HM Government

European Union
European Regional Development Fund

Health Enterprise East

DIGITAL TRANSFORMATION OF CARE

A WHITE PAPER EXAMINING THE ROLE MEDTECH INNOVATION HAS IN THE CONTINUED DIGITAL TRANSFORMATION OF CARE WITHIN THE NHS

ALICE GREENHALGH
HEALTH ENTERPRISE EAST

Medtech Navigator

The Medtech Navigator, part-funded by the European Regional Development Fund (ERDF), is a three-year programme, delivered by Health Enterprise East Ltd., to facilitate knowledge exchange between the medtech industry, many of whom are small and medium sized enterprises (SMEs), the NHS, and academia. The programme seeks to enable companies to identify potential market opportunities in a variety of specific disease areas and apply for Innovation Grant funding through the programme, thereby engaging SMEs in new R&D projects that are both customer-focussed and collaborative in nature. This will allow the creation of partnerships between clinicians, academics and industry to develop novel medical technologies which will improve healthcare and quality of life for patients and the healthcare market of the future.

www.medtechnavigator.co.uk

Health Enterprise East Ltd.

At Health Enterprise East believe in improving healthcare through technology and innovation.

We work with the NHS, medical technology industry and government organisations to help turn innovative ideas into products and services that will benefit patients.

Our experienced team offers clients a diverse range of business and innovation management services. Our strengths include IP management, technology commercialisation, health economics and strategic market access advice.

Based in Cambridge, we work with over 25 NHS organisations nationally and medtech companies globally. Our aim is to help our clients address the challenges faced along the product development pathway, connecting them with relevant healthcare experts and funding opportunities.

Contents

Digital health and the NHS

There are many products and services that spring to mind once digital health is mentioned, telecare, telemedicine, mHealth, digital health and eHealth services, to name a few. Such a list can also collectively be referred to as technology enabled care (TEC). Digital technology has advanced exponentially in the last decade and whilst technology has transformed sectors such as retail, banking, travel and tourism, it has yet to make serious waves in the healthcare sector. The adoption and spread of digital tools for diagnosis, treatment and management has been modest across the healthcare sector as a whole, but particularly within the NHS. Whilst electronic health records are now used more routinely there is still a long way to go before the NHS is transformed by TEC[1].

The NHS is however fully committed to helping health and social care professionals communicate more effectively by using new technology whilst also enabling patients and carers to access the care they need quickly, easily, in a time conscious manner[2]. The NHS understands the value that can be gained from the digital tools and apps that make treatment, care and advice easier to obtain, along with connected computer systems that give staff the test results, history and evidence they need to make the best decisions for patients. However, there are a multitude of reasons why uptake has been slower than in other equally developed countries such as Canada and Denmark. Challenges include a lack of consumer confidence resulting from previous patient data breaches and accountability for when things go wrong.

The impact of COVID-19

The emergence of COVID-19 has forced rapid change upon global healthcare delivery and the NHS has proven that it can rapidly adapt and innovate whilst continuing to deliver world class care. Innovation is at the forefront of this push, with the main goal of streamlining clinicians' work, optimising systems, improving patient outcomes, reducing human error, and lowering costs through digital solutions.

Summary

In this white paper we will explore what digital solutions are currently available, what areas are saturated and why has adoption been slow in the past. We will cover innovations from large corporations and also from the smallest of SMEs to demonstrate that only the best evidence-based tools have the chance of being adopted by the powerhouse that is the NHS.

NHS Long Term Plan

The NHS Long Term Plan was published on 7 January 2019 and presents the NHS's priorities for care quality and outcomes improvement for the decade ahead. The plan reinforces the significance of technology in the future of the NHS, setting out the crucial priorities that will support digital transformation and provide a step change in the way the NHS cares for the nation. The long-term plan kickstarted significant digital transformation projects at hospital Trusts across the UK. Such projects are often in the order of millions and the common denominator is they all aim to transform the way staff work and improve patient experience.

