to data needed to manage patient treatment pathways".[60] This is important given that the Department's key milestones and funding are directed towards helping trusts develop electronic records only—which are not necessarily interoperable. Boots, the pharmacy, told us that wider progress towards

54 BCS, The Chartered Institute for IT (DTN0006)
55 Age UK (DTN0056)
56 Splunk (DTN0017)
57 National Pensioner's Convention (DTN0017)
58 NHS England, "What good looks like framework", accessed 17 May 2023
59 PRSB, "Core information standard", accessed 17 May 2023
60 Cisco (DTN0064)

implementing interoperable shared care records that cover interactions with the health service across an ICS has been "slow", and that there is underlying "significant variation in data governance and technical system solutions which will slow future progress".[61]

35. Some sectors reported specific concerns about the extent to which the measures contained in the *Plan for digital* would contribute to achieving a flow of information between different care settings in the longer term. The Highland Marketing Advisory Board cautioned that an over-emphasis on digitising care records in hospitals could detract from finding suitable digital solutions for other organisations that form part of an ICS.[62] The LIFT council also flagged the emphasis on hospital settings, and suggested that a wider approach encompassing mental health services and community care would be preferable.[63] PAGB, a trade association, told us that the scope of the commitment to ensure access to shared care records for constituent organisations of an ICS was unclear: they, and organisations in the pharmacy sector called for clarity on whether providers would be able to view and amend records.[64]

36. The Hewitt Review of ICSs, published in April 2023, also recognised the importance of developing data sharing capacity across ICSs. It recommended:

> NHS England, DHSC and ICSs work together to develop a minimum data sharing standards framework to be adopted by all ICSs in order to improve interoperability and data sharing across organisational barriers, particularly focusing on GP practices, social care provision and [voluntary, community, faith and social enterprise organisations] providing health and care services (who will need additional support in this work).[65]

37. ***We support the Hewitt review's recommendation that the Department, NHS England and ICSs should work together to develop a standards framework to be adopted by all ICSs. This should improve interoperability and data sharing within and between systems. This should include working closely with sectors that could feed into shared records in the future, including pharmacy, mental health and community health, to ensure that what is put in place meets their needs.***

61 Boots UK (DTN0012)
62 Highland Marketing Board (DTN0024)
63 LIFT Council (DTN0040)
64 PAGB (DTN0007), Boots UK (DTN0012), The Company Chemists' Association (DTN0018), Community Pharmacy IT Group, Pharmaceutical Services Negotiating Services (PSNC), National Pharmacy Association (NPA), Royal Pharmaceutical Society (RPS), Company Chemists' Association (CCA), and Association of Independent Multiple Pharmacies (AIM) (DTN0023)
65 The Hewitt Review, 4 April 2023

4 Training and the role of the workforce

38. The Department recognises that it will need to improve digital skills in the health and social care workforce if digital transformation is to be a success. It says:

> To achieve digital transformation, we need to build general digital literacy, expert digital skills, and digital leadership in the health and social care workforce. This includes leaders across the sector.[66]

The NAO's 2020 report on digital transformation identified a shortage of key digital skills, and the lack of a comprehensive plan to address this, as one of the main barriers to digital transformation. It said that "specialist skills are in short supply" and reported that national bodies had not finalised plans to improve the wider workforce's digital skills.[67]

Digital, Data and Technology (DDaT) workforce

39. Several of the Department's aims on skills and the workforce focus on specialist Digital, Data and Technology (DDaT) staff. Commitments from the *Plan for digital* include:

i) Meeting demand for DDaT staff in 2030 through "recruitment, retention and growth" of the workforce via graduate recruitment, apprentices and experienced hires, creating posts for an additional 10,500 full time staff.

ii) Establishing new and continuing existing digital learning provision through the NHS Digital Academy, including the Digital Health Leadership Programme, Digital Futures Programme, Topol Fellowships in Digital Healthcare and Health Innovation Placements, from 2022.

iii) To "grow and nurture a pipeline of diverse future specialists and leaders" via graduate and apprentice schemes.[68]

40. Health Education England (which merged with NHS England in February 2023) recommended in a report published in May 2021 that the NHS will need to invest substantially in its digital workforce if it is to achieve its ambitions for digital transformation.[69] It set out the scale of investment and recruitment that it forecast would be required to meet projected demand for the health service only (not including social care) in 2030, at existing pay scales:

> The salary and employment on-costs for the workforce of 46,000 WTEs in 2020 is estimated to be around £2.05 billion. If this workforce is to increase to a projected size of 78,000 WTEs and its composition remains the same, the costs will be around £5.2 billion.[70]

66 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022
67 National Audit Office, Digital transformation in the NHS, 15 May 2020
68 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022
69 Health Education England was responsible for training NHS staff in England.
70 Health Education England, Data driven healthcare in 2030: Transformation requirements of the NHS Digital Technology and Health Informatics workforce, March 2021. This calculation is based on a mean salary pay point corresponding to the top of NHS Agenda for Change band 5 and the assumption that salaries will increase by 2.7 per cent per annum, and employment on-cost at 34.9 per cent (21 per cent for the NHS pension and 13.9 per cent national insurance contribution).

41. The Department says that its "short term" workforce plans, set out in the *Plan for digital*, will:

> Expand the supply of specialist digital skills in the workforce by attracting high-potential graduates, apprentices and trainees as well as developing existing and aspirant health and care staff, and digital, data and technology professionals.[71]

The Department says that its longer-term workforce plans will be set out in a workforce strategy which will provide "a framework for bridging the skills gap and making the NHS an attractive place to work".[72] This was initially due to be published in March 2023 but has subsequently been delayed. At the time of writing it had not been published.

42. Salaries for most NHS staff, including those in DDaT posts, are set under Agenda for Change. We heard that this makes recruiting specialist digital staff difficult because they can often earn substantially more, or receive other employment benefits, in the private sector.[73] NHS Confederation quoted an ICS manager who noted that recruiting for DDaT roles was "challenging" because "we can't compete with other sectors offering better packages and remuneration".[74] NHS Providers summarised:

> Digital transformation […] requires the recruitment of staff roles with digital skillsets, including product managers, delivery managers, user experience researchers and service designers. Many trusts find it difficult to compete with private sector employers who can offer candidates competitive salaries, clear career progression opportunities and digitally enabled work environments.[75]

43. Difficulties in recruiting for DDaT roles are not confined to NHS England, but exist across the civil service. In recognition of this difficulty, Departments are able to submit a business case to the Cabinet Office for approval to implement the "DDaT Pay Framework". The Pay Framework allows Departments "seeking to recruit and retain staff [to] hard to fill DDaT roles" to offer "capability based allowances" (bonuses) to candidates. DDaT Pay Framework business cases can be funded outside of the Department's headline pay remit "via [a] reduction of contingent labour use".[76]

44. We asked NHS Digital about the challenges of recruiting specialist digital staff under Agenda for Change pay scales. Simon Bolton, NHS Digital's former Chief Executive, told us that although "at the moment" the organisation had enough people with the right skills" to deliver what it was required to, there was a risk that this would not be the case in the future. He explained:

> [T]he technology market is incredibly difficult for skills. We have seen huge inflation in wages, particularly in the private sector, and we are competing in that space for talent. Of course, some people will join us because they believe in the purpose, but we cannot rely just on that.

