

IDENTIFICATION AND ASSESSMENT OF DIGITAL TECHNOLOGIES TO ASSIST WITH THE **NHS HEALTH CHECK**

1. Executive Summary

1.1 Background

Digital health technologies (DHTs) offer huge opportunities to health and care systems in a wide variety of scenarios. The increasing range of capabilities of these technologies are opening more and more areas of practice. The increasing maturity of the market is reflected in technologies that are now starting to have a strong track record of delivery and a growing amount of compliance and conformance with relevant standards and regulations to match traditional health technology environments.

The broadening awareness and adoption of DHTs among both health and care professionals and the public, particularly because of the pandemic, also has the potential to improve inclusion in care pathways and public health interventions.

This project, therefore, involved an analysis of the digital health marketplace to identify existing DHTs capable of delivering key elements of the NHS Health Check. The NHS Health Check as a process does theoretically lend itself well to some degree of digitisation. The principle elements of the check revolve around:

- Data capture
- Data analysis and risk stratification
- Communication and support with behaviour change and clinical management.

These are all features that are common in many DHTs. The typical benefits that a DHT can bring to a traditional 'offline' process are:

- Greater access – DHTs provide the opportunity for users to engage with a given process at a time and place that is convenient to them.
- System efficiency – DHTs can, to an extent, deliver a 'channel shift' with users taking responsibility for aspects of a process that would traditionally fall to a healthcare professional.
- Continuous monitoring and behavioural change support – these tools are by their very nature, capable of enabling ongoing information capture and analysis which fundamentally changes the 'point in time' nature of some health care system processes. In addition, there is an increasing sophistication in the use of behaviour change techniques that can augment simple service signposting to support a more impactful outcome from processes like the NHS Health Check.

Public Health England (PHE) commissioned ORCHA (the Organisation for the Review of Care and Health Apps) to undertake this analysis alongside the PHE team. ORCHA's mission is to get more people using and benefiting from great DHTs. A key aspect of this involves supporting health and care systems to identify and integrate these DHTs and services into key processes and care pathways.

This work was carried out by ORCHA in conjunction with PHE between December 2020 and April 2021.

1.2 Method

The initial challenge was to identify existing DHTs that have the relevant features and functionality to support the NHS Health Check. PHE stipulated some core requirements that a DHT should have. PHE also stipulated that a DHT needed to be able to demonstrate that the relevant functionality already existed, rather than being a capability that could be developed.

ORCHA proposed the use of a graduated search and assessment approach to assist with the identification of DHTs which met the requirements. This approach is effective in supporting a wider market analysis and DHT search. The graduated approach naturally increases the level of assessment as the process moves forward from 'long listing', through to final DHT selection.

1.2.1 Requirements

The requirements which DHTs needed to adhere to in order to recreate a full NHS Health Check were provided by PHE and can be found in the table below (section 3.1.1). These were used as per the national best practice guidance and regulations which can be found at <https://www.legislation.gov.uk/uksi/2013/351/regulation/4/made> and <https://www.healthcheck.nhs.uk/commissioners-and-providers/national-guidance/>.

Note: A key stipulation underpinning the requirements was that the relevant features and functions were already in existence at the time of the ORCHA assessment. This did not require the relevant features to be deployed in a live version of a product but did preclude any DHT not able to demonstrate the existence of the feature and function within, at a minimum, a development environment.

1.2.2 Identification of DHTs

The initial longlist was compiled through four different techniques:

- Utilising ORCHA's existing repository of around 5,000 assessed DHTs to identify a fit with the requirements.
- Undertaking a wider market search using our skilled digital health analysts to identify other potential DHTs that met the long list criteria through web searches (including a review of the NHS Apps Library).
- Undertaking a wider market search using our skilled digital health analysts to identify other potential DHTs that met the requirements through an online app intelligence platform which contains detailed categorisation information called 42Matters.
- Working with the PHE team to advertise an open call allowing DHTs that could meet the key requirements to self-nominate.

1.2.3 Assessment Approach

The initial longlisting process identified 99 DHTs that were of potential relevance. ORCHA undertook a series of further and increasingly more detailed assessments to refine that longlist to a final shortlist of nine DHTs that were established as meeting the requirements.

