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Evaluation of the Near Me video consulting service in Scotland during COVID-19, 2020



HEALTH AND SOCIAL CARE



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**Dr Joseph Wherton and Professor Trisha Greenhalgh
Department of Primary Care Health Sciences
Radcliffe Observatory Quarter
University of Oxford OX2 6GG**

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Abbreviations and Glossary of Terms

Abbreviation / Term	Definition
Attend Anywhere	Video call system and service designed to support remote health and care consultations
CAMHS	Child and adolescent mental health
COPD	Chronic Obstructive Pulmonary Disease
EQIA	Equality Impact Assessment
GDPR	General Data Protection Regulations
GGC	Greater Glasgow and Clyde Health Board
HIS	Healthcare Improvement Scotland
HSW	Healthcare Support Worker
HSCP	Health and Social Care Partnerships – bring together Local Authorities and local Health Boards to plan and deliver integrated adult community health.
Hub site	The location where the clinician is based during the video consultation
Internet browser	A piece of software installed on a computer system / computers that provides access to the internet and websites.
IQR	Interquartile range: a statistical measure of where the bulk of values lie in a range.
IRIHS	Interdisciplinary Research in Health Sciences (University of Oxford)
IT	Information Technology
Likert scale	A type of survey scale which invites respondents to select their level of agreement with specific statements or questions.
MS Teams	Microsoft (MS) Teams is a secure communication (video, messaging, file sharing) tool, which forms part of the Office 365 software package.
NASSS	N on-adoption, A bandonment and Challenges to S cale-up, S pread and S ustainability – an analytical framework developed to explain individual and organisational challenges to adoption and sustained use of technology-supported programmes in health and care.
NES	NHS Education for Scotland
NHS Health Boards	NHS Scotland has 14 territorial Health Boards, which cover specific geographical areas. They are responsible

Abbreviation / Term	Definition
	for the protection and improvement of their population's health, and for the delivery of frontline healthcare services. There are also 7 Special NHS Boards.
NHS Near Me	National branding name in Scotland for the video consultation services using the Attend Anywhere platform
NRSPCC	NHS Research Scotland Permissions Coordinating Centre
OOH	Out of Hours care: provides support to those who require medical assistance outside normal GP surgery hours.
PEI	Patient Enablement Instrument: a patient-reported outcome measure that reflects the quality of an appointment.
Primary care	Primary health care is the first point of contact with the NHS. It includes community-based services provided by, for example, GPs, community nurses, pharmacists; and by allied health professionals such as physiotherapists and speech and language therapists.
R&D	Research and Development
RCGP	Royal College of General Practitioners
REC	Research Ethics Committee
SAC	Scottish Access Collaborative
Secondary care	Mainly hospital-based health care provision, including emergency care (via Accident & Emergency), outpatient departments and elective treatments.
SLT	Speech and Language Therapy or Therapist
Spoke site	The location where the patient is based during the video consultation
Tertiary Care	Specialist health services for people with a condition requiring high levels of expertise and support services
TEC	Technology Enabled Care
URL	Uniform Resource Locator - the browser address of an internet web page
VC	Video Consulting or Video Consultations
vCreate	A secure video messaging initiative, which links patients, families and clinicians.
VPN	Virtual Private Network: a VPN connection establishes a secure connection with the internet.
Waiting area	A virtual online waiting area which patients access via an internet link and then wait for their appointment

Executive Summary

Introduction

Near Me is the public-facing name for the video consulting (VC) service used across health and social care in Scotland. Near Me clinics have been established in both primary and secondary care, in all local territorial NHS boards and in the Golden Jubilee National Hospital (NHS Scotland's National Waiting Times Centre), as well as in a range of Health and Social Care Partnerships¹, Local Authorities and third sector organisations.

In June 2020 the Scottish Government commissioned the University of Oxford to conduct an independent evaluation of the Technology Enabled Care (TEC) initiative for the rapid rollout of Near Me video consultations in the context of the COVID-19 pandemic. The field work was conducted during June-October 2020 by a research team based within the Interdisciplinary Research in Health Sciences (IRIHS) unit at the University of Oxford. This builds on a previous evaluation conducted by the IRIHS team in Scotland in 2019, before the COVID-19 pandemic (see [1] for full report of the previous evaluation).

Near Me is the public-facing name used to describe video consulting services provided via the Attend Anywhere platform in Scotland. This name was developed by patients in NHS Highland, and was in near-universal use across Scotland at the time of the fieldwork for this evaluation.

Attend Anywhere is the name of the video consultations platform, purpose-built to meet the needs of the health and care sectors, for which a national licence has been procured for Scotland.

For the purposes of this evaluation report, the term 'Near Me' is generally used, unless research participants referred specifically to 'Attend Anywhere'.

Background

Building on initial work and early adopter sites to pilot video consulting², in November 2018 Scotland's TEC programme launched a £1.6 million 'scale-up challenge', to support wider rollout of Near Me across all health boards. Near Me runs on the Attend Anywhere platform – a video technology which works via the internet and can be accessed by a member of the public using their own device, be it a laptop, tablet or mobile phone. People use an internet link to access a 'virtual' online waiting area, where service providers meet them and provide the video consultation. This process has been designed to align with the ways in which people usually attend face to face appointments, and with established health and care processes and workflows. This is illustrated in the diagram below.³

¹ Health and Social Care Partnerships bring together Local Authorities and local Health Boards to plan and deliver integrated adult community health, including primary care, and social care services, including services for older people.

² See previous evaluation of Near Me for more background [1]

³ Diagram from NHS Scotland National Video Conferencing Service website:
<https://www.vc.scot.nhs.uk/attendanywhere/>

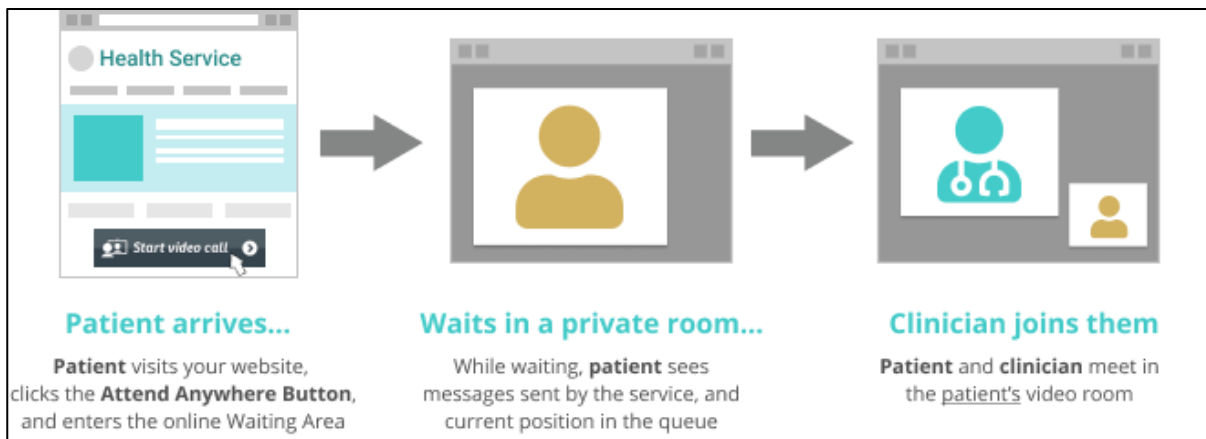


Figure 1: Process for a patient attending an online video consultation with a clinician

In the previous evaluation we found that Near Me was being used for a wide range of conditions and clinical services, though on a relatively small scale and concentrated in a few Health Boards. Three different service models were in use:

- **Hub-home:** Clinician connects from clinic to patient at home.
- **Dyadic hub-spoke:** Clinician in specialist 'hub' centre connects to patient in remote 'spoke' health or care site without an additional staff member present (e.g. in an unstaffed kiosk).
- **Triadic hub-spoke:** Clinician in specialist 'hub' centre connects to patient in remote 'spoke' health or care site with an additional staff member (nurse, GP, healthcare support worker [HSW]) present.

The Scottish Government's Programme for Government (2019-20) featured Near Me, and committed to opening up health and care services to those who may struggle to travel due to their condition, by using technology such as video consultations [2]. In March 2020, the rollout of Near Me was greatly accelerated to help reduce the need for face to face appointments during the COVID-19 pandemic. It forms part of the national remobilisation framework [3], as well as a commitment in the current Programme for Government covering 2020-21 [4].

The aim of this evaluation was to provide timely and robust information on: a) the experience of the rapid implementation and delivery of the rollout programme to scale-up and spread Near Me clinics, in the context of the COVID-19 pandemic, and b) lessons from this experience, including approaches taken; and barriers to and enablers of the accelerated implementation and uptake.

Research Methods

The evaluation was undertaken between July and September 2020. It used mixed methods and collected qualitative and quantitative data. We purposefully selected eight of the 14 local territorial Health Boards for qualitative data collection, in order to analyse data within the organizational context. These boards were selected to explore variations in geography (urban, rural, islands), clinical context, local (NHS territorial health boards) and adoption progress.