71 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022
72 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022
73 NHS Providers (DTN0009), NHS Confederation (DTN0021)
74 NHS Confederation (DTN0021)
75 NHS Providers (DTN0009)
76 Central Digital and Date Office, Transforming for a digital future: 2002 to 2005 roadmap for digital and data, 9 June 2022

> Into the future, we will have to think very carefully about how we can attract the best digital talent into the NHS so that we are competitive, at least to some degree, with the external market; otherwise we will not be able to deliver the capabilities that we need without relying on third-party suppliers, which is not always the best model to operate.[77]

45. **A shortage of skilled digital professionals working in the NHS has been a barrier to digital transformation to date. Digital specialists can often command higher wages or better conditions in the private sector. This makes recruitment and retention to the NHS challenging, and leaves the health service reliant on third-party suppliers.**

46. ***To ensure that the NHS is able to recruit the best candidates and sustainably meet demand for DDaT specialists, now and in the future, we recommend that the Department apply to implement the DDaT Pay Framework for NHS England DDaT specialists, which would allow additional pay measures including bonuses/"capability based allowances" for staff.***

The wider NHS workforce

47. Focusing on growing and upskilling the DDaT workforce is necessary for digital transformation, but we heard repeatedly that the Department and NHS England must ensure that the wider workforce, including clinicians, also has the skills to use and engage with digital technology effectively.[78] This reflects the findings of the Watcher Review in 2016:[79]

> Getting [NHS IT] right requires a new approach, one that may appear paradoxical yet is ultimately obvious: digitising effectively is not simply about the technology, it is mostly about the people.

48. Spirit Health, a tech company, told us that "several generations of the NHS workforce were trained on analogue systems".[80] The Nuffield Trust explained that to address this, digital skills training needs to be incorporated in all of the training that the NHS provides, from training modules for administrative staff to its graduate schemes. Training should include not only how to use particular technologies or be attached to particular roles, but should also give staff the understanding and knowledge to incorporate and apply digital skills in their own roles.[81] This applies to non-clinical, non-DDaT roles: the Nuffield Trust gives the example of receptionists, who need to be able to negotiate with patients to find a balance between the patient's needs and preferences and the service capacity.

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77 Q76

78 Q6, Q10–12

79 Department of Health and Social Care, Making IT work: harnessing the power of health information technology to improve care in England, 7 September 2016

80 Spirit Health (DTN0045)

81 Nuffield Trust (DTN0051). See also Q48.

49. The *Plan for digital* notes that digital technology has the potential to "reduce pressure on our overstretched workforce, giving them more time for the treatment and caring that only people can do".[82] It does not contain any specific commitments to upskilling the wider workforce, beyond DDaT specialists. Witnesses broadly agreed that, in time, digital transformation could substantially reduce pressure on the wider workforce.[83] For example, NHS Confederation said that more effective digital infrastructure could help to:

> Recover services whilst making the best use of the workforce's time, […] free up resource and accrue savings to be invested elsewhere. This bolsters capacity enabling service delivery to provide more choice, bandwidth for coproduction, patient engagement, evaluation and monitoring all of which then leads back to improving services.

It continued, however:

> The NHS workforce is in crisis with 105,000 vacancies, and widespread burnout. Even with the ideal digital system plans there must be a shared understanding that the workforce is already running on empty. Digital systems have the power to transform working practices but not before time and capacity is first given to co-designing, training, embedding, learning and continuously re-visiting digital systems with staff and users. Without investing in our workforce both present and addressing future needs, even the best digital systems can only transform so much.[84]

50. ***Investment in the NHS's specialist digital workforce needs to be matched by investment in the wider workforce's forces digital skills. It is important that digital is understood as a thread that runs throughout healthcare, not as a specialist skill set that is only relevant to some staff and occupations. We recommend that when devising professional training, the Department work with NHS England to ensure that digital training is integrated throughout its wider learning programmes.***

Involving staff in digital transformation

51. Witnesses told us that it is important that digital transformation works with staff and patients, rather than being perceived as something "done to" or imposed on them.[85] We heard that previous attempts at digital transformation had failed in part because they did not adequately engage the workforce who would be using technology and lacked appropriate structures to enable participation and co-design of digital technologies. The Cystic Fibrosis Trust said:

> Efforts in the past to digitalise the NHS have lacked engagement with clinical staff and focused on technology and not changes in the way people work. Continuous engagement with staff throughout the digital implementation

82 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022

83 Highland Marketing Advisory Board (DTN0024), Care England (DTN0033), Spirit Health (DTN0045), eConsult Health Ltd (DTN0048)

84 NHS Confederation (DTN0021)

85 Q48-Q50, Health Tech Alliance (DTN0063), Liquidlogic (DTN0001), Thrive by Design (DTN0002), Cystic Fibrosis Trust (DTN0037)

> process is crucial to ensure the right areas are addressed, the appropriate possible problems are identified during the planning, and that staff are comfortable and equipped to use the new technology.[86]

52. Witnesses told us about some of the practical implications of failing to engage with an appropriately knowledgeable workforce. TPP, a software company, told us that "in many circumstances" not adequately involving staff in digital transformation had led to decisions being "made locally by people without the technical skills to appraise systems and without appropriate engagement from the hospital's clinical and administrative teams". This had led to "procurement of poor IT systems and sub-standard implementations". Without input from the staff who will use them, systems "simply do not deliver what the consultants, doctors, nurses, and admin teams need".[87] Several witnesses told us that this was a factor in slow progress towards digital transformation to date.[88] Dr Tim Ferris, National Director of Transformation for NHS England, told us that this reflected the experience of many in the healthcare sector. He noted that attempts to adopt technology more widely in healthcare had been "challenging for clinicians" because "it has forced quite a bit of bureaucratic overhead and process on to them". He continued, however:

> I see that trend as reversing. Technology, which has been the problem, is also the solution. Technology is becoming much more adaptive to the work flows of clinicians.[89]

53. Submissions emphasised that co-design and co-production of initiatives by staff and patients could help address this problem. For example, the Nuffield Trust told us that their research demonstrated the importance of co-design, and set out a number of features of successful programmes:

> At a national level, it is important to co-design programmes by bringing together stakeholders from across the NHS, industry and the patients and public, to identify challenges and how technology might help. This means understanding the particular pathway, co-designing the interventions and identifying any particular barriers. Time and resources must be built into programmes to do this effectively, as well as an ongoing process for generating insight and evidence on how the innovations are being used.[90]

