CARE CITY TEST BED PROGRAMME

Digital Innovation and the Health and Care Workforce

CARE CITY

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Digital Innovation and the Health and Care Workforce

1 Background

The beginning of the second Innovation Test Bed programme run by NHS England and the Office for Life Sciences coincided with celebrations marking the 70th birthday of the NHS. The health service is one of the largest employers in the world and the NHS workforce has been instrumental in delivering the significant health improvements seen over the last few decades. During this relatively short period we have seen NHS staff achieve incredible medical advances, from organ transplants to new vaccines, new cures for cancer and advanced genomic sequencing. Indeed as we come to the end of the Test Bed programme, NHS people are playing a key role in COVID-19 research and contributing to one of the world's biggest randomised clinical trials.

However, as the health system looks ahead to the next 20 years, it faces significant pressures with escalating demand for health and care services in a context of increasing financial constraints. In addition, the workforce is stretched to capacity and with almost a fifth of the NHS workforce aged over 55, the next decade could see a large number of senior staff retiring from the service (NHS England, 2020a). Digital healthcare technologies have the potential to support the health and care system to meet the challenges of the future but this demands new ways of working and a new way of thinking about workforce roles and capabilities. The Care City Test Bed programme sought to address these challenges through unleashing the untapped potential of administrative and clinical support staff, together with proven digital technologies to improve care and deliver efficiency gains across health and social care.

2 Adoption and scale of innovation in health and care

> **For technology to deliver on its transformative power in our health and social care system, there also needs to be a culture shift in the NHS, where staff embrace technology with the same enthusiasm and vigour as patients. The translation of discovery into strategy requires NHS staff to deliver this strategy on the ground.**
>
> **Health Education England, 2019**

As we face a rising demand and an increasingly digital future, the health and care workforce remains its most important asset, and crucial to the successful adoption and scale of digital technology within the public sector. Although products and technology often take centre stage in health and care innovation, translation of the technology into real improvement in outcomes is facilitated by people.

Harnessing the potential of digital technology in the health and care system is often challenging, and many early stage innovation projects fail due to cultural, technical and practical barriers to implementation. Even for successful, proven innovations it can be difficult to replicate in a new context, with successful innovations on one site often failing to provide the same impact when applied more broadly in another context (Perla et al, 2015). Over the years, innovation in healthcare has been viewed as a "nice to have" rather than a necessity which, in part, offers some explanation as to why the health and social care sector's technology adoption lags behind other fields of work.

Much work has been undertaken to attempt to understand the complex factors which contribute to the success or failure of innovation programmes in the public sector. The Innovation Unit and Health Foundation's (2019) examination of successful innovation programmes uncovered eight key enablers to successful scaling of innovation in the NHS. In particular the report notes the importance of building teams to scale innovations, not relying on key individuals alone to drive uptake. Successful projects recognise the importance of the interpersonal connections in creating an environment where people develop a sense of trust and reassurance in the intervention and are more likely to adopt it easily. Implementation teams need time, training and support to apply innovations and to have a meaningful relationship with innovators. Similarly, the Nuffield Trust (2020) highlights the importance of a close working relationship between innovators and the health and care workforce to enable learning and iteration of the innovation in response to local need and feedback. Both reports recognise the critical role of digital champions within the workforce to inspire others and lead change. Importantly, to be successful, technology must be relevant to staff and patients and align with existing 'real world' priorities and challenges.

3 Aims and Objectives

The Test Bed programme recognised the potential of digital innovations to transform care and set out to undertake real world testing of high value innovations which could produce significant health improvements without additional financial costs. The Care City Test Bed has had a unique focus on the workforce, equipping and empowering health and care staff to utilise digital technology to extend their role and improve service efficiency and health outcomes. For the sustainability of the health and care services we need to rethink the role that innovations can play in enhancing the roles and competencies of staff at each stage of care, but perhaps most importantly in those roles that are often undervalued by the system. Domiciliary carers, healthcare assistants and hospital administrators represent around one million employees across the health and social care sector and are critical to service delivery, yet often miss the attention that clinical staff such as doctors and nurses receive. The programme sought to realise the potential of these staff, working in partnership with patients, to overcome common challenges to successful digital innovation projects and improve care and health outcomes.

