Unleashing the potential of digital tools to support self-care

Introduction

Digital technology is often championed as a central solution to the challenges facing NHS England as a whole and our primary care system. Yet detail on what digital tools exist and how they are being used is limited, meaning it is difficult to assess where improvements could be made or examples of best practice can be found.

To explore the role of digital tools within self-care, PAGB revisited its 2020 digital audit[i] which was originally conducted during the first wave of the COVID-19 pandemic. Through this, we were keen to understand how digital tools to support self-care had advanced in the last three years, and to identify where opportunities exist to further facilitate the public to self-care for minor ailments to help free-up valuable time for in-person primary care services to address more urgent cases.

Looking across the NHS app, NHS website, Integrated Care System (ICS) websites, and the NHS 111 services, we uncovered a number of opportunities for existing digital tools to better support self-care. We recommend that:
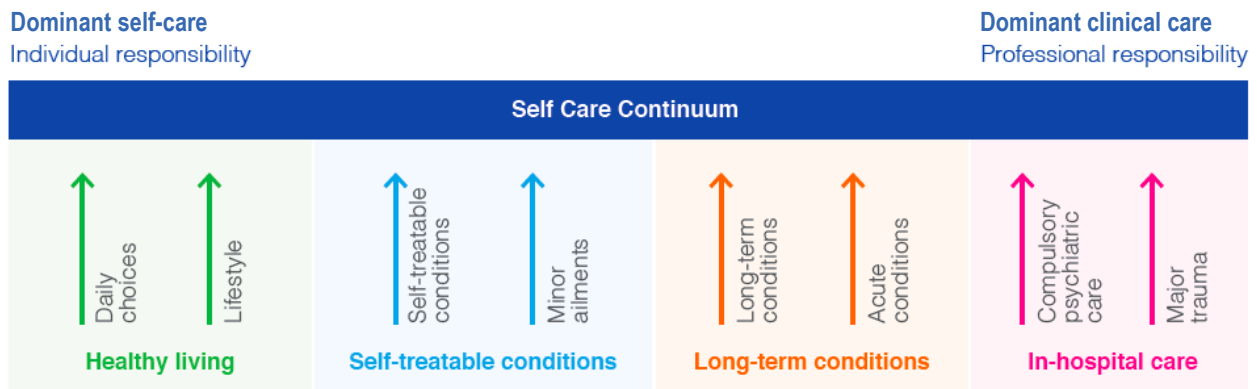
1. **NHS England and the Government develop a self-care hub, accessible via the NHS App and NHS website.**
   o This should:
      (a) Consolidate information on how to self-care, along with a library of publicly available tools to facilitate people to self-care
      (b) Include a list of conditions for which the public can self-care, and information on where to seek further information and/or access appropriate over-the-counter medications
      (c) Include a library of accredited and trustworthy apps which the public can use to facilitate their ability to self-care for minor ailments.

2. **ICSs include information on self-care on their websites. NHS England should also provide support and national guidance on information to include on these pages.**
   o These pages should include information on how to:
      (a) Self-care for minor ailments
      (b) Seek self-care advice and information via NHS digital services, including NHS 111
      (c) Seek advice and information from pharmacy services, where appropriate.

3. **NHS England maximise opportunities to receive self-care advice and information via NHS 111 online and telephone service.**
   o This should include:
      (a) A review of the NHS 111 pathway and algorithm to ensure advice on self-care is delivered at all appropriate stages of throughout the triage process
      (b) Publication of data on the number and proportion of users provided with self-care information or advice for specific conditions to allow assessment of where further self-care support may be required
      (c) Increasing public awareness of NHS 111 services and for what conditions it is most appropriate to utilise these.

This report outlines the findings of our updated audit and recommendations on how NHS can unleash the potential of digital tools to support self-care.

Background

What is self-care?

Self-care comprises the actions that individuals take for themselves, as well as on behalf of and with others, to develop, protect, maintain, and improve their health, wellbeing and wellness. This audit focuses on information related to the minor ailments and self-treatable conditions section of the Self-care Continuum.

Dominant self-care
Individual responsibility

Dominant clinical care
Professional responsibility

Self Care Continuum

Healthy living	Self-treatable conditions	Long-term conditions	In-hospital care
Daily choices / Lifestyle	Self-treatable conditions / Minor ailments	Long-term conditions / Acute conditions	Compulsory psychiatric care / Major trauma

Source: Self Care Forum

The evolution of digital healthcare

In November 2020, PAGB published an audit of publicly available digital tools and platforms.[i] Conducted between April and June 2020, the audit looked at how digital tools evolved during the first wave of the COVID-19 pandemic, to help individuals self-care for minor ailments and therefore minimise unwarranted in-person contact with primary care services.