Although much of the transformation work, such as upgrading IT and phone systems, will be largely unseen by the public, differences will be seen at the sharp end of patient care where there will be significant resulting benefits. The ability to use mobile devices, that are supported by robust software services, will facilitate frontline staff to share information more readily, better identify risks and make decisions and conclusions more easily. This instant access to information such as medical records will enable faster diagnoses and treatments, while lessening the pressure for lengthy note taking and handovers that have become a by-product of the paper-based processes that exist today. To conclude

this digital transformation will allow clinicians to spend more time doing what they trained to do[3]. The digital transformation of the NHS will also pave the way for digitally and technologically advanced medical devices to come into fruition.

One of the ways the NHS has moved forward recently is to combine teams from the Department of Health and Social Care, NHS England and NHS Improvement together to form a single unit, NHSX. NHSX is responsible for driving digital transformation and leading policy, implementation and change. NHSX is leading the biggest digital health and social care transformation programme in the world. With investment of more than £1 billion pounds a year nationally and a significant additional spend locally, NHSX was created to give staff and citizens the technology they need. NHSX aims to deliver the Health Secretary's Tech Vision, which builds upon the foundations laid out in the NHS Long Term Plan[4]. NHSX has set out five missions:

- Reduce the burden on the NHS workforce, so they can focus on delivering care
- Give people the tools to access information and services directly, so they can best take charge of their own health and care
- Ensure information about people's health and care can be safely accessed, wherever it is needed
- Aid the improvement of safety across health and care systems
- Improve health and care productivity with digital technology

Clinical Communications Procurement Framework

It is important for SMEs to know how the NHS is going to procure their services and products, and the kind of tenders that may come out. On 31st July 2020, NHSX launched its Clinical Communications Procurement Framework to help NHS Trusts accelerate the adoption of proven digital tools and phase out outdated technology. The Procurement Framework aims to support NHS organisations with dedicated clinical facing communication and task management tools, to accelerate the adoption of proven technologies and to phase out pagers by the end of 2021. The Framework Agreement has been designed to provide a compliant and convenient route to market for the NHS commissioners within England. This includes NHS England and Improvement, Clinical Commissioning Groups, Primary Care Networks, NHS Trusts and NHS Special Health Authorities.

Clinicians and other health care professions will have access to a broad range of communication tools all under one procurement framework agreement. Participating authorities have the freedom and flexibility to make a direct award or undertake a mini-competition to meet the bespoke requirements of each customer. All suppliers have been assessed to certify that they meet all legislative requirements, consequently negating the need for formal tendering thus saving valuable time and resources in the procurement process. The framework contains sizeable national companies as well as a good number of regional SMEs. Crucially, all will have the opportunity to showcase their products via the framework, helping buyers to make informed local decisions.

COVID-19 has really changed the game in terms of an urgent need for secure messaging platforms in the delivery of health and care services. Better communication tools will support staff in remote working, have the potential to reduce errors in clinical handover between shifts, and provide appropriate information gathering around messaging - as opposed to using personal email or platforms such as WhatsApp. In this sense the procurement framework is to be welcomed, since it will provide a streamlined process for Trusts to access services that meet their needs and the required standards both quickly and efficiently.

Case Study 1: MedicBleep

The move to replace pagers with modern technology is the next step in achieving a fully digitised NHS – a crucial part of the tech vision and the NHS Long Term Plan. Digital services and IT systems used by the NHS will soon have to meet a clear set of open standards to ensure they can talk to each other across organisational boundaries and can be continuously upgraded. Any system which does not meet these standards will be phased out and the government will look to end contracts with providers which do not understand these principles for the health and care sector.

There are 25 suppliers on the Clinical Communications Procurement Framework List at this current time. One of these is Medic Bleep, a clinical messaging solution enabling workforce collaboration and increased productivity through a secure, compliant real-time communication tool. Enabling a workforce to send and receive, text, images, files, initiate voice calls, create group chats and pass the on-call roll within a single mobile application. It enables doctors, nurses and the wider team to communicate and collaborate within and across healthcare organisations. The increased efficiency in communication accelerates productivity, improves patient outcomes and reduces costs.