54. While digital technologies have the potential to save staff time, many submissions highlighted the current difficulties staff face in engaging with the process of digital transformation because of other pressures on their time.[91] This reflects the conclusions of our 2022 report on *Workforce: training, recruitment and retention in health and social*

86 Cystic Fibrosis Trust (DTN0037)
87 TPP (DTN0049)
88 Health Tech Alliance (DTN0063), Liquidlogic (DTN0001), Thrive by Design (DTN0002), Cystic Fibrosis Trust (DTN0037), NHS Confederation (DTN0021)
89 Q81
90 Nuffield Trust (DTN0051). See also: Thrive by Design (DTN0002), NHS Confederation (DTN0021), Health Tech Alliance (DTN0063), Liquidlogic (DTN0001), Dr Kathrin Cresswell and Professor Robin Williams (DTN0031)
91 Q4–6, NHS Confederation (DTN0021), eConsult Health Ltd (DTN0048), The King's Fund (DTN0020), British Medical Association (DTN0032)

care, which found that the workforce frequently lacks time and bandwidth to engage with training.[92] The King's Fund recommended that addressing this is a matter of culture and expectations around the role of digital in NHS jobs. It said:

> To enable innovation, there needs to be a sustainable empowered workforce with the capacity to engage with the private sector and internally in the development and implementation of new technologies. This means prioritising innovation as a part of everyone's job and ensuring the capacity and skills exist for staff to engage in co-development, implementation and optimisation to reduce their frustrations and improve care services.[93]

55. **Without staff engagement in the entire process of introducing digital initiatives, digital transformation risks being perceived as an unwelcome, time-consuming imposition on an already over-stretched workforce. Co-designing digital initiatives with staff—including, but not limited to clinicians—is essential to ensure that these offer workable improvements to existing practices. The Department and NHS England must ensure that staff have the time and headspace to engage with this process.**

Social care staff

56. Our inquiry focused primarily on digital transformation in the health service, and did not explicitly ask for evidence on the social care sector. Nonetheless, the two sectors are clearly closely intertwined and we received some submissions on the challenges of digital transformation in the social care sector.[94] These highlighted many similar problems to those affecting the health service, including a lack of basic equipment and digital functionality and a skills gaps in the workforce. For example, Care England told us that:

> In terms of implementing digital technologies in health and care settings, the relative lack of digital skills among social care staff is a significant barrier. Research has shown that '45% of providers express concern that care staff [lack] digital skills,' and that '23% of care home staff cannot access the internet consistently at work'.[95]

57. The *Plan for digital* contains a number of commitments on social care. The Department has committed to providing £150 million worth of funding to "to support digital transformation in social care, including laying crucial cyber and connectivity foundations", noting that "this is the first time we have provided central investment on this scale for digitising social care".[96] It also contains commitments to "equip the adult social care workforce with the right skills" and "support to embed digital ways of working, and align with wider workforce ambitions".[97] The Department provided details to our Expert Panel on a number of initiatives for social care staff, centred around "a digital learning offer that includes accessible training and online resources over the next 3 years". It says that "social care staff will be supported via digital skills training such as the NHS Digital Academy", working in partnership with organisations including Skills for Care,

92 Health and Social Care Committee, Third Report of Session 2022–23 "Workforce: training, recruitment and retention in health and social care", HC-115

93 The King's Fund (DTN0020)

94 Care England (DTN0033), Nuffield Trust (DTN0051), Care Quality Commission (DTN0065), Q54, Q60

95 Care England (DTN0033)

96 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022

97 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022

which is responsible for workforce development in the social care sector.[98] In line with its overall rating of the Government's progress, our Expert Panel rated the Government's progress on commitments to digitally upskill health and social care staff as "inadequate".[99] It pointed to a particularly acute digital skills gap amongst social care staff and a "lack of analysis and planning that would be needed to achieve extensive change within the [social care] sector".[100]

58. **There is a digital skills gap in social care that, if unaddressed, will hinder the digital transformation of the health and social care sectors. As with training for staff in the health service, it is vital that digital skills are integrated throughout learning and development for social care staff, rather than being presented as specialist skills sets.**

98 Health and Social Care Committee, Fourth Special Report of Session 2022–23, Evaluation of Government commitments made on digitisation of the NHS, HC 780

99 See Chapter 1 and Health and Social Care Committee, Fourth Special Report of Session 2022–23, Evaluation of Government commitments made on digitisation of the NHS, HC 780

100 Health and Social Care Committee, Fourth Special Report of Session 2022–23, Evaluation of Government commitments made on digitisation of the NHS, HC 780

5 Digital exclusion

59. NHS Digital says that "for patients, digital health can mean better access to information and care, increased convenience, and more opportunities for greater control of their own health and shared care".[101] We heard about how digital transformation can improve the care that patients receive, leading to more comprehensive coverage, as well as offering innovative ways of treating and managing conditions. For example:

a) Digital initiatives are transforming services for some groups who require ongoing care. For example, the Cystic Fibrosis Trust told us that many more aspects of cystic fibrosis care had moved online during the pandemic, and that it was supporting "a number of research projects" that looked at whether digital technology could reduce the burden of care for people with cystic fibrosis.[102]

b) The Care Quality Commission said that extended remote access to services had proven particularly helpful for people with learning difficulties and their carers during the pandemic, since it removed the need to travel to appointments, and for cancer patients, who are often immunosuppressed.[103]

c) The Royal College of Midwives explained that the pandemic had forced it to experiment with new ways of delivering care, including virtual antenatal sessions which were "accessible and inclusive" and were able to be recorded so that women could access them at a time that was convenient.[104]

d) The Nuffield Trust drew our attention to evidence on the role of digital services in widening access to mental health treatments.[105]

60. Accessing digital services can be more challenging for some groups than for others, however. The Department says that there are three main barriers:

- Access: this includes people who cannot afford an appropriate digital device or mobile data, or who do not have WiFi or internet access.
- Skills and confidence: people who do not have sufficient digital skills, or are not sufficiently confident in their skills.
- Motivation: people who would prefer not to use digital services, which is often due to concerns about security and lack of trust in the efficacy or reliability of digital services. The Department recognises that some people "may always need or prefer" face-to-face routes.[106]

101 NHS Digital, "Digital inclusion for health and social care", accessed 19 May 2023
102 Cystic Fibrosis Trust (DTN0037)
103 Care Quality Commission (DTN0065)
104 Royal College of Midwives (DTN0005)
105 Nuffield Trust (DTN0051). See also Dr Frederick Konteh, Professor Russell Manion and Professor Rowena Jacob (DTN0022)
106 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022

Research commissioned by the Department showed that it is not usually the case that people only have one of these barriers to using digital healthcare. People who struggle tend to do so for a combination of reasons:

> [Factors including] Digital access (devices, data connectivity), accessibility, skills, confidence, motivation and availability of support all combine to shape how and if people use the internet, and the balance of benefits and harms they get from the digital world.[107]