Since the 2020 audit was conducted, NHS digital channels have undergone substantial change, in part due to, or accelerated by, the pandemic but also in response to Government policy. In November 2021, a review commissioned by the Government recommended that a new Transformation Directorate be established at the centre of NHS England (NHSE) to bring together its previously disparate digital functions and accelerate the introduction of digital tools and innovations into NHSE.[ii] Shortly after the Directorate was established in early 2022, the Government published its '*Plan for Digital Health and Social Care*', outlining a series of commitments including measures to improve NHSE's digital services.[iii]

- **July 2020** – Matt Hancock MP (then Secretary of State for Health and Social Care) commissions a review into national leadership of digital transformation, led by Laura Wade-Gery, Chair of NHS Digital, to find ways to help the NHS digitise "harder and faster", following ministerial concern during the initial wave of COVID-19 that the digital response had been inadequate[iv]
- **November 2021** – The Wade-Gery review publishes its findings and recommends the creation of a new Transformation Directorate at the heart of the NHS to drive digital transformation[v]
- **November 2021** – Sajid Javid MP (then Secretary of State for Health and Social Care) confirms that he accepts the findings of the report and announces that all bodies with national responsibilities for digital transformation (NHSX), IT and data services (NHS Digital), and delivery will be merged with NHS England (NHSE)[vi]

- **February 2022** – NHSE's Transformation Directorate is established, starting with the merger of NHSX and NHSE[vii]
- **June 2022** – The Department for Health and Social Care (DHSC) publishes its 'Plan for Digital Health and Social Care', outlining how learnings from the COVID-19 pandemic will be taken forward[iii]
- **April 2023** – The merger of NHSX, NHS Digital and data and digital functions held within NHSE to form NHSE's Transformation Directorate is complete[viii]

In light of the pace of transformation within NHSE, PAGB has conducted a further audit focusing on NHS digital channels to examine how they have evolved since 2020 and to assess the extent to which these tools now encourage and support the public to self-care. Analysing the accessibility of information and advice of self-care and variations in access to this across England, the audit also outlines where opportunities for improvement and enhancement exist and how this may be achieved.

Public trust and uptake of digital healthcare

PAGB's 2020 self-care survey highlighted an increase in trust and uptake of digital health tools among the public and demonstrated a greater willingness to self-care for minor ailments and COVID-19 symptoms.[i] In 2022, PAGB conducted another survey to re-assess public attitudes to self-care, to see if progress made during the pandemic had changed or had been cemented into the way the public interact with the NHS for minor ailments.[ix]

While the survey found that the proportion of the public who would consider self-care as their first option had fallen from 69% in 2020 to 64% in 2022, the survey also revealed a 7% increase in the public's ability to find trustworthy health information via online resources, and a 3% increase in their ability to spot information that is not trustworthy.[ixx] However, the survey also noted that the public are becoming increasingly overwhelmed by the amount of health information online, with the results showing an 8% rise in this feeling since 2021.[ix]

Ensuring the public have reliable access to trustworthy health information is essential for encouraging and supporting self-care for minor ailments, and to encourage appropriate use of primary care services.[x] As NHS digital channels have evolved to become the predominant means of accessing health information in the UK, it is important to evaluate the extent to which these tools are helping people to overcome the challenges revealed by PAGB's 2022 self-care survey, and access reliable and trustworthy information on self-care.[ix]

Methodology

To assess the present ability of digital tools to facilitate the public to self-care, this audit reviewed and analysed NHS digital tools which the public can access for free and use to access information about their health and self-care, between February and May 2023. The channels examined by this audit included:

To investigate the usage and ability of certain NHS digital tools to support and encourage self-care, this audit utilised publicly accessible data sets, government documents and data procured through parliamentary scrutiny. These sources included:

- NHSE data sets, including:
  - NHS 111 Integrated Urgent Care Aggregated Data Collection (IUC ADC)
  - NHS 111 Minimum Data Set
  - NHS 111 online usage data[1]

- The following government and parliamentary documents:
  - Department for Health and Social Care (2022) *A plan for digital health and social care*
  - House of Commons Health and Social Care Committee Expert Panel (2023) *Evaluation of government commitments made on the digitisation of the NHS*

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[1] NHS 111 online data sets are not held in the public domain. Specific data for this audit was requested and procured via a written parliament question – this is accessible on the UK Parliament Hansard website.[xxii]

Audit findings

NHS App

Launched at the end of 2019, the NHS App provides the public with easy access to trusted, credible health information and other digital NHS services.[xi] The NHS App is available for free on smart mobile devices and provides convenient access for the public to their health data, and advice and information on conditions.