One way in which Medic Bleep demonstrates its value is by having a handy calculator tool on the homepage of their website. This estimates how much time could be saved in terms of fulltime equivalent doctors and nurses each year. This calculation is based on peer-reviewed evidence of Medic Bleep's use at West Suffolk NHS Foundation Trust, which found that on average nurses can save 21 minutes per shift and doctors can save 48 minutes per shift. This is an excellent example of how SMEs can communicate their value to NHS procurement.

Website (demo video)

The changing innovation culture

The impact the COVID-19 pandemic has had on the NHS is colossal – and it remains too soon to draw any firm conclusions. Pre-COVID-19, some of the main reasons NOT to innovate were:

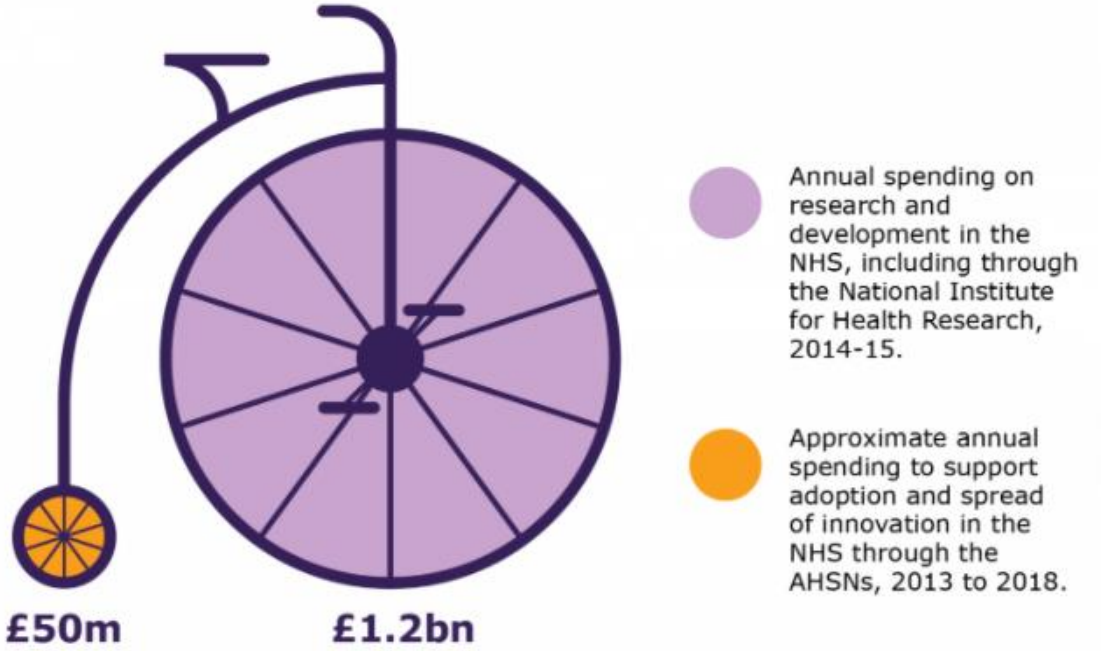
1. Incentive or motivation – most people (in any sector) are not innovation minded and happy to practice what they learned or the system requires. Looking for innovative practice and undertaking the hard work of sustainable implementation is not often considered to be part of anybody's day job.

2. Time and capacity to work on new things. The need to develop a robust evidence base for new innovations. Whilst important, this can delay timely implementation. Senior clinicians must be able to spend substantial time convincing colleagues of the benefits of innovations, experienced project teams to help providers implement innovations, and continued support for providers in evaluating the impact of changes and sharing learning.

3. Money. Innovations may only be seen as successful if they can produce immediate positive effects, such as in-year savings, at the location of implementation. Those innovations which have wider pathway benefits, over a longer timeframe, can struggle to be adopted. Nevertheless, the lack of adequate funding, and the startling mismatch between resources for innovation and resources for adoption and spread, remain a substantial barrier. As long as the NHS sets aside less than 0.1 per cent of available resources for the adoption and spread of innovation, a small fraction of the funds

available for innovation itself, the NHS's operating units will struggle to adopt large numbers of innovations and rapidly improve productivity. These choices are in stark comparison with some private multi-nationals that set aside up to 25 per cent of turnover to promote their innovations, in many cases significantly more than they dedicate to research and development, see Figure 1 below.