Qualitative interviews were conducted via phone/video call with health and social care staff, including doctors, nurses, allied health professionals, healthcare and third sector support workers, clinician and non-clinical service managers, care home managers; and with national stakeholders. The report also incorporates routinely-collected data on uptake of the service in different localities, extracted from the Attend Anywhere system, patient and clinician experience surveys conducted immediately after the consultation, and outcomes from a public engagement project with the general public, clinicians and partner organisations.

We analysed data thematically, combining descriptive quantitative data with synthesized qualitative themes. Data synthesis was guided by a multi-level theoretical model (NASSS: **N**on-adoption, **A**bandonment and challenges to **S**cale-up, **S**pread and **S**ustainability [5]), developed to explain individual and organisational challenges to sustained adoption of technology-supported programmes in health and social care. The analysis focused on developments since the previous evaluation (prior to the pandemic) and implications for scale-up and sustainability going forward.

Findings

Implementation and Use of Near Me

Backed by the Cabinet Secretary for Health and Sport, in March 2020 the TEC team launched a '12-week scale-up plan' to help rapidly deploy Near Me services. This included targeted support for GP practices, priority secondary care services and care homes, while maintaining platform access and providing technical support for local priority activities. The initiative was grounded in learning from the scale-up programme, focusing on issues related to technical set-up (hardware, connectivity, access to software, etc.); service processes (e.g. how patients will enter and leave the video appointment); and training (developing staff capability to consult with patients by video).

A suite of guidance resources on the implementation of Near Me across different care settings (primary care, outpatients, inpatients, care homes) were developed and a large number of people were drafted in from quality improvement teams across Healthcare Improvement Scotland (HIS), the Scottish Access Collaborative and the Care Inspectorate to support engagement, training and service implementation.

Use of Near Me increased significantly from early March 2020 onwards. Between March and June 2020 there was a 50-fold increase in video consultations, from 330 per week to just under 17,000. Hospital and other community care services constituted a much higher proportion of the Near Me activity (77%) than GP services (23%). Near Me was used for over 50 different specialities. Services related to Psychiatry/Psychology and Community Mental Health services presented a significant proportion of Near Me activity, constituting approximately 27% and 10% of overall Near Me hospital/community care activity, respectively. Physiotherapy was the third highest speciality (constituting 9% of overall Near Me hospital/community care activity), followed by paediatric services (8%).

Post-consultation survey data shows that most patients and professionals perceived video consulting as beneficial, both during the COVID-19 pandemic (i.e. to reduce risk of infection) and longer-term (e.g. by improving access, reducing travel). Overall, patient

surveys showed positive outcomes in terms of patient satisfaction and patients' views on how the consultation helped them cope with their condition (as measured by the patient enablement instrument, PEI [6]). Technical performance and quality of the call had a significant impact on these patient-reported outcomes.

A separate public and clinician engagement exercise was commissioned by the TEC programme (June – August 2020) alongside this evaluation [7]. Survey data from this work indicated wide support among the public and healthcare professionals for the use of video during, and beyond, the pandemic. However, they also highlight concerns in relation to digital access and health inequalities, including poor internet connectivity, access to relevant technology, cost of mobile phone data usage, and lack of privacy or other social circumstances within the patient's home.

Hospital and Other Community Care Settings

We heard predominantly positive comments from staff, who described various advantages of using video to maintain some level of service provision during the pandemic. The pandemic produced a strong external pressure on NHS organisations and there was a strong sense that this was a national effort being implemented across *all* NHS organisations in Scotland.

While there was contextual variation across health boards, the case sites illuminate the importance of Scotland's national-level groundwork around video consulting prior to the pandemic, which helped create the technological infrastructure, workflows and local knowledge to hit the ground running with a scaled-up service.

The main challenges and unintended consequences related to the reworking of clinical and administrative routines, administrative structures to support patient 'entry' into the virtual waiting area, and constraints related to IT and physical infrastructure.

The case sites demonstrate the importance of a quality improvement approach to continual monitoring, adaptation and knowledge sharing, in order to support organisational resilience and respond effectively to the evolving and unanticipated consequences of rapid scale-up.

GP Services

Whilst a few general practices had embraced Near Me before COVID-19 (10 out of 931 practices active by March), most had not. The rapid scale-up initiative saw a significant shift in the uptake and use of video consulting across GP services, with approximately two thirds of GP practices starting to use Near Me. But as lockdown restrictions eased, GP activity fell to around a third of practices continuing its use.

While the majority of clinic activity was conducted via telephone, many GPs talked about the value of video consulting, including 'eyeballing' patients to decide whether they needed urgent assessment or admission, paediatric appointment and out of hours (OOH) care.

There were several reasons for limited use and a fall in usage across GP services. These include the case mix in general practice (straightforward problems in patients well known to the clinician where telephone was sufficient), logistical challenges to using video within appointment workflows (due to high variability in appointments), problems accessing video

call technology within this busy and complex work environment, and some difficulties with internet connectivity and local IT helpdesk support.

Care Homes

An engagement exercise by the Care Inspectorate during the COVID-19 pandemic revealed just over half of care homes having internet connectivity throughout the premises, about 39% with partial connectivity (e.g. in management offices, corridors) and 5% with no internet connection [8].

Access to mobile and computing devices, and coordinating shared use of these in residential care facilities, was also a limiting factor for video consulting. A number of national and regional initiatives were instrumental in alleviating this issue, such as the Tech Device Network (a Scottish Care-run initiative for organisations to donate technology).

Since the research was conducted, an initiative has been launched in Scotland to facilitate digital inclusion for residents in care homes – a collaboration with TEC and the Connecting Scotland Programme. This focuses on access to devices, internet connectivity and skills support for staff and residents.

Care staff were generally very positive about the option of Near Me appointments for scheduled and unscheduled consultations, and virtual ward meetings with health professionals. However, they were reliant on it being offered as an option by GP and other health services.

A number of video platforms (including Near Me in some cases) have been used to connect residents with family, which has been seen to be particularly beneficial for some residents' social and mental wellbeing.

Data Synthesis using NASSS

The NASSS framework [5] domains were used to assess the impact of COVID-19 on the use of Near Me and the implications of moving from rapid scale-up to longer term use.

Clinical Appropriateness and Extended Use

- a. In the context of COVID-19, and depending on the condition and setting (i.e. more so in secondary care), video consultations became an acceptable alternative to bringing the patient into clinic or conducting the appointment via phone.
- b. There has been a significant expansion in areas where little or no formal physical examination is required, but where non-verbal cues and facial expressions are important (e.g. psychiatry, psychology, mental health, respiratory, speech and language therapy). In the context of COVID-19, video was often considered even better than face to face because face coverings and other PPE were not needed.
- c. Video has also provided a better alternative than phone for limited visual assessments that do not require physical contact or a high-quality/close up image, for “eyeballing” a child or elderly person to assess whether they were, broadly speaking, ill or well, for assessing the acutely unwell patient and also for routine monitoring of chronic conditions.

- d. Extended use of Near Me has involved a high degree of preparatory work and creativity among practitioners, in order to adapt and optimise effectiveness. But not all conditions or circumstances are appropriately managed through a remote video consultation. It is important to harness and share learning about the usefulness and appropriateness of different consultation modes in different clinical contexts and social circumstances of patients.

Technological Benefits and Challenges

- a. As found in the previous evaluation, the Near Me technology was, in general, considered dependable and produced high-quality video and audio. The software platform (Attend Anywhere) was initially under significant strain due a sudden increase in volume of users, resulting in a small number of periods of service degradation. These were resolved promptly by the technology supplier, avoiding significant disruption.
- b. Alignment with hospital and secondary care services through the 'single point of entry' design facilitated rapid scale-up in outpatient care settings. However, expansion in the number of virtual waiting areas and patient volume increased the risk of patients entering incorrect waiting areas.
- c. Managing and monitoring patient access was more challenging for GP practices, due to more complex and unpredictable workflows. Functionality within the Attend Anywhere platform (to send an internet link directly to the patient's phone) has recently been included to help overcome these issues.
- d. A major challenge for many services across all sites has been establishing adequate private and technically set-up spaces for a video consultation.

Value of Near Me for Patients, Staff and Services

- a. The main benefit of Near Me in the context of the pandemic has been reduced risk of infection and the ability to maintain some service provision in the face of limited clinical space, physical distancing and shielding requirements.
- b. While COVID-19 has been stressful in some ways, it also created opportunities for service redesign, with many existing and new adopters intending to continue use in the longer term. The main benefits identified were reduced travel, improved access, lower infection risk, increased service capacity, allowing more flexible working and environmental benefits.
- c. While video is likely to remain part of business as usual, there would still be value in a system-wide approach to assess the sustainability and cost-benefits of different Near Me service models, as well as other modes of remote consulting.

Concerns Raised by Patients and Staff

- a. In our previous evaluation, the concerns we heard were not about the specific video technology, but about the concept of video consulting in general or the logistics of the service. The survey and interview data in this current evaluation indicate growing support for the use of Near Me, both during and beyond the pandemic. However, staff and patients raised a number of concerns about moving from rapid scale-up to longer-term use.