What the 2020 audit found

Throughout the first wave of the COVID-19 pandemic, the NHS increased the functionality of the NHS App to reduce the public's reliance on in-person primary care services and to help support them access online services, information and advice. While NHS app users were able to access information on self-care for minor ailments, in order to find this, they first had to navigate a long, alphabetised list of conditions. There was no central hub where information on self-care could be found.

Although the NHS App was not optimised to allow easy access to self-care information, the 2020 audit found that the NHS Apps Library had potential to facilitate and encourage self-care beyond the NHS App.[i] However, at the time of the audit, the NHS Apps Library focused primarily on self-care for long-term conditions rather than self-care for minor ailments.

Changes since the 2020 audit

Throughout the pandemic, the NHS routinely updated digital tools including the NHS App to improve functions that allowed users to access information and care for themselves if they contracted COVID-19, as well as providing access to the digital COVID pass. These updates included directions to up-to-date guidance on the virus and links to relevant NHS website pages.

However, in June 2023, the Health and Social Care Committee's report from their inquiry on digital transformation in the NHS noted that future versions of the NHS App should bring additional benefits including improved *"functionality, integration and personalisation"*, and improve uptake of the App to ensure these benefits are effectively utilised by the public.[xii] They highlight that although the Government has committed to improving the App and increasing its use, further work is needed to achieve this and demonstrate how they will drive increased uptake.

In addition to changes to the NHS App, in December 2021, the NHS Apps Library was decommissioned, with patients now immediately directed to the NHS App or NHS website.[xiii] Although PAGBs 2020 audit found that the library focused predominantly on apps for the management of, and self-care for, long term conditions – for example, cancer and cardiovascular disease – the library was deemed by the audit as a useful tool that had the potential to enhance the accessibility of accredited apps that provide self-care advice, symptom checkers and digital triage. The decommissioning of the library reduced the number of options available to the public to access information on self-care or to use these trustworthy apps to monitor and track their conditions.

NHS website

The NHS website provides easily accessible resources and information on health conditions and medicines – including pages on over 1,200 different conditions. Condition-specific advice provided on the NHS website is routinely updated in accordance with the most recent medical research and advice, with the entire website being reviewed every three years.[xiv]

What the 2020 audit found

PAGB's 2020 audit found that, similar to the NHS App, when locating relevant information on self-care through the NHS website, users must navigate a long, alphabetised list of conditions and treatments.

Although the website's "Health at home" page – now "NHS @home" – provided information on accessing online primary care services, including ordering repeat prescriptions, contacting GPs, and managing long-term conditions, it did not refer to or encourage self-care for minor ailments.[xv] The audit recommended that this service could be expanded to included self-care for minor ailments.

Changes since the 2020 audit

In the 'Plan for Digital Health and Social Care', the Government noted it will "*increase the functionality of the NHS App and website to offer features that help people stay well, get well and manage their health.*"[iii]

However, a 2023 evaluation of Government commitments on the digitisation of the NHS highlighted that the funding model put forward by DHSC for this purpose is "*not sufficiently agile*" to manage the increase in NHS App registrations without compromising other digital tools such as the NHS website.[xvi] The review also noted that despite Government commitments to increase funding for National Digital Channels, funding for digital services had since been reduced, impacting on the Government and NHS's ability to improve these services.[xvi]

Yet, despite reductions in overall funding for digital channels, during the 12 months between October 2021 to September 2022, the NHS website received 1.2 billion visits.[xvii] This is a significant increase from 2019 during which the website recorded an average of 40 million visits per month (approximately 480 million per year), demonstrating the public's willingness to utilise this channel to access healthcare information.[xviii]

NHS website
Visits from October 2021 to September 2022:[xvii]

23M per week

2,300 per minute
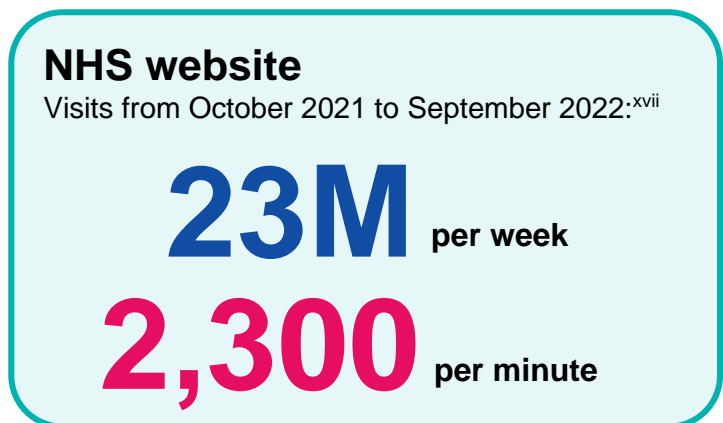
Improvements to better enable self-care