Figure 1: Comparison of spend on innovation and on adoption and spread of innovation in the NHS



Sources: Department of Health 2016; NHS England 2017

4. The domino effect. The decision to introduce an innovation can have a domino effect, triggering a series of changes to diagnosis, treatment and the roles of staff and patients and revealing new patient needs – in short, a lengthy period of iterative testing and refinement. This goes a long way towards explaining why the spread of service innovation in the NHS, as in other industries, is a difficult and costly process even if the innovations appear simple. Adoption of most service innovation needs to be seen as part of service improvement rather than the process of 'rolling out' a 'proven' approach.

5. General rigidity of a system that strongly favours the status quo combined with a supply driven approach to innovation within the NHS. This can mean that innovations are developed and driven by industry rather than frontline clinicians, or, more importantly, in collaboration with patients.

Since the outbreak of COVID-19 the NHS has changed at rapid pace. For example, greater attention has been brought to the importance of mobile devices and demonstrated that in addition to improving care they can connect people as well. When the virus began to take hold, hospitals were swift to respond by increasing capacity for ICU and COVID-19 wards. Above all this illustrated the demand for

more efficient workspaces. With very few means of contact possible, access to mobile devices meant patients could keep in touch with loved ones. It is key that these advancements must not provide any further burden to staff, ability to charge, store and maintain devices must be inbuilt into the solution for implementation into the workplace if this digital revolution were to truly take off. The principal reason why the pace of change has improved in recent months is that barriers have come down. Decision makers are searching for a broad consensus on which way to move forward, instead of seeking agreement on every point of detail. There has also been more willingness to deploy solutions that meet a need, or that are 95% there, and iterate in an agile way.

Barriers to adoption

Culture

The barriers to adopting digital transformation into the NHS are surprisingly often non-technological. Indeed, a change of culture is often quoted to be the largest hurdle that must be overcome in order to revolutionise the NHS's digital transformation. Other key issues specific to the pharmaceutical and medical-technology industry were found in a review by McKinsey to be culture and mind-set, organisational structure, and governance [1].

Pace

A particular challenge facing regulators is the pace of development and change in the digital healthcare sector. This rapid change requires adoption of a more agile, flexible approach to try to keep up. Commissioners and clinicians alike face similar problems: which products do they choose? How can they be confident that the product being pitched to them will meet their needs and benefit patients? All the while, developers can come to be frustrated by a complicated healthcare system that is tough to navigate. In contrast to the Silicon Valley mantra of 'move fast, break things' to promote innovation and technology, the health service tactic is much more 'move gradually, avoid harm.' However, this does illustrate where the challenges lie, in that the healthcare service has to put patient lives above all else. Likewise, conquering these challenges will empower innovators and the NHS to reap the benefits that digital health technology can provide for both patents and staff alike.

Technology push

Frequently medtech solutions to clinical needs are considered solely from a technological perspective. The current challenges, in addition to the clinical challenges faced by the NHS, are societal including ensuring the level of patients' trust in healthcare apps and medtech devices is the same as the healthcare professionals. Therefore, emphasis should be placed on co-creation rather than technology push.

Training

There is a lack of education and training in deploying technological solutions into a clinical setting and consequently staff often lack the confidence to use technology effectively. There are often concerns about quality, reliability, privacy and security of data. These things should be addressed by anyone developing digital solutions for use in the NHS. The NHS plans to move to integrated apps that can link with clinical systems, such examples as Patients Know Best and Health Fabric are used to demonstrate this. The MHRA has also produced further guidance on what apps would be considered a medical device. We recommend reading through this advice as early in the development process as possible.

Regulations and Governance

Governments also have a large role to play in the adoption of digital healthcare technologies. England has established national bodies, like NHS Digital and NHSX, to support and transform NHS and social care. NHS Digital has developed a first set of standards on the interoperability of clinical IT systems.

