

Beliefs and trust barriers to engaging with digital health services

A rapid review of recent literature

April 2025

Executive Summary

With more and more health services moving online, there are concerns that people who face digital barriers will also find it more difficult to access care. With funding through the VCSE Health and Wellbeing Alliance, we conducted a project to understand and co-design a resource to address belief and trust barriers to digital health services. The first stage of this project was a rapid review of evidence, conducted in May and June '24.

A synthesis of 26 academic and 'grey' literature papers published in the past five years surfaced a range of beliefs and concerns around using digital health services. The evidence also shows overlap between the groups of people more likely to lack trust in using digital health services and groups who experience more health and healthcare inequalities. The key insights from the literature review:

i) Beliefs about digital health services:

Concerns about communication challenges, leading to poorer care.

- Belief that it is harder to build connections and / or communicate fully about health concerns via digital tools such as appointment booking platforms, or video consultations, leading to inappropriate or delayed care.

Concerns about getting it wrong, leading to not getting the right care

- Belief that it is easier to make a mistake using digital tools when inputting or sharing information, which could lead to not getting the right care at the right time.

Concerns about an increased burden of care for some

- Belief that increased use of digital health services, such as virtual wards, will place more responsibility onto patients and / or carers, with potential for poorer quality care.

ii) Trust concerns around digital health services:

Lack of trust in how personal data will be stored and protected digitally

- Lack of trust and understanding about how data is shared through digital health services, who has access to data and the risk of data breaches.

Lack of trust in the accuracy of data being collected and used digitally

- Concerns that data collected through digital health services may not accurately reflect people's lived experiences and / or may not reflect diversity of identities, leading to inappropriate decisions about care.

Lack of trust in how digital services are being rolled out

- Perception that increasing digital health services is a cost-cutting exercise, leading to poorer access to care.

iii) Groups most likely to experience trust concerns:

- People with **disabilities** have lower levels of trust in the NHS
- People from **lower social grades** have lower levels of trust in how data is protected
- People from **minority ethnic groups** have lower levels of trust in how data is protected, and have more concerns about their data being used to discriminate against them
- People who **experience vulnerabilities** have lower levels of trust around accessing care and data sharing, eg people experiencing homelessness; refugees / asylum seekers; Gypsy, Roma & Traveller communities; sex workers.
- **Unpaid carers** may face or perceive additional burdens around accessing care through digital.

Introduction

More and more health services are moving online, with implications for access to care among people who face barriers to digital inclusion including limited digital skills and confidence, connectivity or access to a digital device. The 'digital front door' is increasingly promoted, particularly across primary care, and many patients and staff are expected to engage with a range of digital tools and platforms within the health system.

Many of the people facing barriers to getting online and using digital services also face health and healthcare inequalities¹. For example, only 76% of people with an impairment have basic digital skills, compared with 91% of the general population². While 34 million people in the UK have downloaded the NHS app³, this leaves at least 25% of the adult population who are not using it. Among those people who are not regularly online, a third

¹ Good Things Foundation (2024). [Digital inclusion and health – summary of key statistics](#).

² Lloyds Bank (2023). [2023 Consumer Digital Index](#).

³ NHS England (2024). [News, 7 May 2024](#).

say they find it difficult to engage with NHS services⁴. With increasing digitisation of health services, this risks compounding existing health inequalities among those with poorer health and poorer digital access.

The NHS Framework for Inclusive Digital Health Services⁵ reflects a commitment to designing accessible digital health services. The Framework identifies beliefs and trust as influential factors in engagement with digital health services, but also recognises a need for better understanding of how beliefs and trust shape engagement with these services.

As part of a project to understand belief and trust barriers to engaging with digital health services, and to co-design a resource to help address these barriers, we conducted a rapid review of recent literature, in May and June '24. The aims of the review were to:

- Identify what is already known about the belief and trust issues that can act as barriers to engaging with digital health services,
- Identify priority groups that may face more belief and trust barriers to using digital health services
- Identify any gaps in the knowledge base around belief and trust barriers; and
- Use this insight to inform the design of a co-design project to develop a resource to address belief and trust barriers.