Alongside this functional analysis, ORCHA also undertook progressively more detailed analysis of the relevant DHTs' compliance with standards and regulations as well as supporting a clinical overview of the final shortlisted DHTs. This process included an NHSX Digital Technologies Assessment Criteria (DTAC) compliance analysis.

1.3 Results

The final shortlist consisted of nine DHTs which met all the requirements and were willing to engage with ORCHA through the assessment process.

The assessment results have not been included in this report as they contain commercially sensitive information.

1.4 Conclusions

The conclusions that can be drawn from the process can be summarised as follows:

- Several DHTs have the key features to support the delivery of the NHS Health Check. Most of these were in the relatively early stages of their evolution for this specific use and several were developed but had not been widely trialled.
- There was still a reliance on healthcare professionals or self-reported data inputs in relation to cholesterol measurement and blood pressure readings. However, some products had started to explore the opportunity to use home sampling kits for cholesterol measurement and these technologies are becoming increasingly mature. Blood pressure readings are likely to still require users to attend either at local pharmacies or GP surgeries.
- In the case of the patients being required to attend pharmacies, this should still reduce demand and increase access, since pharmacies tend to be open longer hours and are more numerous than GP surgeries. Additionally, the project identified several 'kiosk' type products, which could be deployed into other public spaces (eg, leisure centres, libraries, etc) as alternative collection points.

The project has demonstrated that DHTs already exist to support NHS Health Check activities. The opportunity is to assess the feasibility of using these tools and the various case uses they demonstrate to better understand how far these technologies can be used to deliver the potential benefits outlined in this report.



Contents

Executive Summary	2
Background	4
HSE Objectives	5
HSE Requirements	5
Recommendations	6
1. Risk Management	6
2. Regulation	6
3. Review	7
4. Reimbursement	8
Delivery Mechanism	8
Phase 2: Digital Health Management Platform - Tallaght University Hospital	10
Population Insights and Data Analytics	11
Pricing	12
Account Management and Governance	13
Timeline	13
Further information about ORCHA	13
Next Steps	13

2. Introduction

DHTs offer huge opportunities to health and care systems in a wide variety of scenarios. The increasing range of capabilities of these technologies are opening up more areas of practice. The increasing maturity of the market is reflected in products that are now starting to have a strong track record of delivery and a growing level of compliance and conformance with relevant standards and regulations to match traditional health technology environments.

The broadening awareness and adoption of these tools among both health and care professionals and the public, particularly as a result of the pandemic, will likely ease their inclusion in more care pathways and areas of public health.

This project, therefore, involved an analysis of the digital health marketplace to identify which DHTs existed that were capable of delivering the key requirements of the NHS Health Check. The NHS Health Check as a process does theoretically lend itself well to some degree of digitisation. The principal elements of the check revolve around:

- Data capture
- Data analysis
- Communication and support with behaviour change and clinical management

These are all features that are common in many DHTs. The typical benefits that a DHT can bring to a traditional 'offline' process are:

- **Greater access** – DHTs provide the opportunity for users to engage with a given process at a time and place that is convenient to them. There is no requirement to make appointments and fit around the availability of busy and stretched healthcare professionals. In the NHS Health Check context, while it is likely that there will need to be some healthcare professional involvement, depending on the tool, this could be minimised and made more or less remote, allowing both users and professionals to better manage their own schedules.
- **System efficiency** – DHTs to an extent deliver a 'channel shift' with users taking responsibility for aspects of a process that would traditionally fall to a healthcare professional. Again, while in the NHS Health Check scenario, some elements of the check might still require human intervention, many elements can theoretically be managed using these tools.
- **Continuous monitoring and behavioural change support** – These tools are, by their very nature, capable of enabling ongoing information capture and analysis which fundamentally changes the 'point in time' nature of some health care system processes. Additionally, the increasing sophistication in the use of behaviour change techniques can augment simple service signposting to support a more impactful outcome from processes like the NHS Health Check.

PHE commissioned ORCHA to carry out a project to identify and assess existing digital products that can deliver a complete NHS Health Check.

The project goal was the identification of existing DHTs able to deliver a complete NHS Health Check. The DHTs were identified through searches and an open call and then evaluated through various assessments including the ORCHA Baseline Review (OBR), NHSX Digital Technology Assessment Criteria (DTAC) and a clinical analysis. This work was carried out by ORCHA with support from PHE.