- b. Concerns were raised about implications for care quality and safety, as services move from rapid deployment to longer-term use of video consulting, and the need for clarity on information and clinical governance going forward.
- c. Patients and staff highlighted issues related to digital access and health inequalities. They included technical barriers (e.g. connectivity, access to devices, mobile data), IT literacy, lack of private space at home and communication/language barriers.
- d. Some staff raised concern about potential negative impact of remote working and remote consulting on workforce management, staff wellbeing, reduced supervision, isolation, anxiety and cognitive demand.

Organisational Issues

- a. Most participants felt that the pandemic helped bring about a more conducive set of organisational conditions to accelerate the use of Near Me, including a positive narrative about the technology (to minimise risk of infection), slack (available) resources (redirecting staff/equipment) and senior management and clinician buy-in (with national directive and reporting mechanisms).
- b. The pandemic brought further (and evolving) organisational challenges related to significant reworking of routines and workflows across the different care settings. This included processes associated with changes to triaging and appointment booking procedures, a significant shift from a predominant hub-spoke (dyadic and triadic) to hub-home model activity in rural and remote settings, and working/consulting from home.
- c. Rapid rollout also put considerable pressure on the administrative structures supporting Near Me appointments, including the administrative resources and mechanisms to offer the video option and managing patient entry into the virtual waiting areas.
- d. A quality improvement approach to continual monitoring, adaptation and knowledge exchange was needed to respond to the evolving and unanticipated consequences. The scaling-up programme undertaken prior to the pandemic meant that existing local knowledge and infrastructure was already established; though more so within hospital and other community care settings than GP and care home settings.

Wider Contextual Issues

- a. There was already strong policy-level support for Near Me before the pandemic. The rapid scale-up initiative was able to build on (and strengthen) the national profile, inter-organisational collaborations and policy-level support over the course of the pandemic.
- b. The Near Me programme continues to form a key part of the national remobilisation strategy, as well as further expansion into social care.
- c. Recent events illuminate considerable infrastructural challenges in some regions, which have a bearing on equity of access, including geographical variations (e.g. connectivity), inequalities (e.g. financial hardship) and care homes (e.g. significant variations in local infrastructure).
- d. Rapid scale-up and service remobilisation creates implications for the sustainability of the 'hub-spoke' (dyadic/triadic) model, as they require various kinds of double-handling (e.g. appointments needed to be made, rooms booked, and staff members

made available, at two sites). Effective communication and collaboration between Health Boards is needed to modify the hub-spoke model for sustainability, and also support the hub-home model across boards when clinically appropriate.

Opportunities going forward

- a. The pandemic has dramatically altered the 'relative advantage' (benefits over existing solutions) for video consulting because of infection control pressures. As the pandemic wanes, the relative advantage of video compared to face to face will change. But there was still broad consensus that the pandemic has prompted a long-term shift regarding the role for video in the 'new normal'.
- b. Going forward, it will be important to understand how the extended use of Near Me (as well as other remote forms of consulting) for the purposes of infection control could be fit-for-purpose longer term.
- c. The Near Me platform facilitated opportunities to try-out and adapt the use of video consulting practices. However, there are still some key infrastructural issues to be worked out with regard to IT and physical infrastructures needed to support wider use.
- d. Future work should focus on addressing digital inequalities (related to IT literacy/confidence, financial hardship and internet connectivity) and workforce issues (staff wellbeing, mental health and supervision).
- e. There is scope to build on recent achievement and lessons across GP settings to cultivate communities of practice for shared learning and help embed video consulting more effectively.
- f. Beyond the pandemic, attention should be paid to the overall narrative or "organising vision" (clear and consistent vision among stakeholders as to what will be achieved) within which the change is framed, informed by continued inter-stakeholder dialogue.

Recommendations

In the previous evaluation of the Near Me programme up to March 2020, we proposed ten recommendations to support scale-up and sustainability of the service model, which were subsequently built into the Near Me work plan. Drawing on the most recent evaluation findings in the context of COVID-19, we have reviewed progress against and updated those ten recommendations. We have also added four new recommendations, based on research undertaken during the pandemic. These are summarised below: for full details, refer to the full Recommendations section of this report.

Recommendation 1: For each clinical specialty, produce national guidance offering 'rules of thumb' for what is generally safe for video consultations

Significant progress has been made in developing guidance across different specialities, including psychiatry, psychological therapies, maternity, pharmacy and paediatrics.

In order to further increase adoption of Near Me and inform best practice, efforts should be made to maintain shared learning and peer support across specialities.

Recommendation 2: Basic training, support and multiple try-out opportunities for staff and patients

There has been broad expansion of patient and staff resources, mechanisms for training and multiple try-out opportunities.

It will be important to maintain these capacity-building resources and pathways, as staff seek to remobilise services beyond the pandemic.

Recommendation 3: Develop and disseminate system-level analysis of the growing evidence about significant financial savings from Near Me

The pandemic has meant a significant shift regarding the financial case for Near Me, which now forms a key part of service recovery plans, and is considered as part of business as usual for the foreseeable future.

There would still be value in a system-level cost-benefit analysis that accounts for the sustainability of different Near Me service models, as well as other communication channels; and how Near Me can become efficiently embedded within wider service redesign.

Recommendation 4: Identify and address clinical and care governance issues beyond the pandemic

During the pandemic, there has been a strong incentive to use Near Me as it is perceived as better than face to face alternatives due to infection control measures.

As the pandemic recedes, professional and regulatory bodies will have an important role to play in revisiting traditional definitions of good clinical practice in health and social care. Progress has been made in gaining endorsement from the Royal College of General Practitioners (RCGP) for the Near Me guidance for GP practices. Further work needs to be done to secure endorsement across different specialties.

Recommendation 5: Working with professional networks, disseminate stories of up-and-running services across GP, hospital and other community specialities

There was a strong positive narrative around the technology-supported change during the pandemic, communicated by respected leaders and clinical champions.

Attention should be paid to new and emerging ways of working as part of the new normal, especially where there are complex challenges and potentially conflicting views on quality, safety and governance.

Recommendation 6: Communicate the “gaining a service” narrative

In the previous evaluation, some staff in remote community hospitals were concerned that the introduction of video clinics meant ‘losing’ a consultant-led service (e.g. monthly in-person visits would cease), although others in the same settings depicted the change as ‘gaining a service’ (access to certain specialists).

To some extent, these concerns have been overtaken by the pandemic. But it will be important to remain aware of these differing perspectives as services recover.

Recommendation 7: Support local champions

The pandemic saw the importance of organisational learning through local clinical ‘champions’ (who extol the benefits of an innovation to others, including at board level where decisions are made).

It is important to continue supporting these individuals as services look to incorporate remote consulting practices within long-term service redesign.

Recommendation 8: Provide set-up support for ready-to-roll sites, paying careful attention to routines, IT support and material infrastructure

The pandemic has seen a significant increase in the resource and support to accelerate clinic set-up and the development of a guiding quality improvement framework to implementation.

Some key infrastructural issues need to be fully worked out in some settings, including sustainability of the ‘spoke’ sites, management of physical hospital/office space and IT infrastructures.

Recommendation 9: Maintaining a Quality Improvement Collaborative to maximise inter-site learning

Recent events reveal the importance of the work undertaken prior to the pandemic, which helped the establishment of a system-level, quality improvement approach to ensuring ongoing adaptation and organisational resilience.

It will be important to proactively maintain and expand on existing networks and communities of practice that have grown during the pandemic for ongoing monitoring and improvement.

Recommendation 10: Strengthening the national Near Me branding

Efforts in late 2019 to get a single, patient-focused national brand (“Near Me”) accepted likely contributed to the success of rapid scale-up, providing a consistent and familiar message to patients and staff.

An important challenge will be managing and maintaining the scope of this national brand as service models continue to evolve.

The following additional recommendations are based on our research undertaken during the pandemic.

Recommendation 11: Review and address digital inequalities

Review service use and develop digitally-enabled care pathways to increase inclusion. This should aim to ensure that all patients receive the same level of access and care regardless of their digital preferences, access to technology and wifi, IT literacy and confidence, and communication and language barriers. This will also require joined-up government working to address underlying issues such as financial hardship.

Recommendation 12: Engage and support GP services

Pursue a dedicated stream of work to cultivate a community of practice across GP settings for collective sense-making, peer learning and investment in the co-evolution of Near Me service models. Investment is also needed in local IT infrastructure and support to embed video appointments within administrative and clinical workflows.

Recommendation 13: Support set-up in Care Homes

Targeted support should be provided to care home organisations and their residents. Support close collaborative working across sectors to help care home staff devise and adapt workable solutions to offer video appointments within local contexts, while also respecting residents' rights to choose preferred modes of consulting. Near Me and the pilot vCreate secure video messaging initiative, which links patients, families and clinicians, should collaborate in order to benefit from shared learning and joined-up working.

Recommendation 14: Monitor the impact of remote consulting on the welfare of the health and care workforce

Continually review the impact of remote consulting on the welfare of the health and care workforce, including their professional identity, mental health and training; and identify how negative impacts might be mitigated.

1. Background and Aims

1.1 About the evaluation

This evaluation was conducted during June-October 2020 by a research team based within the Interdisciplinary Research in Health Sciences (IRIHS) unit at the University of Oxford. It was commissioned by the Scottish Government to provide timely, robust information on the TEC initiative for the rapid rollout of video consultations in the context of the COVID-19 pandemic.