61. There is a risk in pursuing digital transformation that people who are unable or unwilling to use digital services will find themselves excluded from services. The Department notes that the risk of exclusion is "particularly high among those who already face health inequalities and have difficulty accessing traditional health and care services".[108] This includes, for example, older people, disabled people, and people with English as a second language.[109] This means there is a risk that digital transformation could further entrench exclusion, making it even harder for those affected to access care. Diabetes UK explained:[110]

> Whether it's online video consultations, ordering repeat prescriptions via an app or the use of digital medical devices there is already significant risk that individuals without the access or skills to support their use of digital technology will get left behind. Worryingly, there is evidence that certain groups are more likely to be affected by digital exclusion, including older people and individuals living with a disability - meaning the trend towards digital approaches to healthcare may well exacerbate existing health inequalities.[111]

62. The Department says that mitigating exclusion is "one of 5 key priorities that NHSE has asked ICSs to address in its drive to reduce health inequalities".[112] It commits to:

- Initiatives including working with local authorities to "increase the availability of private, accessible community spaces for digital interactions, such as digital kiosks", using "community assets to engage and empower people to use digital technology for health".

- Working with Departments across Government to promote digital inclusion: notably the former department for Digital, Culture, Media and Sport, reflecting the King's Fund's comment that digital inclusion is not "the sole responsibility of the health service" and that taking a cross-government approach is more likely to deliver the required results.

- Working with NHS England produce a framework for NHS action on exclusion, and to develop further resources to support inclusion. This was due to be published in May 2023.[113]

107 Basis Research and the Good Things Foundation, "Increasing motivation to use digital health and social care services: a behavioural science perspective", accessed 19 May 2023
108 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022
109 NHS Digital, "What we mean by digital inclusion", accessed 23 May 2023
110 Diabetes UK (DTN0027)
111 Diabetes UK (DTN0027)
112 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022
113 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022

63. ***Responsibility for promoting digital inclusion does not rest solely, or even primarily, with the health service, and we are encouraged that the Department recognises the importance of cross-departmental working to address digital exclusion from its services. We recommend that it sets out its approach to cross-departmental working in response to this report and in its action plan for addressing exclusion.***

Maintaining non-digital channels

64. Some groups are currently unable, or unwilling, to use digital services. To some extent, this may be due to other concerns about digital that can be addressed, which we return to below. Witnesses emphasised, however, that maintaining non-digital arrangements for this group is essential now, and will continue to be so as digital transformation progresses.[114]

65. Our Expert Panel's report evaluating Government commitments on digitising the NHS considered the extent to which the Department had been able, or was planning, to mitigate against the exclusion of some groups of the population that are unwilling or unable to use digital services.[115] The Expert Panel gave a rating of "requires improvement" to a key commitment in this area—the roll-out of the NHS App, which the Department has positioned as the new "front door" to NHS services—due to the lack of alternative channels for people who are unable to use it. It said:

> Digital exclusion of some groups of the population was a recognised concern among the Government and many stakeholders that we heard from. Worryingly, we found little evidence of progress being made towards achieving the aims expected to be set out in the Government's digital inclusion plan due to be published in May 2023. […] We conclude that there has not been enough funding allocated to ensure that the health of groups experiencing digital exclusion is not exacerbated as more health and care services are delivered via the NHS App without viable physical alternatives and without staff capacity to help patients use the NHS App.[116]

66. We heard that this situation also occurred in other NHS settings. For example, Healthwatch England reported that remote GP appointments during the pandemic "haven't met everyone's needs" and said that "people without access to the internet or computer literacy are being left without support in the move to digital services".[117] The Nuffield Trust told us that the experience of implementing digital technology in general practice, which accelerated during the pandemic, demonstrates the risk of "creating a 'digital inverse care law' where those most in need—often patients who are less well and already materially disadvantaged—find it hardest to access care they need".[118] To avoid this they advised that the Department and NHS England:

- tackle existing inequalities in access to care, by ensuring that services are targeted to those in greatest need; and

114 Age UK (DTN0056), National Pensioner's Convention (DTN0017), Nuffield Trust (DTN0051), Healthwatch England (DTN0066)

115 Health and Social Care Committee, Fourth Special Report of Session 2022–23, Evaluation of Government commitments made on digitisation of the NHS, HC 780

116 Health and Social Care Committee, Fourth Special Report of Session 2022–23, Evaluation of Government commitments made on digitisation of the NHS, HC 780

117 Healthwatch England (DTN0066)

118 Nuffield Trust (DTN0051)

- avoid implementing access in a rigid way that narrows the choices patients have about how they can access care (including providing non-digital alternatives).[119]

The Nuffield Trust, and others, emphasised the importance of maintaining physical alternatives to digital services, as well as ensuring that people who want to use digital services do not experience barriers to doing so.[120]

67. ***Many patients could benefit from encouragement and support to use digital services that might not initially be their first choice, but there will be some patients who continue to prefer physical channels. The Department and NHS England must ensure that non-digital channels remain available, especially as it develops and implements its digital offer.***

Barriers to using digital technology: lack of access and skills

68. People are excluded due to access issues when they do not have, or are unable to use, technology that would connect them to the health service. This might be because they do not have access to the basic equipment that is needed to use digital services, including smartphones and computers or sufficient data. For example:

- 1.7 million people in England do not have any internet access;[121]
- Around 8–10% of people do not own a smartphone;[122]
- 2 million households say that they struggle to afford broadband or mobile data.[123]

Access problems can also happen when digital services do not meet patient needs: for example, if an app that is recommend does not meet someone's accessibility needs due to the impact of a health condition.[124]

69. Lack of digital skills and experience in certain population groups is a further driver of exclusion and inequality. According to Lloyds Bank, which carries out regular research on digital skills and access, 10 million adults in the UK lack "even the most basic digital skills" and 14.9 million have low or very low digital engagement.[125] Age UK noted that it would welcome "more clarity on how systems will mitigate for digital exclusion", noting that although many services had moved online during the pandemic, patterns of very low engagement and lower levels of access amongst groups such as older and disabled people had persisted.[126]

119 Nuffield Trust (DTN0051)

120 Age UK (DTN0056), National Pensioner's Convention (DTN0017), Nuffield Trust (DTN0051), Healthwatch England (DTN0066), LIFT Council (DTN0040), The Company Chemists' Association (DTN0018)

121 Ofcom, Adults' media use and attitudes report 2022, 30 March 2022

122 Health and Social Care Committee, Correspondence with Dr Tim Ferris, 19 April 2023

123 Basis Research and the Good Things Foundation, " Increasing motivation to use digital health and social care services: a behavioural science perspective", accessed 19 May 2023

124 The Company Chemists' Association (DTN0018)

125 Lloyds Bank Foundation, Essential digital skills report 2021, 9 November 2021; Lloyds Bank Foundation, UK Consumer digital index 2022, accessed 23 May 2023

126 Age UK (DTN0056)

70. We heard a number of suggestions for how the Department and NHS England could help to address exclusion caused by a lack of skills and access to digital resources, and who might be best placed to deliver this. For example:

- Similarly to involving clinicians in co-production of digital initiatives to ensure that their needs are met, we heard that including patients in co-designing digital initiatives was essential to "design out" inaccessible or unappealing features, and ensure that technology recommended or offered by the NHS is usable by as wide a range of people as possible.[127]

- Diabetes UK, the National Pensioner's Convention and the British Medical Association recommended that equalities impact assessments should be carried out for digital health and care initiatives.[128] Diabetes UK explained that "without the risk of digital exclusion being identified there is no way to mitigate against these risks" and said that "digital inclusion impact assessments would help the NHS avoid exacerbating or creating new health inequalities".[129]

- Age UK highlighted the role that voluntary and community organisations could play in bridging gaps in support and communicating the benefits of digital health care, providing a "vital service in supporting older people who would like to use the internet to do so".[130]

- The National Pensioners' Convention recommended offering a range of options to use digital services such as Smart TVs and emails, rather than relying on smartphones. They also suggested using "community hubs and library hubs for those that have difficulty".[131]

- A report by National Voices emphasised that the community and voluntary sectors are "vital partners to supporting services to co-design with people who might face barriers" and ensuring that services are as accessible as possible.[132]

71. ***The NHS is a universal service, and people should not be unable to access it because of wider challenges around access to technology, connectivity and digital skills. The Department should work with NHS England and other Departments to understand what models would work best for supporting patients to use and access technology in different settings both in and outside the health service (for example, in the community).***

Barriers to using digital technology: motivation

72. The Department's commissioned research on reasons why people do not use digital healthcare identified that a lack of motivation to use digital services is the most common reason why people opt out. The research showed that although "the vast majority of people involved" in it were confident in their digital capabilities and could access services, just

127 Thrive by Design (DTN0002), Nuffield Trust (DTN0051)
128 Diabetes UK (DTN0027), National Pensioner's Convention (DTN0017), British Medical Association (DTN0032)
129 Diabetes UK (DTN0027)
130 Age UK (DTN0056)
131 National Pensioner's Convention (DTN0017)
132 National Voices, Unlocking the digital front door: keys to inclusive health care, May 2021

two in five reported wanting to access the health service digitally.[133] Analysis of Ofcom data on why people do not use the internet further suggested that those who have opted out because they feel that "it's not for me" are both the largest group, and the group in which "the strongest predictive links existed with people's demographics and circumstances"–which also broadly mirror those people more likely to experience poor health outcomes.[134]

73. Basis Research and the Good Things Foundation, who carried out the Department's research, concluded that the importance of motivation as a factor in healthcare specifically (and more so than in other sectors) means that "actions to address barriers to digital inclusion such as skills or access are important but will not be sufficient to increase digital inclusion if motivation is not also addressed".[135]

74. There are a number of specific reasons why people might be unmotivated (as opposed to unable) to use digital health technology, and might opt out of using digital health initiatives. These include:

- Not seeing clear benefits from using a digital option over a non-digital option.
- Concerns over the security of their data, either as it is held by the NHS or in third-party systems and applications.
- Concerns about the clinical efficacy and reliability of digital options.[136]

75. ORCHA, an organisation that reviews health and care apps, suggested that these problems come down to a lack of trust in digital initiatives broadly. ORCHA recommended that "work needs to be done to develop trust in digital as a broad category".[137] Other witnesses suggested this is compounded by specific concerns about NHS data management and privacy, and the sensitivity of information being shared.[138]

76. The Department has taken some steps to address these problems. These focus on the role of communication in addressing concerns and demonstrating the benefits of digital approaches. For example:

- The Department recognises that persuading people to use the NHS App will require it to demonstrate what the App adds over non-digital options: for example in terms of convenience or access to records.[139] The Department said in

133 Basis Research and the Good Things Foundation, "Increasing motivation to use digital health and social care services: a behavioural science perspective", accessed 19 May 2023. See also: Nuffield Trust (DTN0051), The King's Fund (DTN0020), Healthwatch England (DTN0066), Dr Frederick Konteh, Professor Russell Manion and Professor Rowena Jacob (DTN0022)

134 Good Things Foundation and Professor Simon Yaetes, "Motivational barriers of non-users of the internet", accessed 19 May 2023

135 Basis Research and the Good Things Foundation, "Increasing motivation to use digital health and social care services: a behavioural science perspective", accessed 19 May 2023.

136 See, for example, ORCHA (DTN0010), Q134, Q157 and discussion of the NHS App in Chapter 2.

137 ORCHA (DTN0010)

138 Diabetes UK (DTN0027), Royal College of General Practitioners (DTN0028), British Medical Association (DTN0032), Royal College of Physicians (DTN0036), Health Data Research UK (DTN0047), Healthwatch England (DTN0066)

139 See Chapter 2.

response to our Expert Panel that NHS England was "committed to rolling out a "suite of new material" to support adoption of the App, with a focus on "clear messaging around the ease and benefits of use".[140]

- The Department and NHS England accept that concerns over data security and privacy have hindered significant steps towards digital transformation in the past. For example, the *GP Data for planning and research* (GPDPR) programme was intended to "transform our understanding of what causes ill health and, importantly, what we can do to prevent or treat it and provide better care".[141] According to NHS Digital, it "quickly ground to a halt when the public raised concerns about transparency, data security and future use".[142] NHS Digital said that since then it had been working "much more closely" with clinicians and experts to understand why patients had opted out of GPDPR. It says that the programme will not progress "until there has been a much more significant communication exercise with the public about how data is used".[143]

- The Department has in the past attempted to help patients and clinicians navigate the wide range of digital technologies that are available to them for specific purposes, for example via smartphone apps. The "NHS Apps Library" was a list of approved third-party apps hosted by NHS Digital, in an attempt to reassure patients about quality and efficacy. The Library was decommissioned in 2021, however, and its former website now directs users towards the NHS App and NHS Covid-19 App downloads.[144]

77. Witnesses were supportive of the Department's intentions to improve communication with patients about both the benefits of using digital healthcare and the security of their data within the NHS, suggesting these could help overcome lack of motivation to use digital services. For example, Health Data Research UK explained that success in supporting people with low motivation to access digital care will be about "demonstrating and communicating how digital innovation can (and already has) provided patient and public benefits such as faster, more convenient access to the right care".[145] Health Data Research UK said that without this, the perceived benefits of digital "may be overshadowed by concerns over the potential risks of data access and digital innovation [such as] loss of human contact, digital exclusion, data breaches and personal security".[146]

78. We heard mixed views on whether communication should be closely attached to specific campaigns. For example, Healthwatch England said that with regard to the GPDPR programme, only "specific, targeted comms will be successful in shifting […] significant public pre-conceptions around the programme".[147] The Company Chemists'