Contrary to the recommendations in the 2020 audit, the NHS App remains without a central hub for self-care. Users must still navigate an alphabetised list of conditions and treatments to locate relevant information on self-care or use the link to the NHS 111 online triaging service to find self-care recommendations for their ailments.

In addition, although data on the NHS website usage demonstrates the demand for health and self-care information via the website, it is unclear if the public can find suitable information on how to self-care for their minor ailments using the site. Like the NHS App, website users must still navigate an alphabetised list of conditions and treatments to locate relevant information on self-care.

To improve these digital tools, we recommend that **a self-care hub, accessible via both the NHS App and NHS website, is developed to better facilitate the public to self-care for minor ailments and provide easy access to information and advice**. The self-care hub should:

(a) Consolidate information on how to self-care, along with a library of publicly available tools to facilitate people to self-care
(b) Include a list of conditions for which the public can self-care, and information on where to seek further information and/or access appropriate over-the-counter medications
(c) Include a library of accredited and trustworthy apps which the public can use to facilitate their ability to self-care for minor ailments.

Integrated Care System/Integrated Care Board websites

In July 2022, 42 Integrated Care Systems (ICS) – each with an associated Integrated Care Board (ICB) – were established across England, replacing Clinical Commissioning Groups (CCGs), which were previously responsible for the planning and commissioning of health care services for their local area.

Each ICS is responsible for providing services for its local region, with the average population for each ICS being 1.5 million. In line with this, each ICS is also responsible for hosting and maintaining their own respective websites and ICB webpages, which their population can use to access information about their local health systems and public health guidance.

As each ICS is responsible for the content of their websites with individual agency for what they deem to be most important for their population, information available to the public on self-care can vary across ICS websites, and therefore the country. Since ICSs were not established until two years after the publication of PAGB's initial digital audit in 2020, these websites were not included in our original analysis; however, given their important role in providing information about local services, as well as information for those seeking advice on their symptoms or conditions, PAGB believes it is vital that ICS websites are fit for purpose.

ICS website self-care pages

Through our review of the 42 ICS websites across England, we found:

32 ICSs included dedicated pages on self-care

Although all 42 ICS websites did contain information on pharmacy and NHS digital services, for the remaining 10 ICS websites there was not a dedicated page on self-care on which this information was consolidated.

Of the 32 ICS websites which have a dedicated page on self-care:

29 contained information about minor ailments for which the public can self-care

21 contained information or links to information about accessing digital tools to facilitate self-care, for example NHS 111 services

29 contained information about pharmacy services available to facilitate self-care

Imaged produced by Datawrapper

Figure 1
Map of ICS borders in England

Among those ICS websites which included pages on self-care, there was wide variation in the depth of information provided. For example, some websites included information on how to self-care for a wide range of individual minor ailments along with advice on when to seek care from a pharmacist or NHS 111 services – however, others provided only minimal information, including one which outlined only a definition of self-care without providing any further information.

In addition, the audit found variation across England in whether information on self-care was held on ICS websites or ICB webpages. As ICB webpages cannot be found through the ICS website or vice versa – instead acting as separate websites – there is an added barrier for the public to overcome in order to access information on self-care if this information is available on one site but not the other.

Improvements to better enable self-care

The level of variation in available information on self-care across England through ICS websites presents unwelcome opportunities for regional health inequalities to become engrained across the country. Although the devolved nature of ICS commissioning and service delivery presents challenges in ensuring the provision of information across the country is consistent, measures should be taken to ensure all people have equitable access to information regardless of the region they live in.

To improve this digital tool, **we recommend that all ICSs should include information on self-care on their websites, and that NHS England should provide support and national guidance on information to include on these pages.** We recommend that these pages include information on how to:

      (a) Self-care for minor ailments
      (b) Seek self-care advice and information via NHS digital services, including NHS 111
      (c) Seek advice and information from pharmacy services, where appropriate.

NHS 111 services

Launched in 2014, NHS 111 services provide access to medical advice for urgent, but non-life-threatening health conditions, allowing the public to ask questions about their symptoms and signposting them to the most appropriate healthcare professional and care setting.