To meet its gold-standard qualification, England requires that health apps receive regulatory approval from three bodies: approval from the Medicines and Healthcare products Regulatory Agency (MHRA) along with a Care Quality Commission registration, followed by an assessment from NICE (National Institute for Health and Care Excellence).

Barriers in healthcare apps

A global study was conducted in 2014 by UK based research, publishing and consultancy group, Patient View to gather information on what patients and carers want from healthcare apps.

Top 5 patient/carer wants from apps:

- To help them understand their condition and treatment choices (61%)
- To provide support (such as care planning) (55%)
- To track and monitor symptoms in order to benchmark their progress (46%)
- To provide a way to communicate with their doctor or nurse (45%)
- To raise public awareness of conditions which are important to them (38%).

Main barriers to using health apps:

- Confusion over the vast number of apps to choose from (37%)
- Uncertainty about which apps to use (32%)
- Preference for face-to-face interaction with doctors or nurses (31%)
- Lack of knowledge of health apps that may be relevant to them (30%)
- Lack of trust in health apps as unsure who develops or funds them (27%).

Overcoming barriers

According to the Kings Fund, some of the big wins appear to come from organisations overcoming a 'that's not our job' mentality, taking a broader perspective on their social purpose, and exploring a wider range of options for delivering the greatest impact for their communities. These include addressing needs that might technically be another health or care organisation's responsibility, taking a more holistic approach to people's physical and mental health, and addressing social challenges as a major cause of ill health rather than a second-order concern.

Keeping up momentum

The next challenge following rapid adoption of digital during COVID is keeping up momentum once the initial crisis has passed. We must ensure that the NHS doesn't just revert back to the status quo 'pen and paper' once the pandemic is over.

Firstly, it's clear COVID is going to be with us well into 2021 and depending upon the development timeline and success of any potential vaccines, potentially longer. Secondly, the pandemic has changed people's perception of what is possible, practical and even desirable to do remotely. Patients prefer the convenience whilst healthcare systems appreciate the efficiency. Likewise, governments, payors and healthcare providers have moved quickly to enable reimbursement where previously obstacles such as disruption to delivery of care seemed insurmountable. With reports of waiting lists building up in the system over lockdown, leading to a backlog of over a year in some settings, digital tools are needed more than ever to be part of the solution for some time to come giving new tech chance to fully bed in.

While there is no generic recipe for the sustainable implementation of innovative practice, there are certain practices which will increase the likelihood of success:

- Ensuring the benefit to patients and the system is clearly articulated.
- Ensuring the case for change makes sense to key decision makers.
- Having a robust evidence base – balanced between clinical research and evidence which shows the benefits of implementation within a live NHS system.
- Making the most of all sources of local intelligence to help build the case for change.
- Where innovations can lead to wider pathway improvements, approaching these at a system level, with all stakeholders working collaboratively.
- Ensuring clinical leadership and wider stakeholder engagement at the beginning of the process.
- Involving patients in the implementation process wherever possible.
- Using tried and tested improvement methodologies and rigorous project management.

How to overcome barriers: Babylon Health

Many industries have had digital processes built into the way they operate for years, such as in travel, banking, and entertainment. This has been the case for so long that in fact their customers have now come to expect a digital service. Early providers of disruptive technology have facilitated a gradual transformation in the healthcare setting by presenting new opportunities to the market and generating demand for innovative models of care delivery.

A great example of this is subscription health-service provider Babylon Health's GP At Hand service. This service has pioneered NHS-funded teleconsultations in London, complete with an interactive, AI-supported symptom checker. The digital app Babylon Health and their NHS service, "GP at Hand" allows users to video call a Babylon GP, providing they are willing to make the healthcare company their primary GP.