140 Health and Social Care Committee, Eighth Report of Session 2022–23, Government Response to the Health and Social Care Committee's Expert Panel: evaluation of Government's commitments made on the digitisation of the NHS, HC-1313
141 NHS Digital (DTN0061)
142 NHS Digital, "General Practice data for planning and research (GPDPR)", accessed 23 May 2023
143 NHS Digital (DTN0061)
144 NHS Digital, "NHS Apps library", accessed 23 May 2023
145 Health Data Research UK (DTN0047)
146 Health Data Research UK (DTN0047)
147 Healthwatch England (DTN0066)

Association felt, however, that "broader messages about the societal benefits as well as the individual benefits to data sharing are likely key […] this is best achieved through concise information in layman's terms."[148]

79. **We are encouraged by the Department's recognition that it needs to do better in both reassuring people about the security of data gathered by the health service, and communicating the benefits of digital healthcare. We need to see this matched with action that demonstrates progress. Specific communication over NHS data collection, and broader communications to encourage engagement amongst those less likely to use digital technology will require different approaches to target different audiences. Both should be underpinned by an understanding of who the people most likely to opt out are and why they do so.**

Encouraging patients to use healthcare apps

80. Healthcare apps, in particular, often provide a point of entry into digital services.[149] Research on attitudes that can lead people to avoid using wider online services suggests that an element of fear (either of making a mistake, or having a bad experience) is relatively common.[150] ORCHA explained that there are risks associated with using digital technologies. In the worst cases:

> A product not fit for purpose can affect a person's physical or mental health, arising from the operation of the product itself, such as inaccurate diagnosis, unsafe treatment delivery, or incorrect guidance.[151]

ORCHA pointed out that although the public can be confident that medication and medical devices issues by the NHS have gone through appropriate assurance stages:

> Digital health products appear to fall into a wide spectrum of approaches to governance. This leads to a narrow field of products undergoing strict assurance levels in terms of selection, whilst a greater number are assessed and selected in an ad hoc manner.[152]

ORCHA said that this means the quality of apps varies widely, and many do not reach the standards that users might expect. Their evidence highlighted that having "assessed 18,000 health apps against 350+ criteria across clinical/professional assurance, data [and] privacy, and usability [and] accessibility", only 20% met acceptable quality thresholds.[153]

81. The Department has said that it plans to add functionality to the NHS App by integrating third-party apps, depending on "what is both appropriate and technically possible", but does not offer a specific timeline for this. It does, however, say that the App will allow people to access "NICE-approved digital health products that my GP or care team have recommended to me": for example, to manage diabetes or cardiovascular disease, and references to uploading data from wearable devices.[154] It further says that since the App Library was decommissioned (see above) it will instead "link to recommended

148 The Company Chemists' Association (DTN0018)
149 ORCHA (DTN0010)
150 Good Things Foundation and BT, "I say…'it's not for me'", accessed 16 May 2023
151 ORCHA (DTN0010). See also Q105, Q107
152 ORCHA (DTN0010). See also Q107
153 ORCHA (DTN0010)
154 Department of Health and Social Care, A plan for digital health and social care, 22 June 2022

apps throughout the NHS website". These apps meet required technical and clinical safety standards (including accessibility), and are approved by experts in a relevant healthcare field.[155] This new approach means that there is no central place to find NHS-recommended healthcare apps and technology. The extent to which recommendations are current, with apps reviewed for continued safety and appropriateness and new apps added, is not clear.

82. We heard suggestions for how the Department and NHS England could improve practical support for people wanting to use digital tools. ORCHA suggested that systems for reviewing and recommending apps needed to take account of the possibility of change, which "can introduce risk to a previously safe product", suggesting that checking continued compliance is necessary.[156] Witnesses emphasised the role of promoting patient choice in addressing exclusion, both in terms of the particular treatment pathways and the tools available, suggesting that recommending a broader range of products might prove more effective in meeting patient needs.[157] For example, the King's Fund argued that "one size rarely fits all" and cautioned that "one digital tool may not fully meet the needs of a diverse population". Their evidence continued:

> However, the NHS has a track record of preferentially selecting single solutions from a single supplier for use by a diverse public. Given the diversity of needs in any local population, either digital tools need to be improved to address all user needs simultaneously, or multiple digital tools need to be made available, each catering to a particular sub-set of needs.[158]

83. **Digital transformation can offer people more choice and control over their healthcare, and empower them to manage their health, and apps offer an accessible starting point for many. But whether peoples' experiences with digital healthcare are positive depends in large part on whether they use an appropriate product. The Department and NHS England lack a systematic, consistent way of assessing and demonstrating whether a third-party health app reaches the necessary quality standards, and we heard that a majority of health apps currently available fail on aspects including clinical efficacy, security and cost. This is unacceptable: using an unsuitable health product can affect people's health, and might make people less likely to opt for digital channels in future.**

84. ***The Department and NHS England should work together to introduce a more comprehensive accreditation scheme for third-party healthcare apps, in addition to the current approach of recommending specific apps on some nhs.uk webpages. Within this scheme it should be easy for people to check whether a healthcare app that they are using or considering comes recommended by the NHS. This scheme should be supported by publicity and communications that both promote the benefits of digital healthcare and explain the risks of using unaccredited apps, providing a clear steer on why using an accredited product matters and where to find them.***

155 NHS Digital, "NHS Apps library", accessed 23 May 2023
156 ORCHA (DTN0010)
157 Nuffield Trust (DTN0051), The King's Fund (DTN0020), The SAS Institute (DTN0062), Oviva (DTN0016)
158 The King's Fund (DTN0020)

Conclusions and recommendations

Introduction

1. Successive Governments have attempted digital transformation of the NHS. Progress has been slow and uneven, and there is now substantial variation between organisations. This attempt has the potential to be different, with clear intentions and funding to address factors that have frustrated progress in the past. These include the preponderance of "legacy" IT in the NHS, the skills of the workforce, and the challenges of building an inclusive digital health service. The Government will only succeed this time if it can respond robustly to all of these challenges. (Paragraph 12)

Innovation in digital healthcare

2. The pandemic provided a unique incentive to download the NHS App, because it hosted the Covid-19 pass. The new version of the App should bring benefits in terms of functionality, integration and personalisation, but it will require people to download it anew. The Department and NHS England announced improvements to the range of services available via the App in May 2023, but they need to ensure that people use them. The Department and NHS England therefore need to demonstrate the continued value of the App, particularly to existing users, otherwise they may increase functionality while decreasing the number of sign-ups. (Paragraph 27)

3. *We recommend that the Department and NHS England set out in response to this report:*

    (a) *A timetable for introducing the new, "native" NHS App, and*

    (b) *Their plan for communicating the benefits and features offered by the new App to users of the current "portal" version.*

    (c) *Further detail of the proposed communications campaign on changes to the App announced in May 2023.* (Paragraph 28)

Systems and inoperability

4. *We support the Hewitt review's recommendation that the Department, NHS England and ICSs should work together to develop a standards framework to be adopted by all ICSs. This should improve interoperability and data sharing within and between systems. This should include working closely with sectors that could feed into shared records in the future, including pharmacy, mental health and community health, to ensure that what is put in place meets their needs.* (Paragraph 37)