The next step after this project is for some products to be used in a brief field evaluation to explore the feasibility of using such digital technologies to support the delivery of the NHS Health Check. This report was written by ORCHA and describes the project method and results.

3. Method

3.1 Method

The initial challenge was to identify existing DHTs that have the relevant features and functionality to support the NHSHC. PHE stipulated some core requirements that a DHT should have. PHE also stipulated that a DHT needed to be able to demonstrate that the relevant functionality already exists, rather than being a capability that could be developed.

ORCHA proposed the use of a graduated search and assessment approach to assist with the identification of DHTs which met the Requirements. This approach is effective in supporting a wider market analysis and search. The graduated approach naturally increases the level of assessment as the process moves forward from 'long listing', through to final DHT selection.

3.1.1 Requirements

The Requirements which DHTs needed to adhere to be able to recreate a full NHS Health Check were provided by PHE and can be found in the table below. These were based on the national best practice guidance and regulations which can be found at <https://www.legislation.gov.uk/uksi/2013/351/regulation/4/made> and <https://www.healthcheck.nhs.uk/commissioners-and-providers/national-guidance/>.

Note: A key stipulation underpinning the requirements was that the relevant features and functions were already in existence at the time of the ORCHA Assessment. This did not require the relevant features to be deployed in a live version of a product but did require any DHT to be able to demonstrate the existence of the feature and function within, at a minimum, a development environment.

Table: Requirements for inclusion, based on measures required for the NHS Health Check

Data Collection	Data Calculation	Data Communication
Collects Age	Calculates QRISK Score	Communicates Smoking Status
Collects Sex	Calculates FAST or AUDIT score	Communicates Body-Mass Index
Collects Smoking Status	Calculates Diabetes Risk	Communicates Cholesterol
Collects Family History of Heart Disease	Calculates BMI	Communicates Blood Pressure
Collects Ethnicity		Communicates Cardiovascular Risk Score
Collects Cholesterol Level		Communicates Diabetes Risk Score
Collects Blood Pressure		Communicates Alcohol Score
Collects Physical Activity Level		Communicates Physical Activity Score
Collects Alcohol Consumption		

3.1.1.1 Interoperability

A requirement for the NHS Health Check is that the collected data and results are shared with the individual's GP. Therefore, this assessment aimed to understand the interoperability of the DHTs with GP IT systems. There are several ways for a third-party application to interoperate with the principal GP IT systems. The primary route is known as the IM1 framework (otherwise known as GP IT Futures) - a central approach administered by NHS Digital that enables an application owner to gain access to a specified set or integration options for all principle GP Systems. The IM1 Pairing scheme allows third-party systems to interoperate with EMIS, Vision and SystmOne which are collectively known as Principal Care System (PCS). Prior to the IM1 scheme, there was another scheme known as GP Soc that supported a similar approach, but which was more reliant upon GP System Vendor support. Another route to interoperability with these systems for a third-party application would be a direct 'bilateral' agreement with individual system vendors. Additionally, a product could interoperate via GP-Connect which is a two-way system and has clinically driven controls on sharing of structured data. Alternatively, the product could interoperate through arrangements with Regional and Local Information Exchanges, governance of these are through the regional/local NHS who govern the exchanges. We investigated what, if any, interoperability capabilities the target applications had, with information detailed in the results section of this report.

3.1.2 Identification of Products

The initial search led to a long list of 99 potential DHTs that appeared to have the relevant characteristics to meet the requirements.

This initial longlist was compiled through four different techniques:

- Utilising ORCHA's existing repository of around 5,000 assessed DHTs to identify a fit with the requirements.
- Undertaking a wider market search using our skilled digital health analysts to identify other potential DHTs that meet/met the long list criteria through web searches (including a review of the NHS Apps Library).
- Undertaking a wider market search using our skilled digital health analysts to identify other potential DHTs that met the requirements through an online app intelligence platform, called 42Matters which contains detailed categorisation information.
- Working with the PHE team to advertise an open call allowing DHTs that could meet the key requirements to self nominate.