NHS 111 is split into two services which allow users to either triage their symptoms through an online symptom checker, or to speak directly with an NHS 111 operator. Both services utilise a triaging algorithm, operated by NHS Pathways, which, through a series of questions, identifies the most appropriate recommendation for their condition, or the most appropriate healthcare professional or setting they should be referred to for further advice.[xix]

Where appropriate, the algorithm can recommend self-care to the user, providing them with advice on how to treat or manage their condition, or directing them to a pharmacist who can provide further information on medicines or over-the-counter treatments.

What the 2020 audit found

The 2020 audit found that, in response to the pandemic, improvements had been made to the algorithms used by the NHS 111 telephone service to make the service less risk averse and to increase the number of callers directed towards self-care where appropriate, with the online service receiving similar updates.

The audit concluded that these improvements should be expanded to other digital triaging systems used by healthcare providers and that data on how people were using triaging systems should be routinely collected, via the tools themselves, to allow policymakers to develop a greater understanding of how people navigate digital self-care, and therefore how to drive improvements.

Changes since the 2020 audit

Telephone service

During the first wave of the pandemic, the NHS 111 telephone service saw an increase the calls it received, rising from 17.7 million in 2019[xx] to 20.7 million in 2020[xx] – most likely due to efforts by the Government, NHS, and communities to reduce pressure on in-person primary care services in response to the COVID-19 pandemic. However, in the years succeeding the pandemic, the trend has continued upwards with the number of calls to the telephone service reaching 22 million in 2022, suggesting the public have become more willing to use this digital channel to access information and healthcare.[xxi]

In April 2021, the telephone service updated the way it collects data on call outcomes to include the number and proportion of callers recommended self-care. Prior to this, data was recorded for recommendation for home care or provision of health information. In addition, prior to 2021 the proportion of callers referred to pharmacy was recorded – however this category has now been split to record those referred to a community pharmacy for prescription medication and those referred for a minor illness.

Data provided by NHS England on the outcomes of calls made to the NHS 111 telephone service[2] highlights that the proportion of callers who were recommended self-care dropped significantly in each region of England from April 2021 to March 2023 (see figure 3 in appendix).[xxi]

Online

2020 saw a significant increase in the number of sessions on NHS 111 online, rising from 1.9 million in 2019 to 12 million in 2020.[xxii] However, in contrast to the telephone service, which maintained high usage after the height of the COVID-19 pandemic in 2020, online sessions decreased to 6.4 million and 7.2 million sessions in 2021 and 2022 respectively.[xxii] Nonetheless, this is still significantly higher than the number of sessions in 2019,[xxii] suggesting the use of online symptom checkers has become more common place following the pandemic.
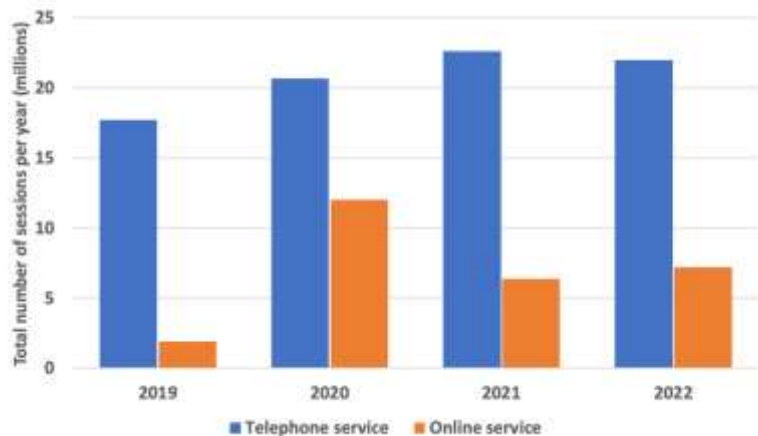

Figure 2- Number of visits to NHS 111 telephone and online services from 2019 to 2022

Data[3] on the overall proportion of NHS 111 online sessions resulting in a recommendation to self-care in England also highlights a significant increase in self-care recommendations from 2019 to 2020, rising by 17% (see figure 4 in appendix) – however this has decreased year-on-year until 2022, during which recommendations to self-care dropped to their lowest point in 4 years.[xxii] A similar story is found across the seven commissioning regions in England, with recommendations to self-care rising from 2019, and then decreasing each year until 2022 to their lowest points (see figure 5 in appendix).[xxii]

Improvements to better enable self-care

Given the increased use and reliance on NHS 111 services, it is encouraging to note that their functionality has evolved and grown to reflect the needs of the public and ensure advice given to users is continuously reviewed and updated. PAGB welcomes the introduction of both the category for recommendations for self-care and for referral to a community pharmacy for minor illness by NHS 111, as these indicate that NHSE increasingly views self-care as an important part of the primary care pathway and is taking steps to encourage the public to self-care, where appropriate.