The approach we took

We chose a rapid review methodology to enable us to scope quickly the key literature from different fields, to identify the main themes across the evidence and to identify areas of weakness or lack of knowledge. Three questions guided our search and synthesis:

1. What is known about how beliefs and trust affect people's access to digital health services?
2. What is known about how staff engage with patients' beliefs and trust in relation to accessing digital health services?
3. What are the potential implications of belief and trust barriers to engaging with digital health services?

⁴ Lloyd's Bank (2022). [2022 Consumer Digital Index](#).

⁵ NHS England (2024). [Inclusive digital healthcare: a framework for NHS action on digital inclusion](#)

Defining 'digital health services'

In this project we adopted a broad definition of 'digital health services' to include a range of digital platforms, apps and tools that are commonly used within the NHS for different types of interaction, including:

- Online appointment booking platforms
- The NHS app for managing appointments, prescriptions and health information
- Video platforms for consultations or receiving therapy
- Other apps and devices for monitoring health conditions and symptoms or receiving therapy
- Other online platforms for accessing medical notes.

Our main focus for the project was primary care in the UK, as this is where most people will first encounter digital health tools and services. However, in our review we did include literature from beyond primary care settings.

The searching and reviewing process

In May and June '2024, we searched for relevant academic papers and 'grey' literature, including reports and publications from public sector, third sector, and VCSE organisations, and other research agencies. The steps we took:

- Key search terms included: "digital", "health service*", "belief*", "trust", "barrier*", "health", "access".
- We focused predominantly on papers published since 2020, recognising the likely influence of the COVID pandemic on the availability of digital health services. However, we did include papers published slightly before this date if very relevant.
- Extracted and synthesised insights from papers into a framework, to highlight common themes and identify any gaps, further questions or further reading.

26 papers were included in the final review, including 15 'grey' literature papers and 11 academic papers.

What the literature tells us

Beliefs about digital health services

The literature reviewed highlights a range of concerns held by patients, members of the public, and healthcare staff reflecting beliefs about the limitations and challenges of digital health services.

Concerns about communication challenges:

A common concern reflected in the literature is that digital platforms (e.g. online booking, video or phone consultations) can make communication more difficult. People worry that healthcare professionals may miss important non-verbal or contextual cues, affecting diagnosis and care decisions. Many believe it is harder to build personal relationships digitally, and fear their health concerns may be more easily dismissed. Some also feel they would be pressured to disclose issues like dyslexia or low literacy when using digital tools. Additionally, lack of private space at home may limit open communication during video consultations.

Healthcare staff share similar concerns. They worry that digital tools reduce their ability to communicate effectively with patients, including missing important non-verbal signs about symptoms or a condition. Some also question whether digital systems can reliably identify the most urgent cases.

For both patients and staff, these concerns centre on the belief that poorer communication through digital services could lead to inappropriate or lower-quality care, or cause delays if people are overlooked or 'lost' in the system.

Relevant literature: British Red Cross (2024); Ada Lovelace Institute (2023); British Red Cross (2023); The Health Foundation (2023); Humphrey (2023); Nicholls et al (2023); Ramachandran et al (2023); Verity & Tzorziou Brown (2023); Basis Social & Good Things Foundation (2022); Bondaronek et al (2022); Watson et al (2022); National Voices (2021a); NHS Confederation (2021); Turner et al (2021).

Concerns about getting it wrong:

The literature suggests that people worry that using digital health services would be more difficult and time-consuming than traditional methods, with concerns about making mistakes that could affect access to care. Some worry about who would review the information they submit online (e.g. for GP appointments) and whether that person has the right skills to assess it appropriately. Others question the reliability of digital systems, including whether they would update information accurately, such as when a new prescription is issued.

Healthcare staff share similar concerns about the accuracy and usability of digital tools. Confidence in using these platforms varies, with some staff fearing they might make errors or accidentally lose patient data.

These concerns — across both patients and staff — reflect a belief that mistakes or system failures in digital health services could result in people being overlooked, experiencing delays, or receiving inappropriate care.

Relevant literature: Ada Lovelace Institute (2023); The Health Foundation (2023); Humphrey (2023); Nicholls et al (2023); Verity & Tzortziou Brown (2023); Basis Social & Good Things Foundation (2022); National Voices (2021a); NHS Confederation (2021); Turner et al (2021).