Digital, Data and Technology (DDat) workforce

5. A shortage of skilled digital professionals working in the NHS has been a barrier to digital transformation to date. Digital specialists can often command higher wages or better conditions in the private sector. This makes recruitment and retention to the NHS challenging, and leaves the health service reliant on third-party suppliers. (Paragraph 45)

6. *To ensure that the NHS is able to recruit the best candidates and sustainably meet demand for DDaT specialists, now and in the future, we recommend that the Department apply to implement the DDaT Pay Framework for NHS England DDaT specialists, which would allow additional pay measures including bonuses/"capability based allowances" for staff.* (Paragraph 46)

7. *Investment in the NHS's specialist digital workforce needs to be matched by investment in the wider workforce's forces digital skills. It is important that digital is understood as a thread that runs throughout healthcare, not as a specialist skill set that is only relevant to some staff and occupations. We recommend that when devising professional training, the Department work with NHS England to ensure that digital training is integrated throughout its wider learning programmes.* (Paragraph 50)

8. Without staff engagement in the entire process of introducing digital initiatives, digital transformation risks being perceived as an unwelcome, time-consuming imposition on an already over-stretched workforce. Co-designing digital initiatives with staff—including, but not limited to clinicians—is essential to ensure that these offer workable improvements to existing practices. The Department and NHS England must ensure that staff have the time and headspace to engage with this process. (Paragraph 55)

9. There is a digital skills gap in social care that, if unaddressed, will hinder the digital transformation of the health and social care sectors. As with training for staff in the health service, it is vital that digital skills are integrated throughout learning and development for social care staff, rather than being presented as specialist skills sets. (Paragraph 58)

Digital exclusion

10. *Responsibility for promoting digital inclusion does not rest solely, or even primarily, with the health service, and we are encouraged that the Department recognises the importance of cross-departmental working to address digital exclusion from its services. We recommend that it sets out its approach to cross-departmental working in response to this report and in its action plan for addressing exclusion.* (Paragraph 63)

11. *Many patients could benefit from encouragement and support to use digital services that might not initially be their first choice, but there will be some patients who continue to prefer physical channels. The Department and NHS England must ensure that non-digital channels remain available, especially as it develops and implements its digital offer.* (Paragraph 67)

12. *The NHS is a universal service, and people should not be unable to access it because of wider challenges around access to technology, connectivity and digital skills. The Department should work with NHS England and other Departments to understand what models would work best for supporting patients to use and access technology in different settings both in and outside the health service (for example, in the community).* (Paragraph 71)

13. We are encouraged by the Department's recognition that it needs to do better in both reassuring people about the security of data gathered by the health service, and communicating the benefits of digital healthcare. We need to see this matched with action that demonstrates progress. Specific communication over NHS data collection, and broader communications to encourage engagement amongst those less likely to use digital technology will require different approaches to target different audiences. Both should be underpinned by an understanding of who the people most likely to opt out are and why they do so. (Paragraph 79)

14. Digital transformation can offer people more choice and control over their healthcare, and empower them to manage their health, and apps offer an accessible starting point for many. But whether peoples' experiences with digital healthcare are positive depends in large part on whether they use an appropriate product. The Department and NHS England lack a systematic, consistent way of assessing and demonstrating whether a third-party health app reaches the necessary quality standards, and we heard that a majority of health apps currently available fail on aspects including clinical efficacy, security and cost. This is unacceptable: using an unsuitable health product can affect people's health, and might make people less likely to opt for digital channels in future. (Paragraph 83)

15. *The Department and NHS England should work together to introduce a more comprehensive accreditation scheme for third-party healthcare apps, in addition to the current approach of recommending specific apps on some nhs.uk webpages. Within this scheme it should be easy for people to check whether a healthcare app that they are using or considering comes recommended by the NHS. This scheme should be supported by publicity and communications that both promote the benefits of digital healthcare and explain the risks of using unaccredited apps, providing a clear steer on why using an accredited product matters and where to find them.* (Paragraph 84)

Formal minutes

Wednesday 21 June 2023

Members present

Steve Brine, in the Chair

Paul Blomfield

Paul Bristow

Mrs Paulette Hamilton

Rachael Maskell

James Morris

Draft Report (*Digital transformation in the NHS*), proposed by the Chair, brought up and read.

Ordered, That the draft Report be read a second time, paragraph by paragraph.

Summary agreed to.

Paragraphs 1 to 84 agreed to.

Resolved, That the Report be the Eighth Report of the Committee to the House.

Ordered, That the Chair make the Report to the House.

Ordered, That embargoed copies of the Report be made available (Standing Order No. 134.)

Adjournment

Adjourned till Tuesday 27 June 2023 at 9.30 am

Witnesses

The following witnesses gave evidence. Transcripts can be viewed on the inquiry publications page of the Committee's website.

Tuesday 15 November 2022

Pritesh Mistry, Fellow, The King's Fund; **Karen Payne**, Topol Digital Fellow, NHS Dorset — Q1–41

Dr Paul Atkinson, Chair, Health Informatics Group, Royal College of General Practitioners; **John Dean**, Clinical Vice President, Royal College of Physicians — Q42–64

Wednesday 11 January 2023

Simon Bolton, Interim Chief Executive, NHS Digital; **Jackie Gray**, Executive Director for Privacy, Transparency, Ethics & legal, NHS Digital; **Dr Tim Ferris**, National Director of Transformation, NHS England; **Kathy Hall**, Director for Digital Transformation and Head of the Joint DHSC/NHSE Digital Policy Unit, NHS England — Q65–99

Liz Ashall-Payne, CEO, ORCHA; **Chris Askew**, CEO, Diabetes UK; **David Ramsden**, Chief Executive Officer, Cystic Fibrosis Trust — Q100–111

Tuesday 14 March 2023

The Lord Markham CBE, Parliamentary Under-Secretary of State, Department of Health and Social Care; **Kathy Hall**, Director for Digital Transformation and Head of the Joint DHSC/NHSE Digital Policy Unit, Department of Health and Social Care; **Dr Tim Ferris**, National Director of Transformation, NHS England — Q112–157

Published written evidence

The following written evidence was received and can be viewed on the inquiry publications page of the Committee's website.

DTN numbers are generated by the evidence processing system and so may not be complete.