The practice has increased the number of subscribers exponentially since conception in late 2016 by addressing unmet needs and delivering value to consumers. The key lesson here is that the power of consumer choice can lead other stakeholders to innovate. More than 40,000 people across London have joined the Babylon-owned NHS practice with the vast majority leaving their existing GP, creating one of the largest and fastest-growing surgeries in the UK. However there have been certain drawbacks to Babylon Health pioneering the way due to way in which GP practises in England are funded through Clinical Commissioning Groups (CCGs). The sheer size of the GP at Hand clinic in Fulham means that the local NHS authority, the Hammersmith & Fulham CCG is having to pay for the care of scores of new patients, even though the majority of them are based in other parts of London.

Apps for the NHS

Another hurdle to overcome according to the Patient View survey is to stand out and differentiate oneself from the rest of the crowd. This is particularly important within the healthcare app setting. There are currently 96 apps on the NHS Apps Library. In order to be published on the NHS apps library website, all products must meet a set of national standards. Developers are required to answer a range of digital assessment questions (DAQ), to make sure that only safe and secure apps and digital tools are published on the NHS Apps Library. The questions posed will depend on a variety of factors such as:

- complexity
- potential clinical effectiveness

- data protection responsibilities

The technical assessment will consist of a few main areas of interest.

- **Available evidence on outcomes**- It is essential that all products do what they say they do. Developers must demonstrate how their product improves health and wellbeing.
- **Clinical safety** - Developers must have taken all appropriate action to keep patients safe using their product. For example, if an app reminds patients to take their medication, developers must give evidence to show that any risk of reminders being incorrect has been completely removed or made as low as possible.
- **Data protection**- Any personal information that is to be collected or shared, by an app or digital tool, must be handled in a safe, fair and lawful way.
- **Security**- an assessment of the security assurance of an app or digital tool will be made to ensure that a user's data has been correctly categorised, taking account of data protection regulations and clinical impact.
- **Usability and accessibility** - A person must be able to understand and use an app or digital tool effectively.
- **Technical stability** - Developers must show how patients can report any problems with a product and how the developer will work to correct them.
- **Interoperability** – Tests on how well a product exchanges data with other systems will be carried out.

Features of effective digital innovation

Top tips on overcoming these barriers to adoption:

- A methodical approach to market access and business strategy
- Understanding IP position and due diligence for investment and growth
- Providing clinical pathway, procurement and reimbursement insights
- Connecting businesses with clinical, operational and technical experts
- Understanding value proposition, economic impact and pricing
- Providing evidence on clinical, operational and financial impact of deployment
- Market insight and data gathering

Who's doing it right

Case Study 2: AccuRx

All general practices need to have the ability to carry out video consultations between patients and clinicians. Advice from the NHSX Information Governance team is that it is fine to use video conferencing tools such as Skype, WhatsApp and Facetime as well as commercial products designed specifically for this purpose, particularly as a short-term measure[5].

To help assure video consultation systems comply with the high standards set in the GP IT Futures framework, numerous systems have been approved for use. Commissioners and practices can select from participating parties on this list via the Digital Care Services Framework (GPIT Futures) with charges centrally funded. CCGs also have an option to obtain a solution procured via the NHS England Dynamic Purchasing System (DPS). It has been assured that commissioners or practices that access solutions through either the Digital Care Services Framework (GPIT Futures) or the NHS England DPS can be confident that these products are appropriate for use in general practice.

One such product that has made it onto the Digital Care Services Framework list is accuRx. To help stop the spread of COVID-19 as patients travel to and from healthcare appointments, accuRx expanded free use of its Fleming video consultation tool to all NHS healthcare providers. This is a great example of how a technology has been created with ease of use in mind. The video consultations do not require a specific app or account to use and they can be started in as little as two clicks. This makes for a very user-friendly tool and it is unsurprising that adoption has been rapid as accuRx has understood their market and has made their product fit three key categories: simple, cost effective, and private. The technology enables healthcare practitioners to use their own smartphone to deliver the call, whilst withholding their mobile number and additionally there's no requirement for costly extra equipment such as webcams or headsets. This ease of use is continued throughout and accuRx's flagship product, ChainSMS, is founded on the same principles of simplicity, cost effectiveness and security. Chain SMS is an EMIS and SystmOne accredited partner product therefore providing integration into a patient's electronic record.