Concerns about an increased burden of care:

Though less common, some literature highlights concerns that digital health services — like virtual wards — may place more burden on patients and unpaid carers. There are worries about reduced personal interaction with clinicians and increased responsibility for self-monitoring and sharing health information. These concerns may stem from a belief that digital care is being introduced mainly to cut costs, potentially leading to a poorer care experience. However, the literature also notes that virtual care may be preferable for some, such as people who fear discrimination or insensitivity in traditional healthcare settings.

Relevant literature: British Red Cross (2024); Bourghouts et al (2021); NHS Confederation (2021).

Trust issues around digital health services

Lack of trust in security of personal data:

A key concern in the literature is how personal health data is stored and who can access it, with many people lacking understanding of NHS data security systems. While data concerns are not unique to digital health services, they likely influence how people perceive and engage with them.

Both patients and staff worry about the security of personal data when using digital tools. This reflects broader anxieties stemming from high-profile data breaches and limited public awareness of how data is handled in the health system. In primary care, some people may be reluctant to use digital platforms – such as for booking appointments – because they are unsure who will see their data or how it will be used in their care.

The literature also indicates differences in trust levels around data security among demographic groups. People from ethnic minority communities, disabled people, people from lower socio-economic groups and people experiencing vulnerabilities (people experiencing homelessness, refugees and asylum seekers, Gypsy, Roma and Traveller communities, and sex workers) have less trust in their personal data being shared securely across the health system. Similarly, people with low levels of digital confidence are more likely to be concerned about how their data is shared.

Relevant literature: NHS England (2024); Qa Research (2024); Ada Lovelace Institute (2023); British Red Cross (2023); Davidge et al (2023); The Health Foundation (2023); Sauchelli et al (2023); Basis Social & Good Things Foundation (2022); ClearView Research (2022); de Angel et al (2022); Bourghouts et al (2021); National Voices (2021b); Honeyman et al (2020).

Lack of trust in the accuracy of digital data:

Some literature indicates that people have concerns that data collected and used through digital systems may not accurately reflect them or their lived experience. This can relate to data about their identity, such as the use of inappropriate categories to describe demographic characteristics like ethnicity, or about their health condition(s).

Inaccurate or missing data may mean it is more difficult for someone to advocate for themselves around a health condition, and it may mean people are missed or overlooked

within the system. Staff hold concerns that data provided through digital health services may not be accurate or reliable, with implications for how they provide care. At a population level, staff and patients can be concerned that a lack of accurate data may mean that decisions about health services are not made appropriately, in the best interests of the groups affected.

Relevant literature: NHS England (2024); Qa Research (2024); Ada Lovelace Institute (2023); British Red Cross (2023); Davidge et al (2023); The Health Foundation (2023); Basis Social & Good Things Foundation (2022); ClearView Research (2022); National Voices (2021a).

Lack of trust that data will be used appropriately:

Linked to concerns about data security, the literature indicates that people worry that their health data could be shared with third parties without their knowledge or consent. This reflects a broader mistrust that data shared through digital systems is always used in patients' best interests. For some, this stems from a perceived lack of evidence that data sharing improves health services.

The literature shows that mistrust is stronger in some groups, who see digital data sharing as riskier. For example, people from minority ethnic backgrounds may fear their data could be used to discriminate against them. Refugees and asylum seekers may worry about data being shared with the Home Office. Others are concerned that health data could affect benefits or insurance decisions.

Healthcare staff also express concerns around how patients engage with digital health records. A few studies suggest staff worry patients may misinterpret the information they access through digital platforms, potentially affecting their wellbeing or damaging relationships with clinicians.

Relevant literature: NHS England (2024); Qa Research (2024); Ada Lovelace Institute (2023); British Red Cross (2023); Sauchelli et al (2023); Davidge et al (2023); ClearView Research (2022); Honeyman et al (2020).