1 Age UK (DTN0056)

2 Alcidion (DTN0052)

3 Ashall-Payne, Ms Liz (CEO & Co Founder, ORCHA) (DTN0072)

4 Association of British HealthTech Industries (DTN0019)

5 Association of Medical Research Charities (DTN0068)

6 Atherton, Dr Helen (Associate Professor , University of Warwick) (DTN0014)

7 BCS, The Chartered Institute for IT (DTN0006)

8 Boots UK (DTN0012)

9 British Medical Association (DTN0032)

10 Care England (DTN0033)

11 Care Quality Commission (CQC) (DTN0065)

12 Cisco (DTN0064)

13 Community Pharmacy IT Group; Pharmaceutical Services Negotiating Services (PSNC); National Pharmacy Association (NPA); Royal Pharmaceutical Society (RPS); Company Chemists' Association (CCA); and Association of Independent Multiple Pharmacies (AIM) (DTN0023)

14 Cresswell, Dr Kathrin (Senior Lecturer, University of Edinburgh); and Williams, Professor Robin (Professor of Social Research on Technology, University of Edinburgh) (DTN0031)

15 Cystic Fibrosis Trust (DTN0037)

16 Department of Health and Social Care (DTN0029)

17 Diabetes UK (DTN0027)

18 Duffy, Mr Peter (Consultant surgeon, Ex-NHS. Currently employed by Manx Healthcare.) (DTN0003)

19 EKTG (DTN0041)

20 Evergreen Health Solutions Ltd (DTN0046)

21 Fowler, Mr Richard (Retired Civil Servant) (DTN0004)

22 GS1 UK (DTN0039)

23 Health Data Research UK (DTN0047)

24 Health Tech Alliance (DTN0063)

25 HealthWatch England (DTN0066)

26 Healthcare Financial Management Association (HFMA) (DTN0013)

27 Healthy.io (DTN0035)

28 Highland Marketing advisory board (health tech industry and IT experts) (DTN0024)

29 JDRF (DTN0011)

30 Kinetikos Health (DTN0073)

31 Konteh, Dr Frederick (Research Fellow, University of Birmingham); Professor Russell Mannion (Professor of Healthcare Systems, University of Birmingham); and Professor Rowena Jacobs (Professor of Health Economics, University of York) (DTN0022)

32 Latter, Professor Sue (Professor of Health Services Research, University of Southampton); and Campling, Dr Natasha (Lecturer and Senior Research Fellow, University of Southampton) (DTN0026)

33 Liquidlogic (DTN0001)

34 Microsoft Ltd (DTN0057)

35 NHS Confederation (DTN0021)

36 NHS Digital (DTN0061)

37 NHS England (DTN0074)

38 NHS Providers (DTN0009)

39 National Pensioners Convention (DTN0015)

40 Nuffield Trust (DTN0051)

41 Oviva (DTN0016)

42 PAGB, the consumer health association (DTN0007)

43 PHG Foundation (DTN0043)

44 Parliamentary and Health Service Ombudsman (DTN0070)

45 Pharmacy2U (DTN0038)

46 Pool, Rachel (DTN0055)

47 Professional Record Standards Body (DTN0042)

48 Regas, Constantinos; and May, Georgia (DTN0054)

49 Royal College of General Practitioners (DTN0028)

50 Royal College of Midwives (DTN0005)

51 Royal College of Physicians (DTN0036)

52 SAS Institute (DTN0062)

53 Solomon, Mr Daniel (DTN0030)

54 Spirit Health (DTN0045)

55 Splunk (DTN0017)

56 System CCEO (DTN0060)

57 TPP (DTN0049)

58 The Association of the British Pharmaceutical Industry (DTN0069)

59 The Company Chemists' Association (DTN0018)

60 The King's Fund (DTN0020)

61 The King's Fund (DTN0071)

62 The LIFT Council (DTN0040)

63 The Organisation for the Review of Care and Health Apps (ORCHA) (DTN0010)

64 The Royal British Legion (DTN0008)

65 The Royal College of Psychiatrists (DTN0067)

66 The Royal College of Radiologists (DTN0053)

67 Thrive by Design - part of Leeds and York Partnership NHS Foundation Trust (DTN0002)

68 Wellcome/EPSRC Centre for Interventional and Surgical Sciences (DTN0034)

69 eConsult Health ltd (DTN0048)

70 medConfidential (DTN0050)

List of Reports from the Committee during the current Parliament

All publications from the Committee are available on the publications page of the Committee's website.

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1st	Pre-appointment hearing for the Government's preferred candidate for the role of Patient Safety Commissioner	HC 565
2nd	The impact of body image on mental and physical health	HC 114
3rd	Workforce: recruitment, training and retention in health and social care	HC 115
4th	The future of general practice	HC 113
5th	Pre-appointment hearing with the Government's preferred candidate for the role of Chair of HSSIB	HC 843
6th	Follow-up on the IMMDS report and the Government's response	HC 689
7th	Integrated Care Systems: autonomy and accountability	HC 587
1st Special	Cancer Services: Government Response to the Committee's Twelfth Report of 2021–22	HC 345
2nd Special	Government Response to the Expert Panel's Report on Government commitments in the area of cancer services in England	HC 346
3rd Special	Expert Panel: evaluation of Government's commitments in the area of the health and social care workforce in England	HC 112
4th Special	Evaluation of Government commitments made on the digitisation of the NHS	HC 780
5th Special	Government Response to the Committee's Report on Follow-up on the IMMDS report and the Government's response	HC 1286
6th Special	Government Response to the Committee's Report on Workforce: recruitment, training and retention in health and social care	HC 1289
7th Special	Expert Panel: evaluation of Government's commitments in the area of the health and social care workforce: Government Response	HC 1290
8th Special	Government Response to the Health and Social Care Committee's Expert Panel: evaluation of Government's commitments made on the digitisation of the NHS	HC 1313

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1st	The Government's White Paper proposals for the reform of Health and Social Care	HC 20
2nd	Workforce burnout and resilience in the NHS and social care	HC 22
3rd	Pre-appointment hearing for the Chair of the Food Standards Agency	HC 232
4th	The safety of maternity services in England	HC 19
5th	The treatment of autistic people and people with learning disabilities	HC 21
6th	Coronavirus: lessons learned to date	HC 92
7th	Supporting people with dementia and their carers	HC 96
8th	Children and young people's mental health	HC 17
9th	Clearing the backlog caused by the pandemic	HC 599
10th	Pre-appointment hearing for the position of Chair of NHS England	HC 1035
11th	Pre-appointment hearing for the position of Chair of the Care Quality Commission	HC 1091
12th	Cancer services	HC 551
13th	NHS litigation reform	HC 740
1st Special	The Health and Social Care Committee's Expert Panel: Evaluation of the Government's progress against its policy commitments in the area of maternity services in England	HC 18
2nd Special	The Health and Social Care Committee's Expert Panel: Evaluation of the Government's progress against its policy commitments in the area of mental health services in England	HC 612
3rd Special	Supporting people with dementia and their carers: Government Response to the Committee's Seventh Report	HC 1125
4th Special	Expert Panel: evaluation of the Government's commitments in the area of cancer services in England	HC 1025

Session 2019–21

Number	Title	Reference
1st	Appointment of the Chair of NICE	HC 175
2nd	Delivering core NHS and care services during the pandemic and beyond	HC 320
3rd	Social care: funding and workforce	HC 206
4th	Appointment of the National Data Guardian	HC 1311