The TEC programme's video consultation workstream is delivered through the Attend Anywhere platform, a bespoke VC system which has been used to drive the integration of VC into health and social care in Scotland. Developed in Australia, a national licence was procured for Scotland in October 2016 and formally launched in December 2016.

Near Me is now the public-facing name for the video consulting service provided on the Attend Anywhere platform in Scotland. Near Me clinics have been established in all 14 local territorial NHS boards and in the Golden Jubilee National Hospital (NHS Scotland's National Waiting Times Centre), as well as in a range of Health and Social Care Partnerships, Local Authorities and third sector organisations.

In 2019 the University of Oxford was commissioned by the Scottish Government to deliver policy and practice-focused outputs to inform future investment decisions, programme management and national support activities for remote video consultations across Scotland. In particular, the evaluation reviewed progress and achievements in relation to the use and outcomes of Near Me, helped develop an understanding of the implementation experience to date and made recommendations relevant to future scaling-up, spread and sustainability activity. The field work was done between August 2019 and early March 2020, before the COVID-19 outbreak. (see [1] for full report).

Prior to the pandemic, there was already strong policy support for the scaling up of Near Me. The Scottish Government's Programme for Government (2019-20) featured Near Me (Attend Anywhere), and committed to opening up health and care services to those who may struggle to travel due to their condition, by using technology such as video consultations [2]. But in March 2020, early in the COVID-19 outbreak, the rollout of Near Me was further accelerated to help reduce the need for face to face appointments and enable access to health and care services via the option of video consultations. Rollout of Near Me continues to form a key part of healthcare transformation and features in the national remobilisation framework [3], as well as in the current Programme for Government for 2020-21 [4].

Building on the previous evaluation conducted before the pandemic, this current evaluation aims to provide timely and robust information on:

- a) The experience of the rapid implementation and delivery of the rollout programme to scale-up and spread Near Me clinics, in the context of the COVID-19 pandemic.
- b) Lessons from this experience, including approaches taken; and barriers to and enablers of the accelerated implementation and uptake.

1.2. Background on Near Me

There has been a long established strategic intent to use video for remote consulting in Scotland, as a means to improve citizens' access to health and care services and, ultimately, to improve their health outcomes [9-11]. In the context of Scotland's unique geography, video consulting has been seen as enabling the pooling of expertise and provision across the country to ensure a better patient experience that reached people in the farthest corners of the country.

The Scottish Government established the Technology Enabled Care (TEC) Programme in 2014, which included a series of workstreams to drive the widespread adoption of technology to support self-management, access to care and remote management within health and social care. The programme's VC workstream focused on the rollout of video consultations across Scotland. In 2015, the TEC team became aware of Attend Anywhere; an internet browser-based video technology that can be accessed by a member of the public using their own device, be it a laptop, tablet or mobile phone. It has been designed to match the consulting workflow. One of the defining features of this model for video consulting is the 'inbound' (or 'person-centric') workflow, which seeks to emulate the ways in which patients physically attend their appointments. For example, a single button on a website (or consistent weblink address on an appointment letter or electronic communication) offers a consistent channel or 'front door' for patients to access a 'virtual waiting room' (potentially managed by a receptionist), before being joined by the clinician on the video call. This is illustrated in the diagram below.⁴

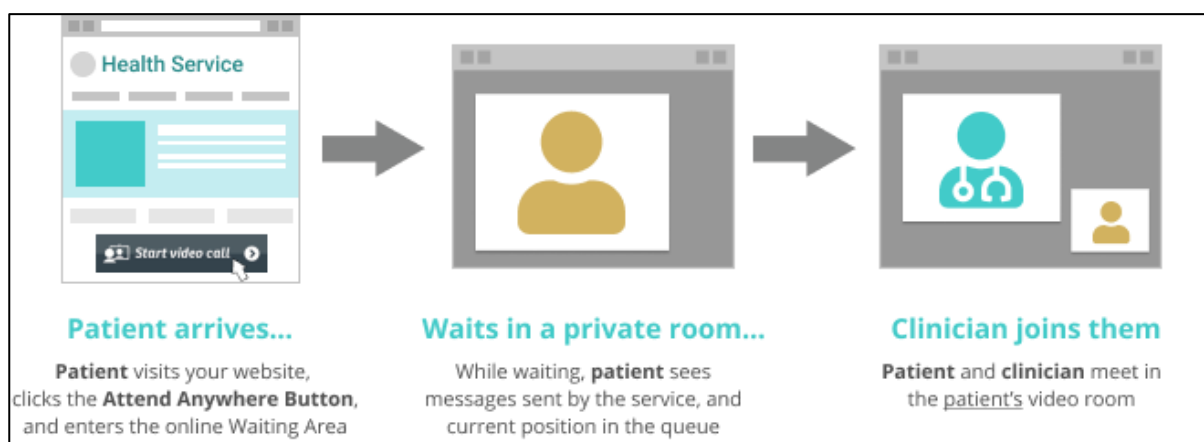


Figure 1: Process for a patient attending an online video consultation with a clinician

Based on the success of co-design and quality improvement projects in Highland (and other unfunded developments), the video consulting service using the Attend Anywhere platform was branded nationally as Near Me. In November 2018 the TEC programme launched the £1.6 million 'scale-up challenge', to support wider rollout across all health boards.

⁴ Diagram from NHS Scotland National Video Conferencing Service website: <https://www.vc.scot.nhs.uk/attendanywhere/>

As described in the previous evaluation report, the ways in which service teams used Attend Anywhere to connect with patients and service users varies across settings and specialties, and can involve three different models of use:

- *Hub-home*, in which the clinician connects from the clinic to the patient at home (or other locations on personal devices),
- *Dyadic hub-spoke*, in which the clinician in specialist 'hub' centre connects to patient in remote 'spoke' health or care site without an additional staff member present (e.g. in an unstaffed kiosk)
- *Triadic hub-spoke*, in which the clinician in a specialist 'hub' centre connects to patient in remote 'spoke' health or care site with an additional staff member (nurse, GP, healthcare support worker [HSW]) present.

These three models were used to support remote consulting of patients within a single Health Board and for consultations across Health Boards, including the provision of services from mainland hospitals to patients living in the Islands and services provided by the Golden Jubilee National Hospital. Further details on the history and development of Near Me before COVID-19 are provided in the previous evaluation report [1].

1.3. Structure of the report

This report presents the key findings and lessons on the rapid rollout of Near Me across Scotland in response to the COVID-19 pandemic. The remaining sections in this report are structured around three main parts:

- **Methods:** including sampling strategy, data collection and analysis.
- **Findings:** including national activity data (collected through the Near Me platform), survey data (collected through online user experience surveys and stakeholder/public engagement), and qualitative analysis across eight health boards. The qualitative data is presented across three different care settings (hospital/other community care, GP services and care homes). Data synthesis is presented through the NASSS framework domains.
- **Discussion:** including opportunities and recommendations for future implementation.

2. Methods

2.1 Data collection

Data collection consisted of semi-structured and narrative interviews with health and social care staff and national stakeholders, patient and clinician post-consultation surveys and video appointment activity data.

The interviews were conducted between July and October 2020 via phone/video call. We purposefully selected a sub-sample of local NHS Health Boards for qualitative data collection, in order to analyse data within the organizational context. These were selected to explore variations in geography (urban, rural and islands), clinical context, local (NHS boards) and adoption progress. The selection was guided by initial scoping interviews with local project leads at each health board. The geographical areas covered by the NHS Health Boards are shown in Figure 2 below.

NHS Scotland Health Board Areas

- | | |
|------------------------------|-------------------|
| 1. Ayrshire and Arran | 8. Highland |
| 2. Borders | 9. Lanarkshire |
| 3. Dumfries and Galloway | 10. Lothian |
| 4. Fife | 11. Orkney |
| 5. Forth Valley | 12. Shetland |
| 6. Grampian | 13. Tayside |
| 7. Greater Glasgow and Clyde | 14. Western Isles |