However, given the mixed picture and variation in use of the telephone and online services since 2019, with usage rising and falling year-on-year, it is unclear if efforts to encourage and support self-care during the pandemic are in decline – for example by triage algorithms becoming more risk adverse, and recommending more in-person care – or if the public are demonstrating a renewed preference for in-person care with primary care services as opposed to online platforms (see figures 3-5 in appendix).

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[2] In addition to changes made in the way NHS 111 data is collected, as outlined above, available data also includes gaps where local services and providers have stopped providing data for unspecified reasons. In addition, the data includes variations in the number of calls and advice which could be attributed to the waves of the COVID-19 pandemic.

[3] NHS England provided information on how data from each commissioning region was collected. In this, they caveat that during part of 2020 users were not asked to provide their postcode when completing the simplified COVID-19 triage system, meaning these sessions were not recorded at commissioning region level – the average of these data therefore do not match the national level data.

To improve the ability of NHS 111 services to facilitate and encourage self-care, **we recommend that NHS England maximise opportunities to receive self-care advice and information via NHS 111 online and telephone service**. This could be achieved through:

(a) A review of the NHS 111 pathway and algorithm to ensure advice on self-care is delivered at all appropriate stages of throughout the triage process
(b) Publication of data on the number and proportion of users provided with self-care information or advice for specific conditions to allow assessment of where further self-care support may be required
(c) Increasing public awareness of NHS 111 services and for what conditions it is most appropriate to utilise these.

Summary and recommendations

Although the NHS has made progress in the development of digital tools to facilitate the public to self-care, primarily stimulated by the COVID-19 pandemic, there is evidence to suggest that the public's use of these services to self-care has waned since the pandemic.

Supporting the public the self-care for minor ailments is vital to supporting primary care services which are currently facing workforce shortages and high demand. Ensuing that digital tools are available to the public to act as alternative front doors to the NHS is key to enabling the public to have timely access to care and advice, and to reducing pressure on GP and A&E services for non-emergent conditions.

This audit has found that since 2020, the Government and NHS have taken steps to improve the ability of digital tools to facilitate self-care, however this has not been consistent across all platforms – for example, NHS 111 has introduced a new category within its pathway for recommendations to self-care, whereas the NHS App has seen no significant improvements in facilitation of self-care.

Additionally, we found that variation across the UK in the provision of information in how to self-care on ICS websites could result in inequalities in access to information on self-care for minor ailments, therefore resulting in further variations in knowledge of NHS digital tools and services, and how best to utilise them.

The Government and NHS must look to optimise digital tools and educate the public on how and when to use these. These actions will help to drive equitable access to self-care advice and information, increase willingness among the public to utilise these tools as a first step to receiving care – where appropriate – and continue efforts to protect over-stretched primary care services from increasing patient demand for in-person care.

Building on the recommendations from PAGB's 2020 digital audit, we recommend that:

1. **NHS England and the Government develop a self-care hub, accessible via the NHS App and NHS website.**
   - This should:
     - (a) Consolidate information on how to self-care, along with a library of publicly available tools to facilitate people to self-care
     - (b) Include a list of conditions for which the public can self-care, and information on where to seek further information and/or access appropriate over-the-counter medications
     - (c) Include a library of accredited and trustworthy apps which the public can use to facilitate their ability to self-care for minor ailments.

2. **ICSs include information on self-care on their websites. NHS England should also provide support and national guidance on information to include on these pages.**
   - These pages should include information on how to:
     - (a) self-care for minor ailments
     - (b) seek self-care advice and information via NHS digital services, including NHS 111
     - (c) seek advice and information from pharmacy services, where appropriate.

3. **NHS England maximise opportunities to receive self-care advice and information via NHS 111 online and telephone service.**
   - This should include:

(a) A review of the NHS 111 pathway and algorithm to ensure advice on self-care is delivered at all appropriate stages of throughout the triage process
(b) Publication of data on the number and proportion of users provided with self-care information or advice for specific conditions to allow assessment of where further self-care support may be required
(c) Increasing public awareness of NHS 111 services and for what conditions it is most appropriate to utilise these.