3.1.2.1 ORCHA Database Search

ORCHA holds a large repository of data categorising the functional characteristics of a huge range of DHTs, compiled through regular review processes.

The following characteristics were used for the search of a long list of relevant DHTs.

- **Data Collection** - whether DHT collects input health data as part of the review process. A DHT would need to collect health data to perform the core assessment of the NHS Health Check.
- **Data Calculation** - whether a DHT contains an algorithm which can calculate a risk profile for a user.
- **Data Communication** - whether a DHT has the functional capability to share data with a healthcare professional, which is necessary for the NHS Health Check.
- **Accessibility** - whether a DHT has shown to be compliant with Web Content Accessibility Guidelines (WCAG) 2.1 AA and 2.2 AA. This provides a sense of equity of access, which is important for the NHS Health Check.

The results of the searches were then triaged by the ORCHA team for compliance with the requirements.

3.1.2.2 Web Search

A web search for relevant DHTs was also completed using the following search terms and obvious variants of these terms:

Cardiovascular apps	Blood pressure apps	Cholesterol apps
Cardiovascular health check apps	Digital blood pressure monitoring	Cholesterol Tests Online
Cardiovascular health check online	Blood test apps	QRISK apps
Cardiovascular digital	Heart apps	Midlife Health Check Online
Digital health checks	Heart health apps	Midlife Health MOT Online
Online health checks	Heart health checks online	Health MOT Online
Web health checks	Hypertension apps	Health Risk Profile Tool

This was carried out using the Google search engine. The results of these searches were then screened for their compliance with the requirements. This screening was carried out by relevant ORCHA team members who understood the requirements of this project.

The NHS App Library was also scanned for DHTs which could recreate the NHS Health Check; however, no products relevant to this project were identified from this source.

3.1.2.3 DHT Description Search

ORCHA has access to the 42Matters repository as part of its business as usual activities. Through this repository, DHT descriptions on both the Google Play and iOS app stores can be searched. This repository includes relevant meta-data about DHTs which may be useful for the shortlisting process, such as language and country availability. The 42Matters repository was searched using the following search terms:

Health check	Blood pressure	Hypertension
Cardiovascular health check	Digital blood pressure monitoring	Cholesterol
Cardiovascular digital	Blood test	Cholesterol tests
Digital health checks	Heart	QRISK
Online health checks	Heart health	Health Risk Profile Tool
Web health checks	Heart health checks	Health MOT Online

The results of this search were screened by the relevant ORCHA professional and documented.

3.1.2.4 Open Call

DHT owners/developers were also invited to self-nominate their products for consideration in this project. ORCHA leveraged their extensive DHT owner/developer community and put out an open call through their social media platforms and direct mailing list. PHE also publicised the open call via Twitter. The open call sought interest based on DHTs that met the requirements.

Owners/developers were able to submit a nomination between the 2nd December 2020 and 16th December 2020.

4. Results – Final DHT Shortlist Functional Description

4.1 Integrated Health Systems

Web or Mobile App:

Web App

Patient or Clinician Facing:

Clinician Facing only

Interoperability Status:

Not interoperable with IM1 Systems
Interoperable with EMIS

Other Key Features:

Reports can be printed or emailed to patient
Referral system available after every health check.

Description:

Integrated Health System is a DHT designed for clinicians to carry out health checks. The health check can be carried out by the clinician over the phone or in the community. On completion of the health check, the clinician can produce a GP report, which can be printed and sent to EMIS. A Client Report can be produced and sent to the patient via email.

Additionally, through Integrated Health System, the clinician can refer patients to behaviour change services via email or short message service (SMS). The system then tracks whether the suggested action, i.e. the referred service, has been initiated by the patient.

4.2 Tickertest

Web or Mobile App:

Web App

Patient or Clinician Facing:

Clinician Facing and Patient Facing

Interoperability Status:

Interoperable with IM1 Systems

Other Key Features:

Platform provides the option for patients to carry out an at-home blood sample for cholesterol and diabetes testing in an NHS laboratory.

Description:

Tickertest is a simple patient facing DHT, which aims to provide a digital health check and captures data which is self-reported by the patient. It has a simple question and answer format, which is split into two parts: Part 1: Your Heart Health and Part 2: Diabetes and Lifestyle. The clinician can request a patient completes a health check via text message with clickable link to Tickertest.