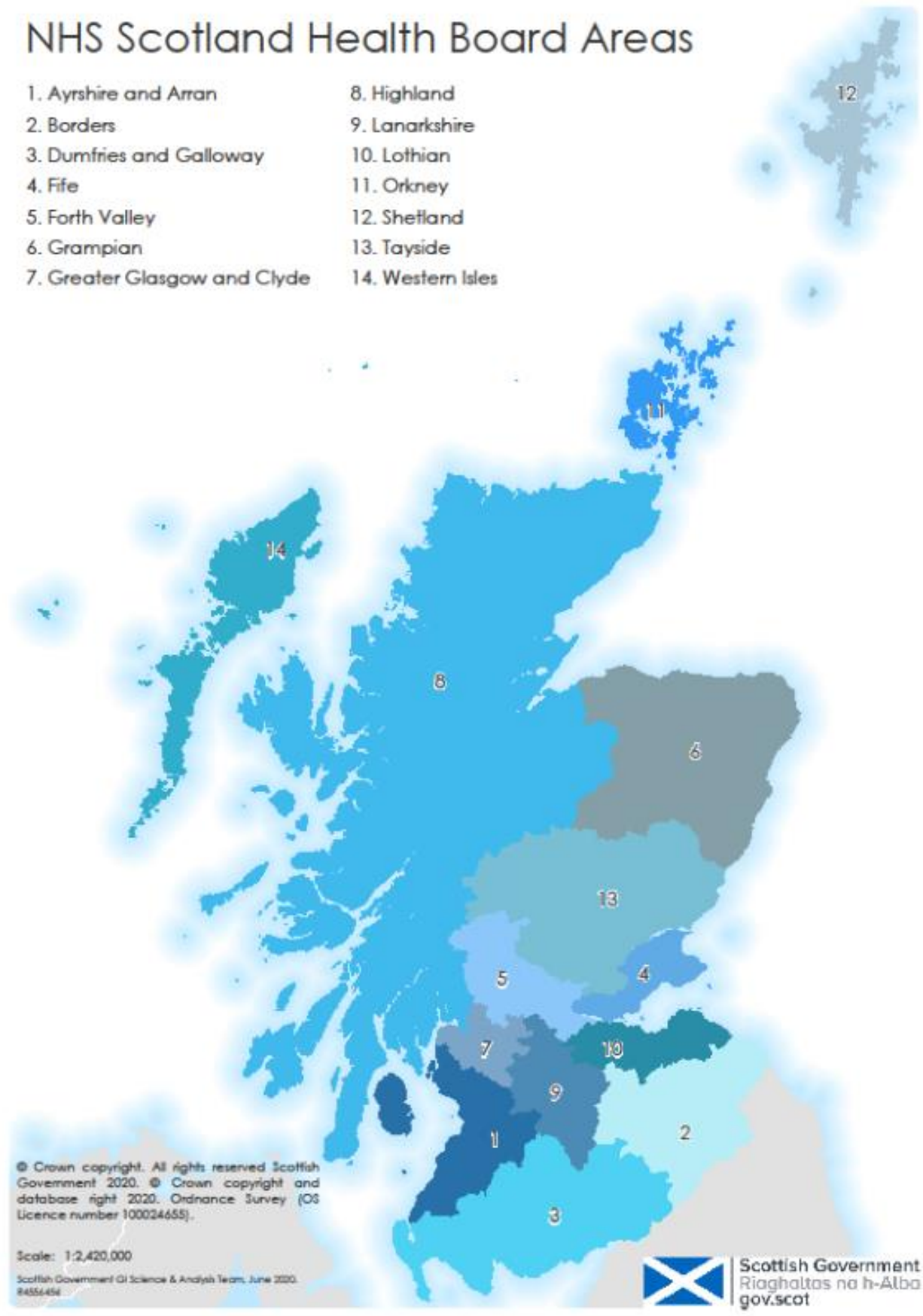


Figure 2: Map of NHS Scotland territorial Health Board areas

Table 1: Participating Health Boards

Health Board	Site where interviewee is based
NHS Grampian	Aberdeen Royal Infirmary Woodend Hospital, Aberdeen GP practices in Aberdeenshire Care Homes
NHS Greater Glasgow and Clyde (GGC)	Glasgow Royal Infirmary Inverclyde Royal Hospital The Royal Hospital for Children Queen Elizabeth University Hospital GP Practices
NHS Dumfries and Galloway	Dumfries and Galloway Royal Infirmary Child Health Care Centre, The Crichton, Dumfries Care Homes GP practices
NHS Highland	Raigmore Hospital, Inverness Care Homes
NHS Forth Valley	Falkirk Community Hospital Clackmannanshire Community Health Care Centre, Alloa Forth Valley Royal Hospital, Larbert
NHS Fife	Queen Margaret Hospital, Dunfermline Stratheden Hospital, Cupar
NHS Orkney	Balfour Hospital, Kirkwall GP practices
NHS Western Isles	Uist and Barra Hospital, Benbecula Western Isles Hospital, Stornoway GP Practices

In total, we conducted 83 interviews. These are summarised in Table 2.

Table 2: Research Participant categories

Stakeholder groups	Interviews
Doctors GPs (15) Consultants (15)	30
Nurses	5
Allied health professions Dietitians (2) Occupational Therapist (1) Physiotherapists (5) Speech and Language Therapists (5)	13
Non-clinical managers	6
Care home managers	5
Admin / support	3
EHealth/IT staff	4
National level stakeholders	17
Total interviewees	83

Interviews were conversational in style and lasted between 15 and 60 minutes. People were asked to talk about their experience of video consulting (or why they had chosen not to use this medium) and about national or local efforts to scale-up the service as part of the pandemic response. When interviewees talked in the abstract about problems and challenges, we asked them to describe specific examples of these. Most people were interviewed individually but some chose to be interviewed in pairs, and on two occasions as a focus group of up to seven (one with GPs and one with a service improvement team).

Of our 83 interviewees, 36 had been interviewed by our team previously for the pre-COVID-19 evaluation of this service. For those individuals, we also asked how things had changed since we spoke previously.

In addition to the interviews, we used Near Me activity data collected by the TEC programme team during the study period and patient survey data (18,915 responses) collected between 1 August 2020 and 25 September 2020. These user experience surveys were completed online, immediately after the video consultation.

An extensive Public and Clinical Engagement exercise was also commissioned by the TEC Programme during the study period, and has been published online [11]. We have drawn on the data and findings from this report as part of the analysis on patient and clinician perspectives. The engagement exercise combined the use of surveys (online, telephone and written) and focus groups with members of the public and health and care professionals. It should be noted that the majority of the surveys were conducted online, and so the findings could be biased towards those with digital access. However, a proactive approach was also taken to enrol individuals who may represent digitally excluded groups, using telephone and written surveys. In addition the Near Me team formally wrote to over 300 organisations, including professional bodies, seeking views.

2.2 Ethical Approval

The study received NHS Research Ethics Committee (REC) approval in June 2019 (ref 19/LO/0550) and NHS Research Scotland Permissions Coordinating Centre (NRSPCC) approval in October 2019, with subsequent amendments approved in June 2020 and local approvals obtained from R&D departments within each health board

2.3 Data analysis

Data collected by Oxford University were pseudonymised by giving each interviewee a different name (gender and ethnically matched). A spreadsheet of real names and pseudonyms was kept on an encrypted hard drive.

Data was managed and stored confidentially and securely at University of Oxford. We paid strict attention to the General Data Protection Regulations (GDPR) and followed data management and data security policies at the University of Oxford, which can be supplied on request.

Field notes and typewritten interview notes (along with selected audio transcripts) were organised into an Excel spreadsheet, in which each row represents an interviewee (or document) and each column represents a different thematic category. Descriptive statistics were used to analyse routinely collected video consultation and patient survey data. We used Mann–Whitney U and Spearman’s Rho tests (non-parametric tests) of significance to analyse factors associated with survey responses and PEI scores.

Data synthesis was guided by the NASSS framework [5]. NASSS is a multi-level theoretical model which helps predict and evaluate the success of technology-supported health or social care programmes. As part of the evaluation undertaken before COVID-19 (up to March 2020), we assessed the challenges and enablers to scale-up across the sub-domains on the right of Figure 3. These were used as an analytic lens to explore recent changes and developments in the context of the pandemic, and implications for longer term sustainability.