Smartphone applications (apps) are amongst the top three digital health technologies impacting the workforce now and will continue to do so for the next 20 years (Health Education England, 2019). The Care City Test Bed programme has been built around a number of simple to use smartphone products which provide clinical support and domiciliary care staff with the tools to identify deterioration and support people living with long-term conditions.

Care City's ambition was to use innovation to support and enhance the work and productivity of these important members of the workforce and focussed on three key programmes of work:

Domiciliary Carers – enabling domiciliary care staff to own, understand and use digital innovations to monitor their clients health and to be able to seek clinical advice and support when needed.

Digital Prescribers – enabling healthcare assistants and other non-clinical staff within primary care in Barking and Dagenham to develop new skills in the prescription of digital tools.

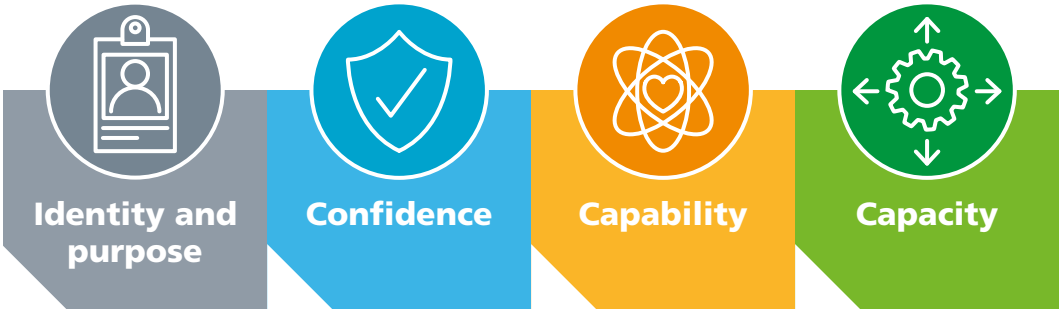
Cardiac Rehabilitation – enabling staff to support and deliver remote cardiac rehabilitation for patients living with heart failure.

This report presents some of the key learnings which emerged throughout the delivery of the Care City Test Bed.

4 Our key learnings

As outlined above, an important element to a successful adoption and spread of innovation – or any intervention – is a confident and supported workforce. Adoption and scale is a social process; Treating this as something technical, without any regard to the social interactions and the work culture in play, hinders the effective diffusion of innovations within the healthcare sector.

During the 18 month programme, and across each stream of work, themes emerged from the Care City Test Bed programme in relation to workforce development. Co-design and partnership working with health and care staff was central to each stream of work and this uncovered important and useful insights for future innovation programmes. Four key learning themes emerged which relate to staff identity, confidence, capacity and capability in using technology. These are described in detail below, along with case study illustrations and suggestions for application to future innovation programmes.



4.1 Identity and purpose

Identity: Roles and Responsibilities

Investment in planning and setup of digital projects can't be cut short. Roles, responsibilities and ways of working must be established early in the innovation planning, with the opportunity for a wide range of staff to contribute and shape the project from the start.

The best made and most well-intentioned innovation plans are often proven unmanageable when applied to the frontline, because the right people were not listened to or heard during critical early planning. It is therefore crucial to invest time in listening to and understanding the organisation, culture and environment in which the innovation is being tested. Each team or organisation has its own local ways of working and therefore roles and responsibilities may differ between or even within organisations. This is a frequent challenge raised by innovators trying to work with the NHS, who often struggle to identify who the decision makers or champions may be. Innovators and frontline staff often miss out on opportunities to build relationships and share learning – creating space to do so can play a significant role in the success of the project. Listening to implementation teams and identifying skills gaps or training needs before implementation is crucial. In the Test Bed programme this was facilitated through regular co-design with those working on and leading each stream of work.

Case Example: Whzan

In the domiciliary care programme, it was evident that organisation size and workforce structure made a big impact on the success of Whzan. Larger domiciliary care organisations faced more challenges with frontline innovation success, as there was often less flexibility and it was harder to establish a clear way of embedding the Whzan kit into their local ways of working. Whzan proved to be more successful within smaller domiciliary care organisations where it was clear who the decision makers were and how to create and support champions amongst the frontline carers.