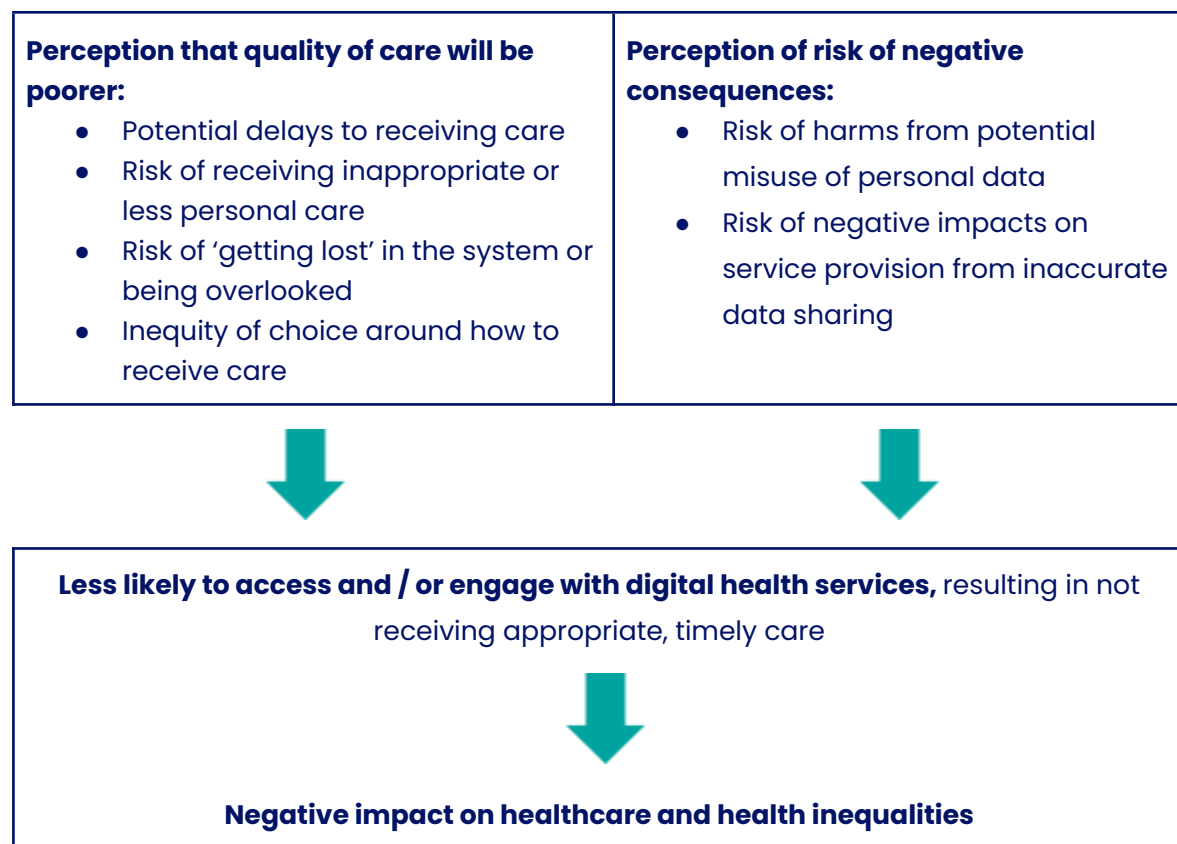
Lack of trust in the way digital services are being rolled out:

A final barrier identified in the literature relates to mistrust of the reasons why digital health services are being introduced, and the extent to which the public have been adequately consulted. Beliefs that digital services are a cost-saving exercise, and that care through digital services may be of poorer quality, relate to a lack of trust that digital services are being rolled out to improve care.

Relevant literature: British Red Cross (2024); Ada Lovelace Institute (2023); Humphrey (2023); ClearView Research (2022).

Potential impacts of belief and trust barriers:

Within the available literature, there is no clear evidence of the impacts of belief and trust barriers to digital health services on health or care outcomes. However, there are several implications for access to care that are proposed or implied across the papers reviewed.



Our next steps

The insights from this rapid review of literature are being used to inform a co-design project to develop a resource to help address belief and trust barriers to engaging with digital health services. This resource, and a report sharing learning from the co-design project, will be available from the Good Things Foundation website in spring 2025.

Acknowledgements

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