Since the patient is expected to self-report their blood pressure and cholesterol, they can leave these sections blank and continue to the results page. If the patient would like to have their blood pressure taken at no expense, the solution informs the patient of local pharmacies which can carry this out. If the patient is calculated to have above a pre-set CVD risk limit (20%), they are urged to take the free, optional at-home blood sample for cholesterol and diabetes testing in an NHS Lab laboratory.

After the patient completes both parts of the NHS Health Check, they will see their results page which displays their CVD risk scores and a list of all their answered questions. The patient can then check these have been answered correctly before clicking 'Send to GP'.

GPs can use the clinician dashboard to see the list of patients and their current statuses. Each patient will either be marked as: incomplete; in progress; or completed, with low-risk, medium-risk or high-risk status.

4.3 Integrated Health Systems

Web or Mobile App:

Web App

Patient or Clinician Facing:

Patient Facing only

Interoperability Status:

Not interoperable with IM1 Systems

Not interoperable with GP IT systems

Other Key Features:

Patients are sent an SMS message with link to complete the online questionnaire.

Clinical reports can be sent to the patients' registered GP via secure email.

Description:

QMS is a simple patient facing DHT which provides a digital health check. The captured health data is self-reported by the patient. There is no direct clinician facing side of the DHT.

The patients receive an invitation with the relevant hyperlink via SMS. The invitation process includes primers and SMS reminders which are typically managed by QMS on behalf of the local Public Health Team or NHS provider. The GP can review and approve, cease, or postpone patients' scheduled appointments.

After the patient logs in with their surname, date of birth, and sex, the solution uses a simple question and answer format to gather health information. The patient is expected to self-report their blood pressure and cholesterol. If the patient does not have the necessary facilities to produce these readings at home, they can leave these sections blank and an appropriate default will be applied to calculate results.

After the patient completes the health check they are presented with their results which includes their heart age and CVD risk. Patients receive personalised actions and advice directing them to the most appropriate support.

Additionally, the results page may encourage the patient to book an in-person health check at a GP surgery, where additional readings can be taken. The patient can then be redirected to find their GP surgery. The results of the completed check are forwarded to their registered GP, with the patient's consent, via NHS email.

This DHT does not interact directly with IM1 but does send clinical reports to the patients' registered GP via secure email.

4.4 Well.Me

Web or Mobile App:

Web App

Patient or Clinician Facing:

Patient Facing and Clinician Facing

Interoperability Status:

Not interoperable with IM1 Systems

Interoperable with EMIS and SystemOne

Other Key Features:

Platform can link with WellPoint Kiosks where patients can have their blood pressure measured

Description:

Well.Me is a patient-facing DHT with a clinician-facing facility. Individuals can independently sign up to Well.Me or they can be referred by an organisation or health-care professional. Users build their own health profile by completing different questionnaires or by using WellPoint Kiosks to record their health data, which is then transferred and added to their health profile. If known, blood pressure and cholesterol can be self-reported. Alternatively, blood pressure can be recorded at a WellPoint Kiosk.

The health data is clearly displayed and compiled onto one main dashboard highlighting all the scores and risks. Some additional features for the patient include the ability to track and proactively set goals as well as access health, wellbeing, and financial advice. Each user also has the option to allow a clinician to view their data within their settings. If enabled, a member of the primary care team can set goals on behalf of the patient and direct them to suitable reading articles from the patient-facing facility.

4.5 Medi-stats

Web or Mobile App:

Web App

Patient or Clinician Facing:

Patient Facing and Clinician Facing

Interoperability Status:

Not interoperable with IM1 Systems

Not interoperable with GP IT systems

Other Key Features:

Patients can associate with a pharmacy for support in reading their results and measuring blood pressure/cholesterol

Description:

Medi-stats is a DHT with an in-depth focus on cardiology whereby readings such as Oscillometry results, pulse curves, and rhythm strips can be recorded as well as the more traditional health results recorded during health checks. This DHT has both clinician and patient facing sides. Patients can log in, book 15-30-minute slots for their health check, and complete health questionnaires before the appointment. After completing the health questionnaires, the patient can download a report of their results.