Case Study 3: MediShout

IT, Equipment, Housekeeping, Facilities, Estates, Stock etc. are all logistic elements that healthcare staff need in order to deliver care. However, many staff members do not have sufficient ways to report and resolve such issues when they appear. This causes a huge amount of wasted clinical time caused by slow reporting mechanisms, such as bleeps, hurrying to repair computers, locating stock or fixing equipment. Consequently, according to MediShout doctors now only spend 1/3rd of their time with patients which is clearly something that can be improved upon by more efficient reporting.

MediShout have developed a cloud-based technology that connects people, Helpdesks, smart phones, tablets, IT systems and RFID tagging. Again, part of the success of this innovation is that they have eased the burden on clinicians, permitting better use of their time. This means that clinicians are very receptive towards the technology and are therefore keen to use it.

Some of the key features that make this innovation so user friendly are:

- Two-way conversations
- Instant feedback to users
- Access to all Logistical Departments
- Ability to add Photos

In addition to this primary role MediShout have also recognised the power of the information they gather and particularly how big-data generation can help to propel long-term improvements. AI and Machine-learning algorithms can be employed to predict future problems before they even occur, making this technology valuable to the wider NHS organisations as well as front line clinicians. In addition to knowing who your end user is, it is important for you to understand that the customer may be a different entity e.g. an estates department.

Case Study 4: BFB Labs

As well as adding value to clinicians, another way to get your product adopted is to provide convenience to patients. BFB Labs provide digital therapeutics for better youth mental health. BFB Labs have developed an immersive digital intervention called Lumi Nova: Tales of Courage, a mobile game that utilises exposure therapy techniques to deliver timely support to those aged 7-12. The intervention combines the appealing nature of high quality video games with exposure therapy, proven to be the most effective form of cognitive behavioural therapy (CBT), to provide help and support to young people who may be suffering from anxiety.

Part of the reason for the success of Lumi Nova is that it can be used at different points in a young person's care pathway, from early support via schools to signposting by GPs and via Child and Adolescent Mental Health Services at points of triaging, whilst on the waiting list for treatment , and alongside therapy as well to prevent relapse. Young people use the intervention at home on a mobile/tablet with support from a guardian and professionals can manage users and track data through a secure Data Hub.

Case Study 5: Healios

Another example of offering convenience to patients in mental health is provided by Healios. Healios deliver online psychological assessments and psychological therapy via an online, interactive platform with fully qualified and UK certified clinicians. The online portal puts the patient at ease and enhances engagement levels with the clinician and means that patients can avoid travelling to see their therapist, and so benefit from either a one to one session with a clinician via video conference, or include additional family members into the session.

Healios works with the NHS, CCGs and Providers to transform care pathways with robust digital solutions. By working with NHS partners, Healios can more effectively manage clinical time and allocate demand to either a traditional pathway or to a digital pathway. Those people waiting to receive care are seen quicker and overall outcomes are improved.

In addition to providing mental health assessments and cognitive behavioural therapy, Healios also offer online assessment and interventions for neurodevelopmental disorders, such as autism and ADHD.

Near market products

The Innovation Agency Exchange provides an online forum accessible across the healthcare sector to share innovations and challenges, and collaborate on ideas, projects and products to improve patient care. There are over 50 digital health solutions listed, 14 are under evaluation with potential for adoption and 37 proven innovations.

One of those innovations under development is MedicSpot, who are building a remote examination and consultation network across the UK. Medicspot PODs allow a doctor to remotely examine a patient using the diagnostic tools and offer a safe and effective consultation via a network of more than 250 live stations at various locations in the community, including pharmacies and NHS centres. What differentiates MedicSpot from other telehealth providers is that each POD contains medical equipment for examination and is available for walk-in consultations without appointments. Having a unique offering is very important to differentiate yourselves from the pack when trying to get an innovation off the ground.