It was essential to identify the roles and responsibilities for Whzan innovation early into the implementation to ensure that the implementation process was not disrupted. We encountered challenges with one of our partners who had struggled to identify a local implementation lead until quite some way into the Test Bed programme. This lack of 'on the ground' leadership impeded the implementation of the technology in this setting, not only delaying the training and recruitment phase of the programme, but also reducing organisational confidence in the product.

Having a local lead implementer, who worked alongside frontline care staff was critical to the success or failure of the digital intervention. The lead implementer was able to maintain a strong relationship with the innovator from the beginning, playing conduit for staff concerns or questions and enabling these to be addressed in a timely way. Both lead implementers and frontline staff were pivotal during the co-design sessions as they were able to provide the challenges and identify skill gaps that needed to be addressed to continue with a successful delivery of Whzan. This was able to happen because their employing organisations recognised that although releasing staff from frontline work had associated costs, this would be repaid in terms of the value delivered by a successful digital implementation.

whzan DIGITAL HEALTH

Purpose

Helping the workforce understand the reasons behind the use of these (new) technologies and how they fit in the bigger picture of the work of the health and care system.

Often, narrow skills training focuses on specific interventions without helping staff understand why they are being asked to do something, and how it fits in the bigger picture of the work of the health and care system. It is true throughout the health and care system that value generated in one part of the system is often felt elsewhere. Providing staff with the opportunity to observe the impact of the innovation/product is effective in building motivation and a sense of purpose around their role in the process.

A strong evidence case, alongside use of storytelling to illustrate the innovation's benefits, can create a powerful case for change and a collective sense of purpose. Traditional approaches which use financial incentives or performance levers to force change can be counterproductive or only secure short lived success unless staff understand and embrace the need for innovation. Internal and external motivation for change must be cultivated to ensure sustained success of any innovation project.

Case Example: Whzan

Digital programmes are often expected to deliver instant benefit and impact, when in reality they may require a significant investment of time and energy before benefits are realised. This was certainly the case for one of the agencies implementing Whzan. At the start, the agency had challenges with the additional workload which the Whzan kit added and how to accommodate this within carers day-to-day workflow. Staff expressed frustration at the slow pace of progress and the lack of visible impact during the first few weeks of testing. However, this frustration soon dissipated once staff were able to see and describe the positive impact on service users. Carers were able to escalate deteriorating patients earlier than they would have before and grew in confidence in their understanding of clinical need and how to communicate with GPs or 111. As the programme progressed, staff were able to contribute more to the co-design sessions as they could see the benefits and purpose for the use of Whzan. The success of this transformation from skepticism and frustration to one of increased confidence and upskilling is evidenced by the fact that the agency has continued independently with the technology beyond the period of the Test Bed and the product is now scaling into Mid and South Essex Health and Care Partnership (Mid and South Essex Sustainability & Transformation Partnership, 2020).

whzan DIGITAL HEALTH

> **The Test Bed project has been an eye-opening journey for our business, seeing first-hand the potential difference technology innovation can make in a care setting.**

> **We were all uncertain at the beginning of the project where this digital path would take us, however I am pleased today to say it has helped us proactively with early detection of deteriorating conditions as well as early signs of illnesses.**

> **I can not praise the team at Care City enough for giving us the opportunity to work in partnership, whilst implementing digital innovations in the care setting. They were all very professional, keen to make the project a success and always contactable to resolve any issues during the introduction and implementation stages.**

> **Over the course of the project we have added digital innovation into our business operations to help identify early health warning indicators, promoting well-being and raising care staff confidence through training on digital technology.**
>
> **Tajinder (TJ) Bains, Branch Director, Kare Plus Romford**

4.2 Confidence

Confidence and trust in the innovation and its offering

Establishing trust amongst the workforce in the technology is vital to embedding innovation into the health and social care service pathway.