If patients desire, they can associate with a pharmacy of choice for advanced health support. This would aid the patient in recording more complex readings of their health which cannot be conducted at home, for instance, blood pressure readings and cholesterol levels.

The clinician-facing side of the portal enables the clinician to complete the health questionnaires on behalf of the patient; they are also able to write notes and suggest action plans which the patient will then be able to read. After the health questionnaires have been completed, the clinician has the option to download the final report and then email the report to the patient or cardiologist.

Medi-stats also addresses emotional wellbeing by including the Generalised Anxiety Disorder-7 questionnaire.

4.6 DORA

Web or Mobile App:

Web App / Telephony Service

Patient or Clinician Facing:

Patient Facing (over the phone) and Clinician Facing

Interoperability Status:

Not interoperable with IM1 Systems

FHIR-API connection live in secondary care

Other Key Features:

Patients receive a scheduled phone call and submit their responses verbally; these are automatically transcribed by the platform.

Description:

DORA is a telephone consultation DHT, in which the patient receives a call at a scheduled time. The DHT is run from the GP practice and does not require patient access to a smartphone, computer or the internet. The GP sends a notification message to the patient to indicate the time of their call. The practice will then make the call using the DORA system. During the call, a chatbot asks the patient questions and interprets what the patient says. The calls can be monitored, so if the solution cannot understand what the patient is saying, or a patient is struggling with the automated system, a member of staff from the GP office will then call the patient instead. While the call is ongoing, the system transcribes everything that is said.

The DHT for the health check is not currently live, however the demo has been built for this project. The DHT fulfils all the functional requirements of the NHS Health Check, completing all relevant health risk assessments. If a call is missed, it would be up to the GP practice and the patient to arrange another time as there is no facility within the platform to do this. The DHT has been designed to offer an outbound rather than inbound call. This is something that will remain the case for the time being, but it is possible for DORA to enable inbound calls further down the line.

When the questionnaire is completed, the patient is given their scores and outcome over the phone by the chatbot. They are then asked if they would like more information about a specific subject. Results are then automatically put into a letter for the GP to distribute themselves. Additionally, the transcript of the call can be sent to the patient; this is an option offered at the end of the call.

4.7 Health Check Cloud Suite

Web or Mobile App:

Web App

Patient or Clinician Facing:

Patient Facing and Clinician Facing

Interoperability Status:

Interoperable with the Principle Clinical Systems through the IM1 pairing scheme

Utilise [Message Exchange for Social Care and Health \(MESH\)](#) and [Electronic Data Interchange for Administration, Commerce and Transport \(EDIFACT\)](#), see summary below for more detail.

Other Key Features:

Patients are sent an SMS message with link to complete the online questionnaire.

Clinical reports can be sent to the patients' registered GP via secure email.

Description:

The DHT is web based and has two areas; a website for patients to access the health check assessment and results (My Well Record), and a clinician-facing side (Health Check Cloud Suite) where results can be viewed and added.

The questionnaire links are sent out to patients by the GP. The patient then logs into the online system to complete their health check. The survey is well laid out and easy to complete. The website is simple to navigate and there is a tutorial when accessed for the first time explaining how it works. While this solution allows patients to complete the full health check remotely, it can also enable patients to complete part of the health check in advance of a face-to-face element. The face-to-face element enables the provider to collect the patient's cholesterol, HbA1c and blood pressure.

The consultation module within Cloud Suite can be used by the clinician with the patient to guide them through the questionnaire. The developer has stated that the questionnaire is designed to be fully completed during a consultation with a clinician, this way patients and clinicians are able to explore 'what if?' scenarios to fully explain the implications of lifestyle change and health improvement. This process of helping patients understand how their results (and therefore risk) could change with lifestyle changes draws on behavioural principles and can be leveraged as a highly motivational tool. The system uses behavioural change principles throughout to support and encourage discussion and change where relevant.

The patient can access their results following their consultation on My Well Record Results are provided instantly on the patient's landing page and in the form of a printable report, highlighting areas which were discussed with the clinician during the consultation and could be addressed by the patient. The website also contains links to sources of information surrounding health improvement such as healthy eating, alcohol, smoking, physical activity etc. The results are also automatically shared with the Health Check Cloud Suite for clinician input. The DHT integrates with all clinical systems, so once the minimum dataset for the health check has been confirmed, all data can be electronically and automatically returned to the patient electronic health record via a secure and NHS-approved transfer system. Clinicians are alerted to any follow-up that may be necessary.