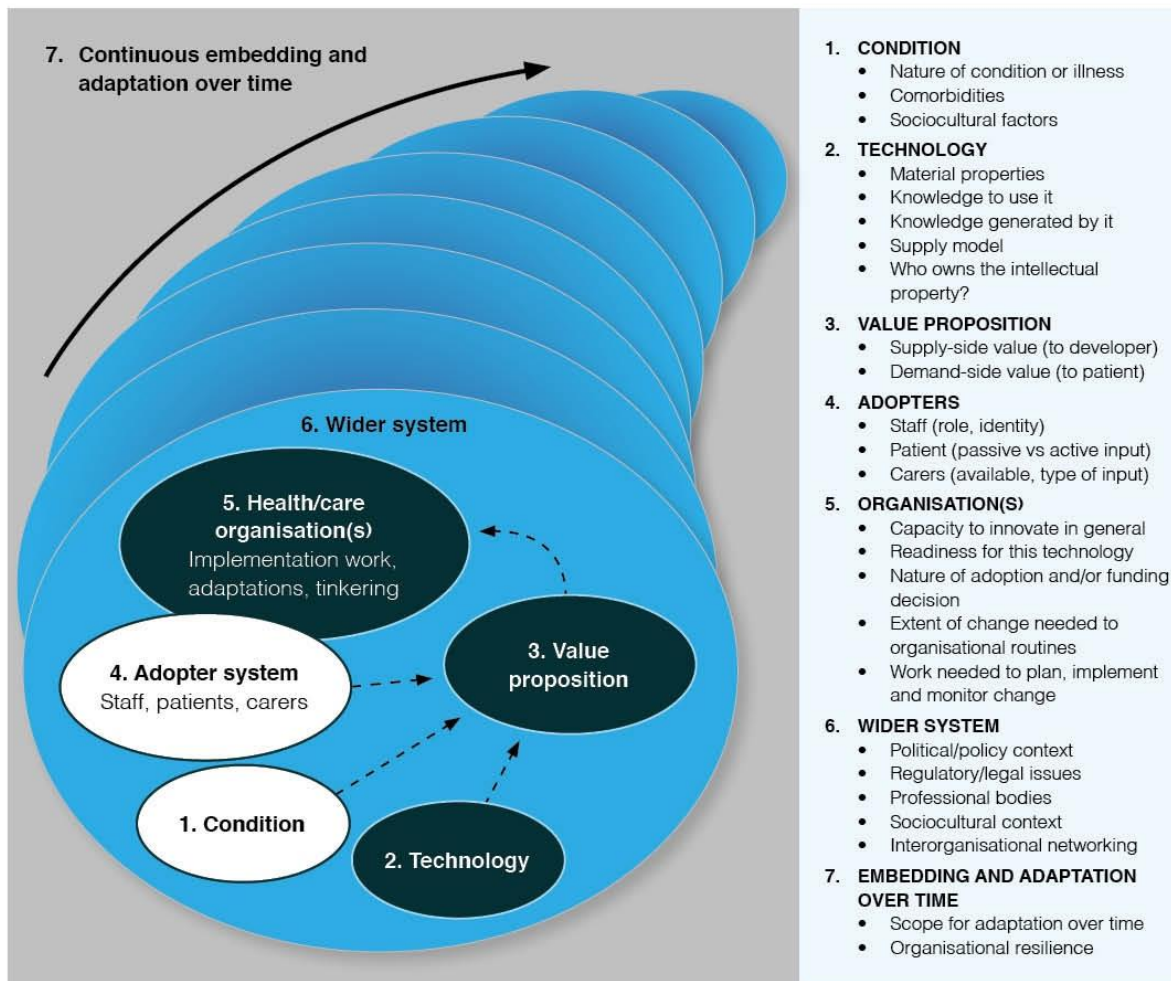


Figure 3: NASSS framework

3. Findings

3.1. National context on response to COVID-19

3.1.1 Rapid scale-up initiative

By mid-February 2020, preparatory work was underway for the rapid rollout of Near Me, forming part of national resilience planning. This included discussions on the potential scope and additional resource and infrastructural requirements, including an extended (two years) centralised procurement of a national licence for the video platform (Attend Anywhere).

The initiative was led by the TEC programme team, building on the foundations already established through the scale-up challenge. Importantly, the TEC programme board had recently endorsed the use of 'Near Me' as a national brand and work to develop community networks for dissemination and shared learning:

Before the pandemic we had a programme board meeting. And it was agreed we would take forward a Near Me network type approach. But having that agreement at that meeting set the groundwork of what we went on to do and the decision around the branding across Scotland. We had an agreement that if we were starting to do public messaging it had to be under one brand.

- Debbie, TEC programme team, Near Me lead

The strong national profile of the Near Me programme at a policy level also facilitated a collective knowledge and confidence in the outcome of the rapid and widespread deployment.

We knew we had NHS Near Me...The governance was in there, there is a government group, there's money, there's an infrastructure, there is the team talking to NHS links in each board. So all of that existed....The smoothing of the sides, meant they could go quick, and didn't have to keep coming back, and writing to ask us for stuff....To spread something you know works and has been well received in one part of the population, and trust in the people....I think that does make it faster.

- Kieran, National stakeholder

On 10 March, the accelerated rollout for Near Me was announced by the Cabinet Secretary for Health and Sport. On 12 March, the Scottish Government Director of Digital Reform & Service Engagement asked NHS boards to form a Near Me implementation team, and the Scottish Government Primary Care Division instructed deployment across all GP practices.

In response to COVID-19, most GP practices moved to first-line telephone triage before consultations, with a reduction in routine long-term condition reviews. Additional funding was provided by the Scottish Government in order to kit out GP rooms for video calling and remote working, including additional computer screens, laptops, microphones, speakers/headsets and webcams (if not already set up). Only a small minority of GP

practices were set up for Near Me prior to the pandemic, and so widespread deployment was an immediate priority.

Most routine and non-urgent services had ceased within secondary care and a large proportion of hospital outpatient spaces had also been reallocated to maximise inpatient capacity and maintain urgent care and prioritised services.

In the same week, the TEC team launched a '12-week scale-up plan' to help rapidly deploy Near Me services across Scotland. A suite of guidance resources on the implementation of Near Me across different care settings (primary care, outpatients, inpatients, care homes) were developed and hosted on the TEC website. While there was no directly allocated funding for additional staff resources, a large number of people were drafted in from across Healthcare Improvement Scotland (HIS), the Scottish Access Collaborative and the Care Inspectorate.

HIS is a Special NHS Board within NHS Scotland with a remit to help implement healthcare priorities and improve service provision. In response to COVID-19, HIS reprioritised national projects and released clinical and non-clinical staff to work in the NHS and other national agencies, including on the Near Me initiative. A team of 50 staff from HIS were assigned to supporting rapid rollout within GP services, maternity, mental health and paediatric services. These clinical areas were a natural fit for the team, where they had strong expertise and existing programmes of work. Each clinical setting had a speciality team with a workstream lead. The workstream lead communicated internally with the HIS programme manager for oversight and coordination across workstreams, and externally with the TEC programme leads to align activities alongside wider national developments. Support was provided across ten local health boards (all 14 boards were offered support) via one-to-one phone calls to discuss and develop local practice processes, as well as supporting coordination of peer learning webinars targeting the different clinical areas.

A similar approach was utilised by the Scottish Access Collaborative (SAC), a Scottish Government programme created in October 2017, to sustainably improve waiting times for patients waiting for non-emergency procedures.

The Care Inspectorate is a regulatory body for social work and social care services in Scotland. To support the scale-up of the Near Me video consulting service into care homes, they completed an engagement exercise with all older people's care homes in Scotland, providing information, guidance on technical setup, training to staff and links to training materials on supporting the video consultation process. Engagement was via phone/email during April-Jun, involving 800 care homes in total [7].

This collaborative effort across organisations was coordinated through the national TEC team, involving daily catch up calls with the workstream leads responsible for the different clinical areas. These meetings were frequent; initially on a daily basis, and later occurring bi-weekly or weekly as required. In addition to this targeted support, expansion of Near Me across all secondary care continued to be done by the local project managers, and so internal communication was maintained with the national project managers overseeing board level developments.

The co-leadership of two senior members of the TEC team was essential for managing and overseeing all aspects of the programme. This included training and upskilling individuals providing direct support to the different clinical services, developing and refining training materials and resources, agreeing system requirements, dealing with technical challenges and regularly monitoring data on the Near Me uptake and usage activity. The peer-learning webinars were delivered with the support of NHS Education Scotland (NES), covering technical, quality improvement and clinical dimensions of the rapid rollout.

As part of this large-scale engagement and knowledge exchange exercise, a '3 step' implementation process was established, providing a broad framework for setting up Near Me in different settings. The three steps covered: *technical setup* (making sure they have the hardware, connectivity, access to software, etc.), the *service processes* (encouraging people to look at their processes, how patients will enter the video appointment, etc.); and *training* (developing capability to consult with patients by video).

So it was a very structured programme in term of the approach. Video consulting would have exploded no matter what, during COVID. It was always going to happen. But there was something about the structure we had in place that enabled it to happen more smoothly and more quickly. It wasn't just a case of sending information out.... It was the structure and support - going through it with them. There was an individual – whether it be our team, one of our partner organisations, one of the board teams, who actually phones the service and goes through that process with them.

- Debbie, TEC Near Me Lead

The uptake and use of Near Me increased very significantly over the course of the 12 week period. The number of video appointments nationally increased from about 330 appointments a week to 17,000 a week between March and June. However, this progress was not without significant challenges in the context of a global pandemic. For example, a national shortage of relevant equipment (e.g. computer screens, webcams) limited scope for implementation across new adopter sites. Requirements on physical distancing and staff quarantining promoted significant staff changes and demanded new ways of working remotely. Unintended consequences of rapid rollout were also experienced during the initial phases of scale-up. For example, the software platform (Attend Anywhere) was under significant strain due a sudden increase in volume of consultations, which was initially accentuated by the presence of England and Wales sites operating (temporarily) from the same Attend Anywhere platform server. However, these service degradations were promptly resolved, supported by the long-standing relationship between the platform supplier, the TEC team and the national VC team, which played an important role in understanding and rectifying underlying causes.

Following the 12 week scale-up initiative, an engagement exercise was undertaken with various service teams, in order to draw together Near Me implementation plans going forward. A key element of this was the need to coordinate activities that had been undertaken in the immediate response, as well as leverage the learning and resources developed. More broadly, health boards were required to produce recovery plans for clinical services during and beyond the pandemic, as part of the Scottish Government Re-mobilise, Recover, Re-design framework. The embedding of digital approaches to care

forms a key pillar within the framework, including the continuation of remote consulting going forward [3].

3.1.2 Uptake and use across Scotland

The use of Near Me between February and September 2020 across health and social care services are presented in Table 3 and Figure 4, below (see Appendix A for the breakdown of this activity across Health Boards). Near Me was used across a range of services. For the purposes of this report we summarise GP activity separately from ‘hospital and other community care’ services, as it was not possible to clearly separate primary and secondary care activity; we acknowledge that there is much overlap across services and organisations in practice.