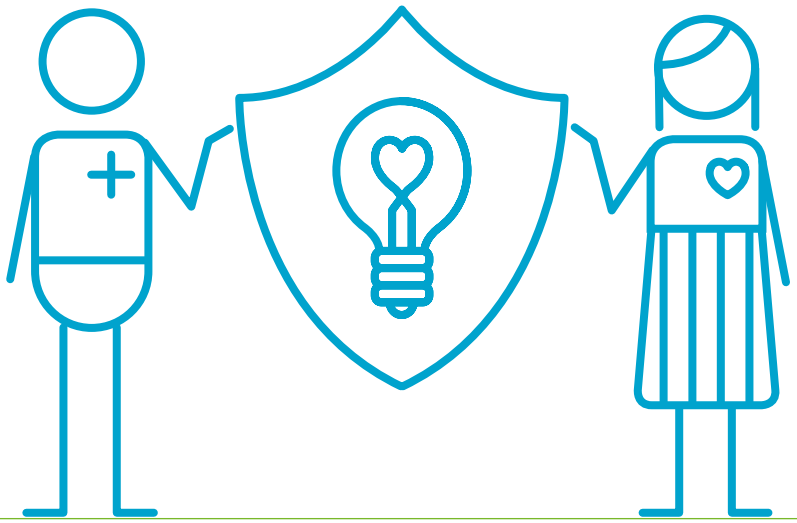
To give innovation the best chance of being embedded into the health and social care service pathway successfully, we need to make certain that those using the innovation are confident in its benefits and use. Trust is vital, and unless there is strong trust in the efficacy of the technology, and its position within the delivery pathway, it will be difficult for staff to believe it is worth investing time and energy into. Digital projects rarely deliver efficiency savings from day one and therefore, commitment to the effort of implementation based on a belief of its ultimate impact is important to achieving success. Unsurprisingly, clinicians supporting the Test Bed wanted to see the evidence base for innovations and explore how it had been tested and had impact elsewhere. Qualitative data is as important as quantitative evidence in building an assessment of the innovation and building trust.

Case Example: TickerFit

In the cardiac rehabilitation programme, open and honest conversations about how and where TickerFit fit into the service pathway helped inform the final patient onboarding process. An understanding was shared within the team that by offering TickerFit, the innovation is not replacing the traditional face-to-face cardiac rehabilitation, but rather providing them with a secondary option that they can offer to patients.

Some of the issues around patient recruitment to the Test Bed identified through co-design related to how front line staff talked about the innovation and the language they used. Language is important because how you describe a new technology or pathway of care determines how users/patients perceive or value the innovation. Where staff were confident and enthused about the tool, they had significantly more success in recruiting patients and service users. Staff who don't fully understand or believe in the value of the intervention may struggle to enthuse users and even risk losing trust in the innovation.

TickerFit



Case Example: Liva Recruitment

The co-design sessions delivered as part of the Test Bed programme proved to be very helpful in unpicking unanticipated challenges around implementation and enabling the project team to be responsive in addressing these. Staff from one test site reported that patients were worried and skeptical about receiving a poorer standard of care via a digital tool than they would in person. They felt strongly attached to their primary care team and staff also expressed some concerns about the move from face to face to a digital intervention. The Care City team and innovators arranged additional support sessions for staff to express their concerns and further explore and test the product themselves. The innovators were able to adapt the staff training tools and resources to further support staff, for example providing them with FAQ information to help with responding well to questions they may be asked by patients. The outcomes were – increased confidence amongst staff in using the technology and promoting it to patients, an increase in referrals and a decision to expand the service to a larger population of people living with diabetes.

Liva healthcare

Confidence in their role

> **Co-designing approaches to communicating with patients, and ensuring the first contact is utilised effectively, ensure that the innovation 'lands' in the best way possible.**

When it was new for staff to be recommending an innovation to patients, it was essential that they had the tools to confidently talk and answer any questions about the innovation. When asked what would help build confidence in their understanding of the technology and ability to impart this to patients, staff requested clear leaflets and conversation guides. Subsequent leaflets and information sheets were developed, along with conversation guides with tips for explaining the innovation and how it would be used and evaluated.

Case Example: Toolkits

For example, in the cardiac rehabilitation programme, through discussion of the process of deciding health goals, we were able to create patient leaflets that included a clear diagramatic step-by-step process of the pathway.

In addition to upskilling the workforce on how to use innovations and technology, i t is important to build knowledge and skills around the art of behavioural change.

Beyond building rapport, there is a specific set of skills around motivation and coaching for behaviour change. These skills can be taught at a high level, but the basics are useful for a huge range of health and care staff, and help to create a positive culture within organisations.

Case Example

When recruiting patients to the primary care tools, staff were encouraged to ensure this was embedded within a broader conversation about their wellbeing and health goals. By supporting staff to use motivational interview techniques, asking open-ended questions, listening and reflecting, prescribers were able to make clear connections between the benefits of the app and the things that were important for the patients. This highlights the fact that staff training to support digital programmes may not simply be about the technical elements, but wider skills which support the tool.