Project leads are able to view real-time data analytics via a data dashboard. The dashboard includes the ability to see map plots of uptake of the digital health check enabling providers to identify gaps and opportunities to increase uptake of the health checks.

This DHT is interoperable with the principal clinical systems which includes EMIS, Vision and SystemOne through the IM1 pairing scheme. Because the IM1 pairing scheme can sometimes be restrictive, alternative methods of interoperability are sometimes used, including MESH and EDIFACT.

4.8 HealthPod

Web or Mobile App:

Web App and Mobile App

Patient or Clinician Facing:

Patient Facing and Clinician Facing

Interoperability Status:

Not interoperable with IM1 Systems
Interoperable with EMIS, Vision and SystemOne via their partner programs

Other Key Features:

The platform can collect data from dedicated Bluetooth enabled devices, such as blood pressure monitors.

Description:

HealthPod is a DHT which can be installed onto a PC or mobile device, such as a phone or tablet. It has two components; a patient-facing application and a clinician-facing management system. Patients complete the questionnaire at the clinic or practice and results are sent to the clinic automatically. The DHT can also be set up for patients to complete the questionnaire in their own homes. Bluetooth enabled devices including: blood pressure monitors, thermometers, glucometers, scales, oximeters, etc. are provided by the developer. These devices can connect directly to the HealthPod DHT so results can be automatically recorded.

When the assessment is completed, email alerts can be set up to be sent to the practice. Health information is communicated to the clinician via email alerts. Any results that fall outside of their set boundaries trigger these alerts.

The results are visible to the patient in a report; however, further information about the results must be provided by a clinician rather than through the platform.

This DHT is interoperable with EMIS, Vision and SystemOne.

4.9 Evergreen Life

Web or Mobile App:

Web App and Mobile App

Patient or Clinician Facing:

Patient facing and clinician facing platforms

Interoperability Status:

Interoperable with IM1 Systems

Other Key Features:

Provides additional wellbeing information for diet, sleep, and exercise.

Description:

Evergreen Life is a wellness DHT and NHS-assured provider of GP online services. It is available on both Android and iOS mobile devices. Users can register to use the DHT and can choose to link to their GP record and online services. This allows users to access their GP record, order repeat prescriptions with the option of home delivery, and book appointments, where practices permit. The Evergreen Life DHT also allows people to build a personal health record, while managing their overall wellbeing. Through questionnaires in areas such as diet, sleep, and exercise, the DHT provides personalised tips that help equip people with information to keep themselves happy and well.

The health check element of the DHT will be clearly identified within the DHT, and clinicians can manage and encourage uptake through Evergreen Connect. The health check functionality is due to be completed soon. The DHT meets all the requirements of the NHS Health Check and will communicate insights to patients based on the information they have provided.

5. Conclusions

The project aims were to identify whether there were existing DHTs that had the key functionality to support the NHS Health Check and to assess any such DHTs compliance with core standards.

The conclusions that can be drawn from the process can be summarised as follows:

- Several DHTs exist that have the key features to support the delivery of the NHS Health Check.
- Healthcare professionals or self-reported data inputs were relied on for cholesterol measurement and blood-pressure readings. However, some DHTs had started to explore the opportunity to use home test kits for cholesterol measurement and these technologies are becoming more and more mature. Blood-pressure readings are likely to still require users to attend either local pharmacies or GP surgeries, but in the case of the former, this should still reduce demand and increase access. Additionally, the project identified a 'kiosk' type solution that could be deployed into various public spaces (such as leisure centres, libraries etc.) as alternative collection points.
- Many of the DHTs identified have been adopted and are being used in different health and care settings. Their use cases differ widely and none yet illustrate the full potential of these technologies in the NHS Health Check space. It is again not unusual that the current use cases are relatively simple and do not perhaps take advantage of the full potential that the DHTs can offer. This is likely to be a combination of the DHT sophistication and usability as well as the natural conservatism in adopting new technologies in the healthcare environment.

The project has shown that digital tools already exist to support NHS Health Check activities. The opportunity is to refine these tools and the various use cases they demonstrate to better understand how far these technologies can be used to deliver the potential benefits outlined earlier.