Appendix

Figure 3 – Proportion of callers recommended self-care via NHS 111 telephone service by region in England[xxi]
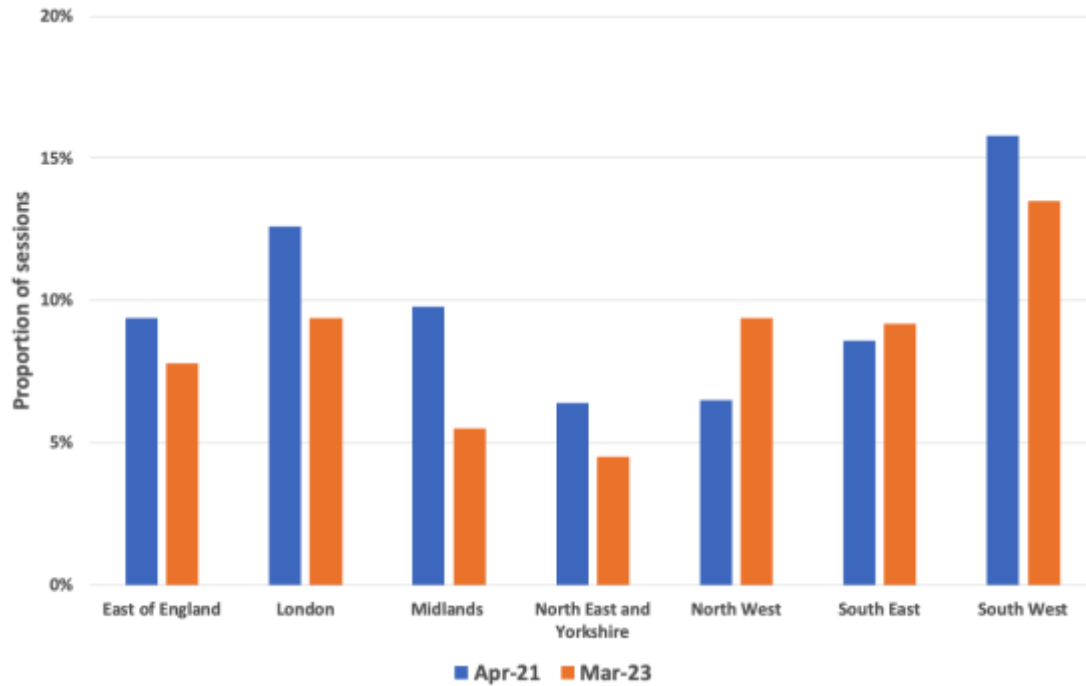

	Number of callers recommended self-care via NHS 111 telephone service	
	Apr-21	**Mar-23**
East of England	9.4%	7.8%
London	12.6%	9.4%
Midlands	9.8%	5.5%
North East and Yorkshire	6.4%	4.5%
North West	6.5%	9.4%
South East	8.6%	9.2%
South West	15.8%	13.5%

Figure 4 – Proportion of NHS 111 online sessions resulting in recommendation to self-care in England[xxii]
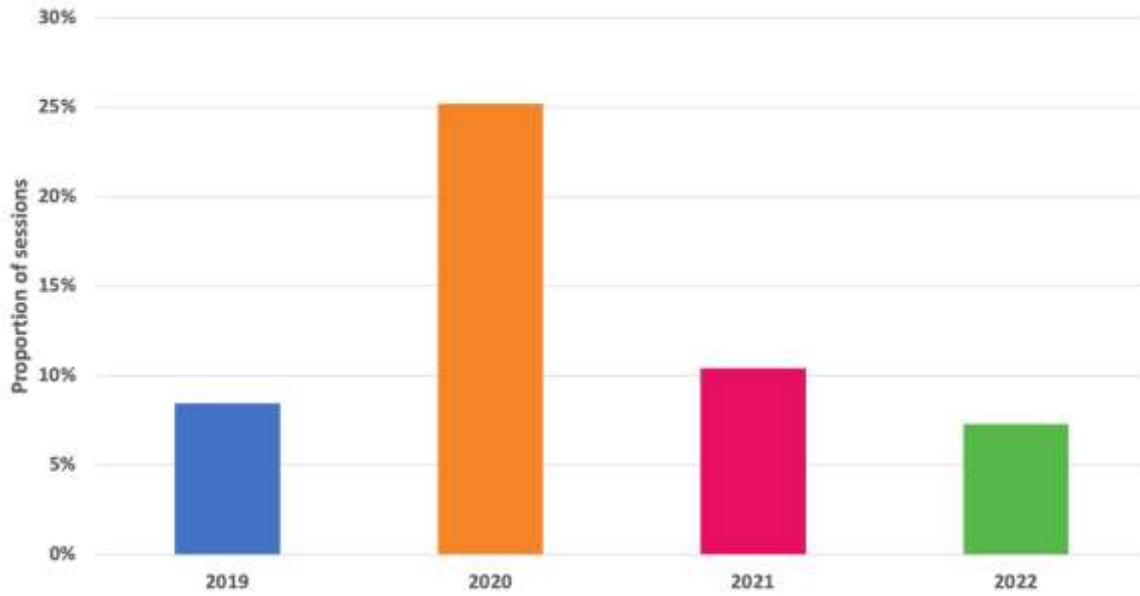
Reporting year	Proportion of sessions resulting in recommendation to self-care in England
2019	8.44%
2020	25.21%
2021	10.40%
2022	7.30%