Table 3: Near Me consultations by month, Feb-Sep 2020

Month 2020	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Hospital / Other community	922	4,681	18,835	36,065	54,702	56,223	50,963	58,615
General Practice	38	5,102	13,685	14,602	13,950	12,412	11,010	11,023
Total*	960	9,783	32,520	50,667	68,652	68,635	61,973	69,638

* Excludes activity within 3rd sector organisations and other administrative systems (e.g. virtual reception desk)

The activity data shows that use of Near Me increased significantly from March onwards. Between February (prior to the pandemic response) and March, overall activity increased from 960 to 9783 Near Me consultations per month by (919% increase). NB: this does not include additional activity conducted through 3rd sector organisations. The use of Near Me continued to increase through to June, in which Near Me activity was 70 times higher than before the pandemic.

In August, overall activity dropped slightly, but still remained 64 times that of the pre-COVID-19 levels. This drop was more significant within the GP services (20% decrease Jun-Aug) than hospital and other community care services (7% decrease Jun-Aug). In September, overall activity recovered to July levels (over 16,500 consultations per week), although this increase has been largely within the hospital and other community care settings.

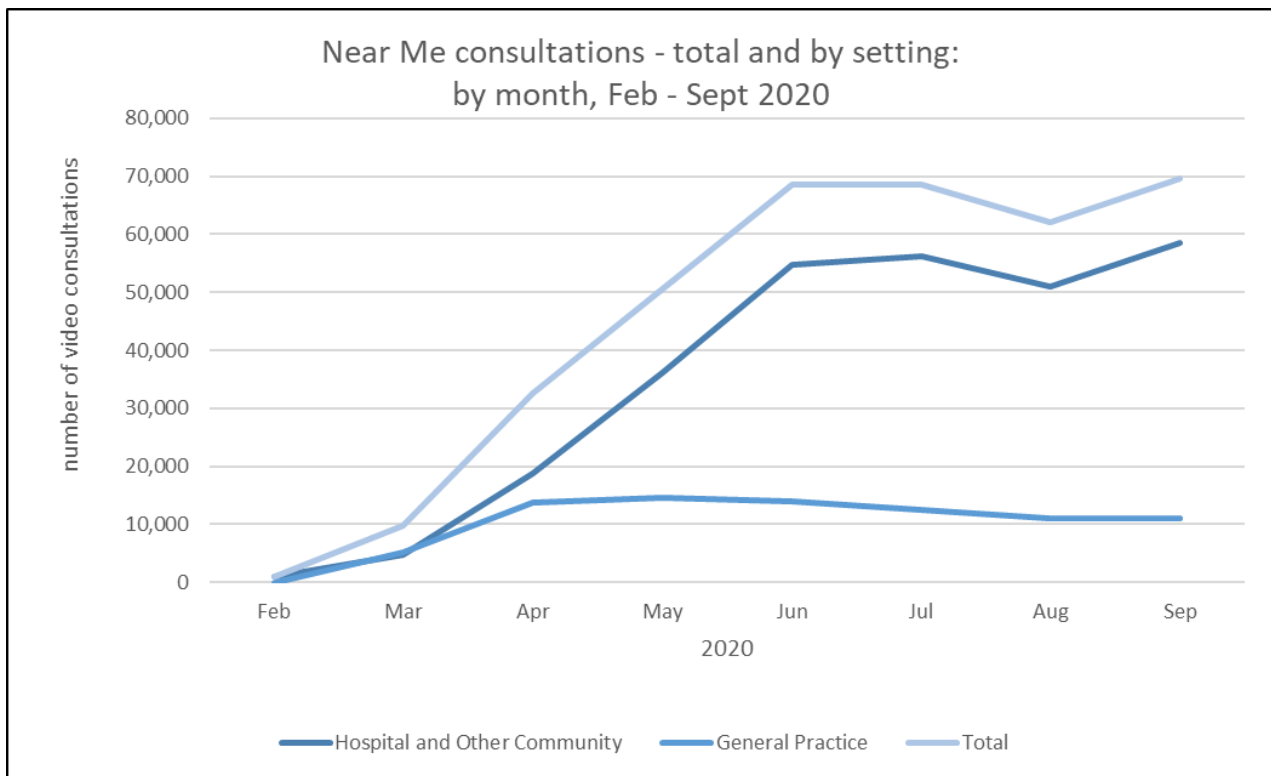


Figure 4: Near Me consultations between Feb-Sep 2020

In our previous evaluation, we found that the majority of Near Me activity across the country (62%) was concentrated within two Health Boards: NHS Highland (42%) and NHS Grampian (20%) [1]. In contrast, activity during this new phase was distributed much more evenly across boards. The highest level of activity was within Greater Glasgow and Clyde (20% of overall Near Me activity), Grampian (19%) and Lothian (12%). However, when measured per head of population, use of Near Me was highest in Orkney, Western Isles, as well as Grampian (see Appendix B). It should be noted that some mainland board activity (e.g. Grampian, Highland and Greater Glasgow and Clyde) included appointments with patients based in the Island boards.

During the data collection period, hospitals and community care constituted a much higher proportion of the Near Me activity (77%) than GP services (23%). Near Me was used for over 50 different specialities. Services related to Psychiatry/Psychology and Community Mental Health services presented a significant proportion, constituting approximately 26% and 10% of overall Near Me secondary care activity respectively. Physiotherapy was the third highest speciality (constituting 9% of overall Near Me secondary care activity), followed by paediatric services (8%). The full list of specialities and associated activity in secondary and other community care are presented in Appendix C.

There was a high degree of variation in terms of GP use of Near Me, both within and between boards. For example, Orkney presented the highest use of Near Me among GP services when accounting for patient population. However, approximately 70-80% of this activity was attributed to one GP practice out of six in Orkney over the course of the pandemic. Within Grampian, which presented the second highest use of Near Me in primary care (in absolute and per population terms), monthly use of Near Me across services ranged from 2 to 261 video appointments.

When controlling for the total number of GP practices within the boards, Grampian still presented the highest use of Near Me in primary care over the course of this period (averaging 35 video appointments per practice/month), followed by Lothian (average of 21 appointments per practice/month), Orkney and Lanarkshire (both average of 17 appointments per practice/month).

The activity data was captured through the Attend Anywhere platform, as opposed to NHS systems, and so it was not possible to establish the proportion of video activity in relation to other appointment types (i.e. face to face and telephone). While the Near Me (Attend Anywhere) activity is useful for studying the relative use of the platform across boards and specialities, there would be added value in routinely capturing data on other appointment types through patient administration systems (see Discussion section).

3.1.3 User experience surveys

A total of 18,915 patients responded to the user experience surveys between 1 August and 25 September 2020 (15% response rate), conducted immediately after the consultation – see Table 4 below. Analysis showed that 97% of respondents said they would choose the video option again. In most cases (78%), patients reported that consultations ran with no technical problems. Of the 22% reporting technical problems, the main issues included poor sound (6% of all respondents) the call dropping (5%), difficulty getting microphone to work (3%) and poor video quality (3%).

For the majority of participants, the main benefits included saving travel (71% of all respondents) and saving time (67%), followed by reduced chance of catching COVID-19 (54%). Just under half of the participants saw benefit in not having to take time away from work or other activities (40%).

Just under a third (29%) of respondents reported disadvantages to video consulting. The main negatives reported were not being able to hear the clinician properly (8% of all survey respondents), poor internet connection (6%), dislike of video calling (5%), needing an extra appointment because the video consultation could not be completed (3%), and finding it hard to understand the other person (2%). Within the 'other' disadvantages (6%), dominant issues raised included prolonged periods (or clinician not showing up) in the virtual waiting area, difficulties dealing with technical delays and challenges/concerns supporting the remote examination.

Table 4: Perceived advantages and disadvantages of video appointments

Benefits	% reported
Did not have to travel to a consultation	71%
Saved time	67%
Less chance of catching an infection than at a face to face consultation	54%
Did not have to take so much time off work / usual activities to attend	40%
Better for the environment	34%
Improves my access to services	31%
Saved money	31%
Seeing me at home made it easier to explain my situation	24%
Easier to have a relative / carer with me in the consultation	13%
Other	2%

Disadvantages	% reported
Could not hear or see the other person properly	8%
We had a poor internet connection	6%
Do not like video calls	5%
Need an extra appointment because we could not complete everything by video	3%
Found it hard to understand the other person by video	2%
Found it hard to make myself understood by video	3%
Could not find somewhere private to make my call	2%
Video call was too complicated	1%
Worried about the cost of mobile data / using my data allowance	1%
Other disadvantages	6%

Patient Enablement Instrument

The patient user experience survey now incorporates the Patient Enablement Instrument (PEI), a six item patient-reported outcome measure that reflects the quality of the appointment [6]. Patient enablement is defined as the patient's ability to understand and cope with illness and life following a consultation. The questions focus on people's understanding of and coping with health issues and illness as the result of a consultation, as follows.