5.1 Strengths and Limitations

The project reinforced opportunities available in the NHS Health Check context but did not fully validate their achievability in practice. As with all digital interventions, many human factors must be taken into account and there will never be a one size fits all solution.

5.1.1 Digital Inclusion

A key issue with all digital tools is the risk that their use excludes sections of a relevant target population. In the digital context, this exclusion could be driven by unavailability of relevant technologies i.e. smart phones, computers etc. (potentially very much linked to health inequalities), but can equally and possibly more plausibly, be linked to a lack of confidence in the use of digital services or a mistrust of digital solutions.

Whatever lies behind any reticence to engage, the reality is that an offline alternative will always be needed to meet the needs of this cohort. Over time it is natural for digital hesitancy to subside and reduce due to demographic changes, the wider adoption of these solutions in society at large, and improvements in the user interface and experience. In this regard, one of the major benefits to arise from the challenges of the pandemic has been a much greater adoption of digital technologies in healthcare by the public and healthcare professionals alike.

5.1.2 Usability and Accessibility

For a service such as the NHS Health Check, the importance of ensuring that any digital tool has a highly effective user interface and is as accessible as possible is critical. To fully deliver on both these elements requires DHTs to be highly configurable to a range of distinct user needs and preferences in order that the core functionality can be tailored as closely as possible to a specific user's needs.

These developments are costly to implement and many digital tools in the early stages of their evolution will typically produce a singular interface that is very much a one size fits all model. More mature DHTs will usually start to add more and more elements to support tailoring and a wider range of user types being supported.

DHTs ultimately have the capability of delivering highly tailored experiences for many user types and this will be a critical part in the evolution of any digital NHS Health Check solution.

5.1.3 Data Collection

Data collection is a core feature of many digital tools. Alongside information provision, it is one of the most common features in DHTs and is as a result a relatively mature functionality.

The NHS Health Check does, however, provide two distinct challenges in terms of data capture in the form of cholesterol and blood-pressure measurement. While some biometric data is becoming more ubiquitous with the proliferation of wearables etc, this is still not the case for blood-pressure readings. Of course, cholesterol measurement is a stage further removed from this, given its dependency on blood testing.

However, in the case of cholesterol, there may be a ready solution that could be adopted, in the form of increasingly mature home blood sampling kits. These offer a simple and established method of obtaining and capturing this information digitally.

Although there is a growing adoption of home blood pressure monitors, this is far from typical at this stage and, therefore, dependency on obtaining these readings from other sources outside the home will remain.

As noted, blood-pressure readings could be serviced via GP practices, but this would limit one of the major opportunities that a digital NHS Health Check offers, in terms of reducing demand on this key resource. Pharmacies are a potential alternative and they, as a matter of course, would generally offer greater access and convenience. However, another option that could be considered is the use of NHS Health Check kiosk technologies to widen the access to these readings. These kiosks can be deployed in pharmacies but also in many other public spaces such as libraries and leisure centres. It is also possible that blood-pressure monitors for patients to use themselves could be more widely made available within GP practice waiting areas, which would help to improve convenience for the patient and reduce burden on practice staff and appointment availability.

6. Acknowledgements

We would like to thank the DHT developers for their time and contributions throughout this project.

We would also like to thank Michaela Nuttall, clinical advisor to the CVD prevention Team and Public Health England, for her insight into the DHTs throughout the clinical assessment.

Finally, we would also like to acknowledge the support that Rosie Taylor, Jade Clark, Andrew Lloyd-Harris, and Katherine Thompson, from the CVD Prevention Team within Public Health England, have provided in contributing to this work.

MAIN OFFICE

SCI-TECH DARESBUY
VANGUARD HOUSE
KECKWICK LANE
DARESBUY
WA4 4AB

TELEPHONE

+44 (0) 1925 606542

EMAIL

HELLO@ORCHA.CO.UK

LONDON

ORCHA
SPACES
307 EUSTON ROAD
LONDON
NW1 3AD

AMSTERDAM

ORCHA HEALTH, B.V.
STADSPLATEAU
73521 AZ
UTRECHT



SEARCH FOR
ORCHA HEALTH