Support and more information for SME's

DigitalHealth.London is a collaborative programme delivered by MedCity, and London's three Academic Health Science Networks – UCL Partners, Imperial College Health Partners and the Health Innovation Network. DigitalHealth.London supports the pioneering of digital innovations by the NHS. Their programmes bring together providers, experts and innovators to collaborate and solve some of the biggest challenges facing our NHS.

MedTech Co-operatives are a set of eleven Medtech and in vitro diagnostics co-operatives (MICs) funded by the National Institute for Health Research (NIHR) to act as centres of expertise that focus on clinical areas of high morbidity and unmet need for NHS patients.

1. Mental Health
2. Surgical
3. Children and young people
4. Brain injury
5. Devices for dignity
6. Cardiovascular
7. Community Healthcare
8. Trauma Management
9. NIHR Leeds In Vitro Diagnostics Co-operative
10. NIHR London In Vitro Diagnostics Co-operative
11. NIHR Newcastle In Vitro Diagnostics Co-operative

The TSA is the representative body for technology enabled care (TEC) services, working on behalf of and advising organisations including telecare and telehealth providers, suppliers, housing associations, care providers, emergency services, academia, charities, government bodies and health and social care commissioners. They are a membership based, not-for-profit community interest company (CIC). Membership provides access to events, networking lobbying and campaigns. There is also access to valuable knowhow such as training and consultancy as well as tailored advice to support growth.

The Accelerated Access Collaborative (AAC) supports innovation at all stages across the development pipeline: from research and horizon scanning for innovations that address the population's needs, to support for adoption and spread of proven innovations. The AAC supports all types of innovations: medicines, diagnostics, devices, digital products, pathway changes and new workforce models. It has become the umbrella body across the UK health innovation eco-system, providing more joined-up support for innovators and setting the strategy for innovation in the health system. The AAC supports the ambition to make the NHS one of the most pro-innovation health systems in the world. The AAC's unique partnership includes patient groups, government bodies, industry and NHS bodies, working together to streamline the adoption of new innovations in healthcare. It brings decision-makers from across the health service together with innovators from industry to accelerate impactful and cost-effective products in a way that hasn't happened before.

NHS Innovation Accelerator, or NIA, supports uptake and spread of proven, impactful innovations across England's NHS, benefitting patients, populations and NHS staff. The programme is delivered in partnership with NHS England and England's 15 Academic Health Science Networks (AHSNs). Innovations selected for the NHS Innovation Accelerator (NIA) undergo a robust, competitive and multi-stage assessment process before joining the programme.

Future plans and top tips

As patients, clinicians and the general public become more used to virtual interactions, online transactions and getting things done from home, it is likely that a more virtual and connected health system will be preferred and importantly more accepted. This also provides a new opportunity to identify and develop sustainable technology-enabled self-management pathways.

Another potential hurdle to bear in mind will be to understand how the NHS will assess solutions to problems. Due to swift uptake of various technologies during the crisis, there will be a variety of solutions for solving similar problems and therefore fragmentation will be prevalent. There will be limited unifying workflows or interoperability and evaluations that were conducted in a less rigorous fashion than usual will have resulted in some less effective and more risky solutions in the system.

Therefore, it is important to understand how your innovation can stand out from the crowd in order to convince a Trust who may have adopted another technology quickly as to why they should switch to yours.

One final point to consider is that NHS staff will need to be supported through the transformation to a digital healthcare service. It is likely staff will have more training on digital health and communication-related skills. Communication will take a whole new form including supporting patients, carers and family virtually and also on how to work effectively with cross-organisational colleagues in social care and local government. Considering what training will be required for healthcare professionals to use your innovation and providing an easy means for this to happen will help to ensure your product gets chosen above other solutions in the same field.

References

[1]McKinsey and Company https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/promoting-an-overdue-digital-transformation-in-healthcare

[2] NHS England https://www.england.nhs.uk/digitaltechnology/
[3] Medtech Innovation News https://www.med-technews.com/features/how-to-enable-the-nhs-digital-future/
[4] NHS X http://www.nhsx.nhs.uk/
[5] NHS Information Governance https://www.nhsx.nhs.uk/covid-19-response/data-and-information-governance/information-governance/