4.3 Capability

Do not make assumptions about the digital literacy of the workforce which is likely to vary as widely as that within the general population.

Throughout the Test Bed Programme, we were supported by a large number of motivated and committed health and social care staff. However, although we are operating in an increasingly digital society, the digital capabilities of the health and care workforce vary widely. Care must be taken with assumptions about the level of digital literacy amongst those implementing digital programmes. Even basic skills such as downloading a smartphone application or using bluetooth may still be new for some. If training isn't tailored to need, this can be another factor in the ultimate failure of digital programmes. The core ambition of the Care City Test Bed programme was to provide the opportunity to create 'expert carers' – upskilling staff in clinical support and administrative roles.

Through tailored training programmes and support, this opportunity has been transformative for many of the staff we worked with, building their confidence and capability and extending their existing role. This delivers value both at an individual level, but also in how we support people living with long-term conditions.

View NINA case study here

Working with The Good Things Foundation, through regular co-design sessions, enabled the team to understand and address learning gaps and needs. The co-design sessions influenced the way in which training in the digital tools was designed. We ensured that frontline staff had enough time to understand, test, and experiment with both the innovations so they would feel able to recommend and introduce them to patients. It is important to create a safe space for all staff to learn and to ask for help where they feel less confident in their own digital skills and understanding. This report does not cover digital literacy amongst patients, although the range of digital skills amongst our patient population was marked. The recent report by the Good Things Foundation (2020) – Blueprint for a 100% Digitally Included UK – explores these issues in much greater depth.

Case Example: Primary Care

For our primary care programme, training was delivered on site and tailored for each test site. Due to unforeseen delays between training and testing, training was repeated to ensure that the workforce had the confidence in recommending and/or using the innovations. This repetition ensured a continuous evolution of training and learning that met the needs of the delivery team and their patients. This was particularly important in Primary Care as the training had to be tailored for each test site due to the different ways of working in each GP practice. This inevitably incurs a resource cost – and there may be elements which can be standardised. However, face to face training is valuable because it develops the relationship between the workforce and innovators, and enables issues/concerns to be unearthed naturally and addressed promptly.

> **Be aware of unconscious bias which may influence the design of the digital intervention. Ensure that the programme team includes a diverse range of voices and perspectives.**

As we become an increasingly digital society, dependent on a wide range of technology, it is critical that these solutions are designed, tested and led by a diverse community which is representative of our population. Ensuring diversity within digital technology programme teams is not a nice to do, but essential to the success of these innovations. The NHS Workforce Race Equality Standard report (NHS England, 2020b) highlights that there is still some distance to travel in ensuring equality, diversity and inclusion within the health service and the same is true within digital health technology. Language is a key example and must be considered, particularly in diverse populations like that of east London.

Case Example: TickerFit in Tower Hamlets

At the start of the project, the contents of the TickerFit app were only available in one language: English. Through working with the Cardiac Rehabilitation Team, most especially with the patient advocates, we identified that Sylheti is the most commonly spoken language in the Borough, with Bengali being the largest single ethnic group in Tower Hamlets. This informed the decision to create another set of exercise videos with Sylheti voiceovers to ensure that we meet the needs of the wider community. If the Test Bed programme team had initiated earlier community engagement in the technology, localised need for additional languages within the app may have been preempted and this would have been undeniably more beneficial to the programme. However, the fact that we were able to adapt the tool during the programme is testament to the effective working relationships between the innovators and programme team.

TickerFit

Case Example

Initially, some of the primary care staff felt that many of the people they supported who were living with long-term conditions may not be as willing to try the technology as those who were newly diagnosed with the condition. This guided our early implementation to focus on younger patients who were recently diagnosed. This was interesting because it revealed the impact of the staff opinions, thoughts and bias (and perhaps their own confidence in using digital tools) in determining how the tool was offered to patients. It was only later in the programme that other staff and patients later challenged this perspective and shared insight from their own practice which demonstrated strong uptake amongst older people who had been living with diabetes for some time. It is inevitable that co-design will bring up a number of different perspectives and views and working through these as a group can add significant value to the programme. Effort must be invested into ensuring a diverse contribution to co-design and ongoing oversight of the digital programme to prevent unconscious bias influencing delivery of the programme.