Figure 5 – Proportion of NHS 111 online sessions resulting in recommendation to self-care by region in England[xxii]
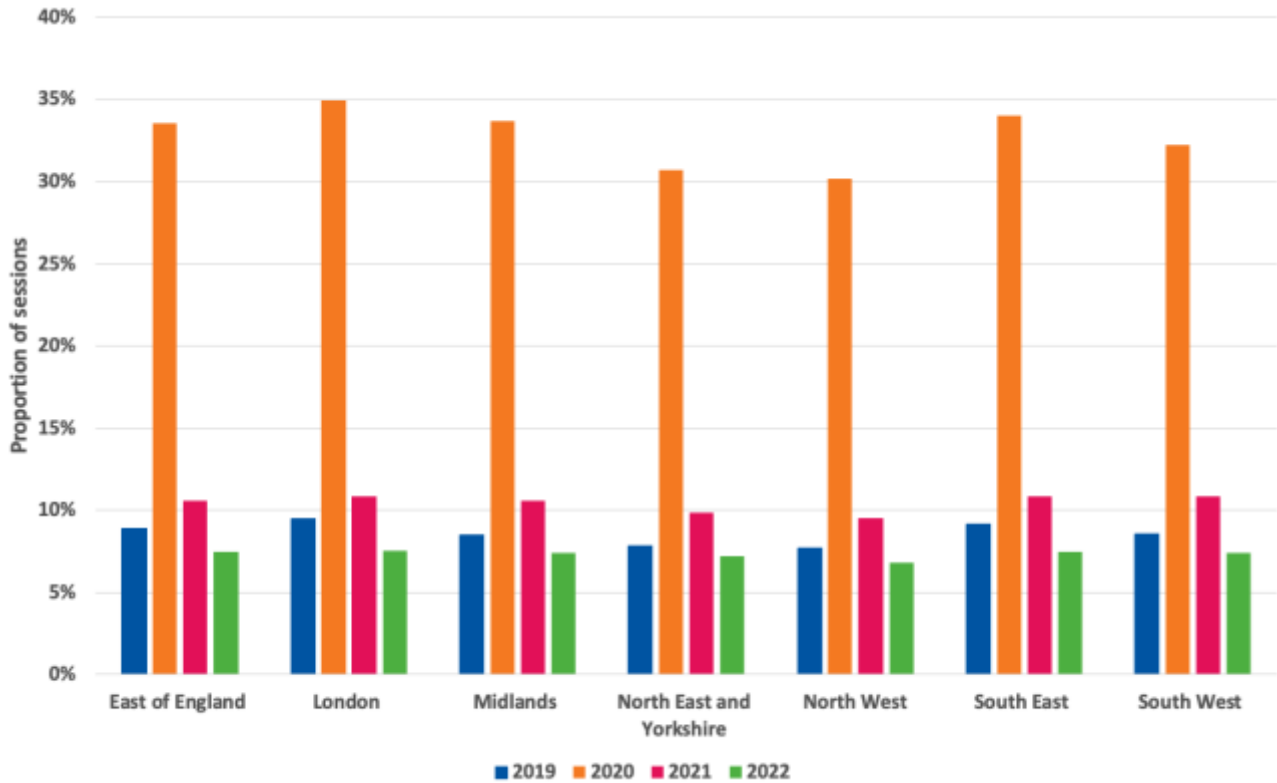
Region	2019	2020	2021	2022
East of England	8.90%	33.53%	10.56%	7.45%
London	9.49%	34.92%	10.85%	7.51%
Midlands	8.51%	33.65%	10.60%	7.42%
North East and Yorkshire	7.82%	30.71%	9.87%	7.19%
North West	7.68%	30.17%	9.55%	6.79%
South East	9.15%	33.99%	10.86%	7.44%
South West	8.56%	32.20%	10.81%	7.38%

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