> **Equip the workforce with 'enhanced' roles, with the skills, knowledge and confidence in working in a multi-disciplinary team, with other professionals that they may not work with regularly.**

Where staff are using technology to play enhanced roles, they often come into contact with other professionals that they may not necessarily work with in their normal day-to-day roles. Teaching and practising professional conversations is vital so that staff are confident to use technology to play these roles within larger virtual teams.

Case Example

Domiciliary carers had to field calls from GPs more frequently than normal, following their escalation referrals. For some, this was the most challenging part of the change process. They needed support to build their confidence in having these new conversations and also navigating the healthcare system. To support them during their escalations, information guides on the NEWS score were created for the staff to keep in their office, and smaller guides for the Whzan kits for ease of reference. This ensured that the carers were able to interpret the NEWS scores that were generated from the Whzan kit.

During the set-up phase for each of the care agencies, it was important to gain a sound understanding of their own internal escalation protocols the agency has for deteriorating patients. Based on this knowledge, a unique escalation protocol was created for each care agency, this ensured that the agencies were responding appropriately to the results of the Whzan kit, and had clear step-by-step guides for responding when they detected clinical deterioration in their clients.

4.4 Capacity

Work closely with staff who will be delivering the technology, to understand day-to-day capacity in order to avoid any assumptions that can lead to delays and affecting engagement.

An underlying assumption of the Test Bed programme was that front line staff and service providers have a drive to develop in their role, and that with support for backfill, there is the capacity for them to do so. However, this is not always the case in practice, even with the best intentions. While we had enthusiastic and willing staff to work with, many of them faced multiple pressures and demands which meant that finding time for the Test Bed programme was often challenging. It is perhaps also expected, but those early adopters interested in innovation and technology often come from a small pool of the workforce. There is the risk that these members of the workforce will become burnt out from their involvement and support on multiple innovation programmes. Quickly identifying 'fast followers' and building in additional expertise and capacity early into the programme can help avoid a small number of people being overburdened and subsequent failure of the project. Future programmes will need to recognise that digital programmes often require significant upfront investment of additional staff time before efficiency and quality gains are realised. Being honest with staff about this will help prevent early failure or abandonment of innovation projects.

Case Example

In the primary care programme, in which healthcare assistants (HCAs) played a pivotal role, we faced a number of challenges to fully engage with the programme. Despite high levels of motivation to utilise the digital tools to enhance care, many reported finding it challenging to prioritise digital prescribing alongside their demanding day to day role. During co-design sessions, and learning from testing, HCAs highlighted this need to build in extra capacity, at least initially, in order to test innovations effectively. For this programme it meant that we committed additional Care City staff time to support practices.

> **I supported the primary care team in the onboarding of patients to the digital apps. I heard first hand of the challenges patients face, on a daily basis, living with long-term health conditions. We were able to offer them extra support, via apps, with the goal of learning new skills to ease their lifestyle.**
>
> **Nicola Kelly, Project Support Officer**

5 COVID-19 and digital transformation in health and social care

Since the start of the Care City Test Bed Programme, the world has been rocked by a viral pandemic. COVID-19 and the necessary urgent response to protect public health has irrefutably changed the traditional ways of working that the world has been very familiar with. Long commutes, face-to-face meetings and spending lunchtime in queues at the nearest place that sells fast food have disappeared over night. The way we deliver health and social care has similarly been disrupted and transformed. The pandemic accelerated ambitions around technology to rapidly digitise many health and care pathways. Activities such as seeing one's GP in person for minor ailments, visiting the hospital for an outpatients appointment, or dropping by unannounced to visit one's loved ones in the care home are no longer the norm.

We have observed three key transformations across the health and social care workforce and system since the start of the pandemic:

1 Implementation of a 'digital first' approach in conducting patient consultations in primary and outpatients care

As the pandemic progressed in the early months of 2020, the need to free up capacity in acute hospitals, and to reduce the risk of transmission in primary care, resulted in the issuance of the 'digital first' guidelines in primary and outpatient care (The British Medical Association, 2020). Patient consultations moved to predominantly remote consultations, significantly reducing GP face-to-face consultations to just under 50% of the original number of appointments recorded prior the start of the pandemic (NHS Digital, 2020a). A similar scenario can be observed in secondary care where an increase of 6.5% in the use of telemedicine in outpatient consultations was noted in March 2020 from the previous year (*NHS Digital, 2020b*).

2 Increased patient uptake in NHS Digital technology

Patients looked into alternative ways of receiving quick and high quality information, and being signposted to the most appropriate services, when their choices were limited by the pandemic. On 17 March 2020, the NHS website reached its highest daily total of visits at 3.4 million (NHS Digital, 2020c). As data is only captured if the visitors accepts 'cookies' (around 40%) this figure is likely to be higher. Usage of the NHS app, which allows patients to view their records and request repeat prescriptions, rose dramatically with new account registrations increasing by 111%.NHS Pathways, a telephone triage system used to support the remote assessment of callers to urgent and emergency services, saw a 12.2% increase in the number of calls triaged in March 2020 from the year before.

3 Managing the effects of COVID-19 using digital technology

In addition to providing alternative ways of receiving care during the pandemic, digital technology also played a role shaping the pandemic response. NHS Digital created a dedicated COVID-19 clinical triage support tool to help assist primary and community care clinicians in assessing a range of symptoms that could indicate the level of severity of the disease, and referring patients for further assessments when required (NHS Digital, 2020d). The NHS 111 online coronavirus service's aim was two-fold: provide patients with easy access to information and advice, and increase capacity within the team of NHS 111 call handlers (NHSx, 2020). A similar service, the NHS 111 online text messaging service was also developed to assist people who are isolating, by providing daily text messages during their isolation period with advice on next steps when their condition improves or worsen (NHSx, 2020). Social media is a huge part of today's society, and in most scenarios, dictates how news is spread widely. Putting this knowledge into good news, the NHS worked with Google, Twitter, Instagram and Facebook to disseminate correct and reliable information about the pandemic to reduce myths and misinformation (*NHS England, 2020c*).

6 Conclusion

In addition to providing alternative ways of receiving care during the pandemic, digital technology also played a role shaping the pandemic response. NHS Digital created a dedicated COVID-19 clinical triage support tool to help assist primary and community care clinicians in assessing a range of symptoms that could indicate the level of severity of the disease, and referring patients for further assessments when required (NHS Digital, 2020d). The NHS 111 online coronavirus service's aim was two-fold: provide patients with easy access to information and advice, and increase capacity within the team of NHS 111 call handlers (NHSx, 2020). A similar service, the NHS 111 online text messaging service was also developed to assist people who are isolating, by providing daily text messages during their isolation period with advice on next steps when their condition improves or worsen (NHSx, 2020). Social media is a huge part of today's society, and in most scenarios, dictates how news is spread widely. Putting this knowledge into good news, the NHS worked with Google, Twitter, Instagram and Facebook to disseminate correct and reliable information about the pandemic to reduce myths and misinformation (NHS England, 2020c).

7 References

Health Education England, 2019. *Topol Review: Preparing the healthcare workforce to deliver the digital future*. [online]
Available at: <**https://topol.hee.nhs.uk/**>

Hemmings N, Hutchings R, Castle-Clark S & Palmer B., 2020. *Achieving scale and spread: Learning for innovators and policy-makers*. The Nuffield Trust. [online]
Available at: <**https://www.nuffieldtrust.org.uk/research/achieving-scale-and-spread-learning-for-innovators-and-policy-makers**>

Horton T, Illingworth J & Warburton W., 2018. The Health Foundation. *The Spread Challenge: How to support the successful uptake of innovations and improvements in healthcare*. [online]
Available at: <**https://www.health.org.uk/publications/the-spread-challenge**>

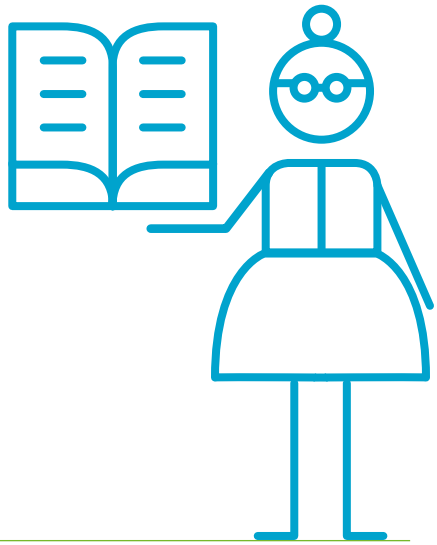
Innovation Unit & Health Foundation, 2019. *Against the Odds: Successfully Scaling Innovation in the NHS*. [online]
Available at: <**https://www.innovationunit.org/wp-content/uploads/Against-the-Odds-Innovation-Unit-Health-Foundation.pdf**>

Mid and South Essex Sustainability & Transformation Partnership, 2020. *New Technology Delivered To Care Homes To Support Better Clinical Monitoring*. [online]
Available at: <**https://www.msehealthandcarepartnership.co.uk/new-technology-delivered-to-care-homes/**>

NHS Confed, 2020. *NHS Reset: The Future of Health and Social Care*. [online]
Available at: <**https://www.nhsconfed.org/NHSreset**>

NHS Digital, 2020a. *Appointments In General Practice May 2020*. NHS Digital. [online]
Available at: <**https://digital.nhs.uk/data-and-information/publications/statistical/appointments-in-general-practice/may-2020**>

NHS Digital, 2020b. *Hospital Episode Statistics for Admitted Patient Care, Outpatient and Accident and Emergency Data*. NHS Digital. [online]
Available at: <**https://digital.nhs.uk/data-and-information/publications/statistical/hospital-episode-statistics-for-admitted-patient-care-outpatient-and-accident-and-emergency-data**>



NHS Digital, 2020c. *Coronavirus (COVID-19) Increase In Use Of NHS Digital Tech – NHS Digital*. [online]
Available at: <**https://digital.nhs.uk/coronavirus/nhs-digital-tech-analytics**>

NHS Digital, 2020d. *Coronavirus (COVID-19) Clinical Triage Support Tool*. [online]
Available at: <**https://digital.nhs.uk/services/covid-19-clinical-triage-support-tool**>

NHS England, 2020a. *We are the NHS: People Plan 2020/21 – action for us all*. [online]
Available at: <**https://www.england.nhs.uk/ournhspeople/**>

NHS England, 2020b. *Workforce Race Equality Standard Data Reporting – 2019*. NHS England. [online]
Available at: <**https://www.england.nhs.uk/wp-content/uploads/2020/01/wres-2019-data-report.pdf**>

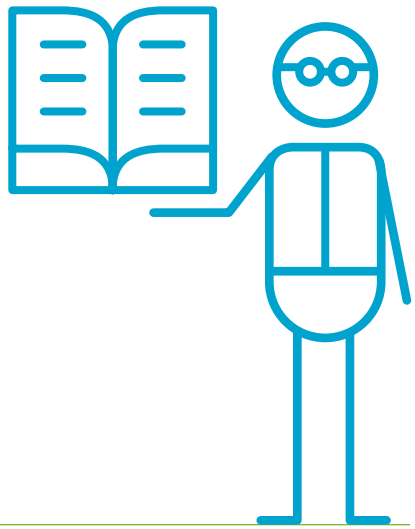
NHS England, 2020c. *NHS Takes Action Against Coronavirus Fake News Online*. [online]
Available at: <**https://www.england.nhs.uk/2020/03/nhs-takes-action-against-coronavirus-fake-news-online/**>

NHSx, 2020. *NHS 111 Coronavirus Services*. [online]
Available at: <**https://www.nhsx.nhs.uk/covid-19-response/technology-nhs/nhs-111-coronavirus-services/**>

Perla R, Reid A, Cohen S, Parry G., 2015. Health Affairs Blog. [Blog] *Health care reform and the trap of the "iron law"*.
Available at: <**https://www.healthaffairs.org/do/10.1377/hblog20150422.047092/full/**>

The British Medical Association, 2020. *COVID-19: Video Consultations And Homeworking*. [online]
Available at: <**https://www.bma.org.uk/advice-and-support/covid-19/adapting-to-covid/covid-19-video-consultations-and-homeworking**>

The Good Things Foundation, 2020. *Blueprint for a 100% Digitally Included UK for a post Covid-19 Economy*. [online]
Available at: <**https://www.goodthingsfoundation.org/sites/default/files/blueprint-for-a-100-digitally-included-uk-0.pdf**>



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