“As a result of your visit to the doctor today, do you feel you are a) able to cope with life, b) able to understand your illness, c) able to cope with your illness, d) able to keep yourself healthy, e) confident about your health, f) able to help yourself?”

The answers are graded on a three-point scale – “same or less” or “not applicable” (0), “better/more” (1), and “much better/much more” (2). Thus, the total PEI score ranges between 0 and 12. This PEI score can be calculated when at least three of the six questions have been answered.

Overall, the median PEI was 4.0 (IQR = 6.0). This study did not capture PEI scores for face to face appointments, and so it was not possible to draw comparisons. However, this

is generally considered to be a good score within existing literature, and an average that is comparable to studies with similar populations undertaking face to face appointments [12-14].

The PEI score also allowed us to analyse the impact of other technical and user satisfaction measures on patient enablement. The findings indicate that the usability/technical performance of the technology had a significant effect on the extent to which the video consultation helped the patient understand and cope with their condition. The Mann-Whitney (non-parametric) test showed a significant positive relationship between PEI score and patients' perceptions of the usability of Near Me ($r_s = .2$, $p < .001$) and satisfaction with the video consultation ($r_s = .3$, $p < .001$). In addition, there was a significant association between PEI score and technical performance, in which patients reporting technical problems tended to have a lower PEI score (median = 3.0, IQR = 6.0) than those not reporting technical problems (median 4.0, IQR = 6.0, $U = 13555140.0$, $p < .001$).

3.1.4 Public and Clinician Engagement

The Near Me TEC team undertook an engagement exercise with clinicians and members of the public, as well as workshops to inform an Equality Impact Assessment (EQIA) and how video consulting could be made more accessible to different patient groups. As noted above, this was based on multiple sources of data including patient and clinician surveys (via online, telephone, written form) and virtual focus groups with different professional, service user and carer representatives. Hence, this broad range of user and stakeholder perspectives provides a valuable resource for this evaluation, especially given the challenges accessing diverse patient and public perspectives during this period. In this section we will highlight key findings relevant to our analysis.

The engagement exercise involved 4,197 members of the public and 1,203 clinicians and care professionals. There were 4,072 public respondents to the survey; the majority (N=4,025) were completed online and some (N=47) completed via telephone or in written/paper format. There were 1,147 clinician respondents to the survey. Further details on the methods and overall findings from this work are described elsewhere (see [11] for more details).

Patient and Public Perspectives

Respondents to the public engagement exercise were generally supportive of Near Me, with 87% of questionnaire respondents saying that video consultations should be offered to patients (when clinically appropriate). Before participating in the survey almost six out of ten (58%) of respondents had heard about the Near Me service, and one in four (25%) had prior experience of using it for their appointment. There was little difference in perspective when comparing across age band, gender, disability, health board and previous experience with Near Me.

When asked whether there were any types of appointments they would not want to take place over video, just over half (51%) said 'yes'. Dominant themes in this regard related to concerns about physical examinations, mental health or psychological support and discussion related to potentially serious/life changing diagnoses or symptoms. The issue of

physical examination included concerns about the absence of hands-on contact (e.g. feeling lumps, joints), undressing or exposing intimate areas of the body (i.e. socially inappropriate and/or impractical to do via video), key observations or tests (e.g. blood pressure, blood tests) and adequate visual acuity (e.g. of rashes, moles, swelling). With regard to mental health and psychological support, it was felt that video mode of interaction could limit therapeutic presence and non-verbal communication, particularly if the performance or quality of the technology was compromised. Similarly, with regard to discussion of symptoms and diagnoses, respondents felt that the physical presence of the clinician would be important for reassurance and emotional support.

Perceived benefits and disadvantages of video consulting were scored on a Likert scale of agreement/importance; scale of 1 (strongly disagree) to 5 (strongly agree). These were generally reflective of the post-consultation user experience surveys described above. Among the public, the benefit of lower infection risk scored highest (average = 4.2), followed by improved access to services (4.1), convenience (4.0), time saving (4.0), reduced need to travel (3.9) and better for the environment (3.9).

The Likert scores associated with barriers or concerns around video consultations were generally lower than the advantages. The main issues for patients were poor internet connectivity (3.2), no private space for a call (2.8), no or limited access to a device (2.8), no or limited internet/technology access (2.8), dislike of video calls (2.7) and cost of mobile phone data (2.6).

Importantly, while the average score for these barriers fell within the middle 'neutral' domain of the Likert scale, the distribution of these scores draws attention to the wide gaps in perspectives, and that a significant proportion of the sample scored such issues as being highly significant. For example, the issue of poor internet connectivity was considered to be 'very significant' for 30% of the sample. This was also the case with regard to internet connectivity (23% scored 'very significant'), cost of mobile data (17% scored 'very significant') and no private space (20% scored 'very significant'). This highlights a need to focus on particular groups who face such barriers.

Clinician Perspectives

Among the health care professionals, 95% of clinicians thought that video consultations should be offered to patients (when clinically appropriate). Before participating in the survey, 81% of health care professional respondents had previously used Near Me for remote consulting. Clinicians also identified a wide range of potential uses for Near Me. There was a preference for video to be used for advice and support to patients (88% of respondents), active management/treatment of an ongoing condition (73%) and review of long term condition management (66%). Some respondents also indicated a role for Near Me for follow-up appointments after an operation/treatments/hands-on care (43%), acute presentations (33%), and an assessment before an operation/procedure (31%).

When asked whether there were any types of appointments they would not want to take place over video, 75% of clinicians said 'yes'. Dominant themes were broadly similar to those raised by patients, including problems associated with conducting physical examinations (e.g. hands-on assessment, blood tests) and mental health (e.g. psychosis, risk of self-harm, communication difficulties).

For clinicians, the perceived benefits (along a five point Likert scale as described above) included lower risk of infection for patients (4.4) and for clinicians (4.2), reduced patient travel (4.1), saving time for patients (4.0), and reducing their need to take time off work to attend the appointment (4.0).

The scores on the main barriers or concerns for clinicians were generally higher for clinicians than for patients/public. This included risk of poor call quality (4.2), patients having no access to a device (4.0), patients needing support (3.9), worries about missing something on the video (3.7) and preferring to see patients in person (3.7). As above, clinicians indicated in the free-text that they would not conduct a remote consultation for hands-on physical assessments and high-risk complex conditions, sensitive or emotionally-laden discussions, as well as people with significant communication or language barriers that would impede the quality of the consultation.

3.2. Health and Care Settings

In this section we focus on the experience of and challenges to rapid rollout across different health and care settings based on participant interviews. For the purposes of this report we have focused on three main settings: hospital and other community care services, GP services and care homes.

3.2.1 Hospital and Other Community Services

As noted above, over this period the majority of Near Me activity was conducted within hospital and other community care settings, covering over 50 clinical specialities (although it is important to acknowledge that there is much overlap across primary and secondary care organisations). In contrast to the previous evaluation, the pandemic has seen a much more distributed use of Near Me across health boards with regard to hospital and community care settings (see Appendices A-C).

In this section we focus on the experience of and challenges to rapid rollout across the hospital and other community care services. Each health board presented contextual variation in relation to the challenges and approaches to scaling up video consultations in response to COVID-19. Therefore, we have presented five contrasting case narratives to highlight differences and commonalities in relation to rapid scale-up.

These example case sites vary across a number of key areas, including the pre-pandemic stage of service scale-up/development with Near Me (e.g. existing technical and administrative infrastructure), the approach to using/supporting Near Me (e.g. use and role of hub-spoke and hub-home models), geography (e.g. internet connectivity, travel implications, urban vs rural), size of health board and population (e.g. number of patients/services, socio-economic, ethnic and age demographic), and rate of confirmed COVID-19 cases (e.g. impact on perceived risk and services).

In summary, the narratives highlight a number of key themes. Firstly, they demonstrate the importance of Scotland's national-level groundwork around video consulting prior to the pandemic, which helped create the technological infrastructure, workflows and local knowledge to hit the ground running with a scaled-up service. Secondly, they illuminate various ways in which the pandemic impacted service capacity and local infrastructures. This includes differing implications for sites that were predominately using or supporting

the hub-spoke model, and the mainland/urban areas predominantly following the hub-home model for video consulting. Thirdly, they capture various unintended consequences of rapid scale-up and how these were shaped by existing IT and material infrastructure, administrative systems and workflows, local knowledge and resources.

Highland

Geographically the largest health board, Highland was one of the early adopter sites for Near Me and established an extensive programme, with a focus on reducing travel and improving access for patients living in remote regions. In 2018/2019, a series of formal co-design projects were conducted with a strong interest in quality improvement, to establish both a central 'hub' (at their base in Raigmore Hospital, Inverness) and 'spoke' centres across NHS Highland from which patients could connect to the services. The relative success of this initiative helped inform the national scaling-up programme before the COVID-19 pandemic.

The model expanded over the course of the scaling-up programme. The main hub at Raigmore linked to multiple spoke sites based in GP practices and community hospitals across Highland, and in Stornoway in the Western Isles. The spoke site rooms were designed for optimal audio and video quality (e.g. painted grey to improve accuracy of skin tone and high resolution cameras) to support both the dyadic model (clinician in specialist hub connects to patient in remote spoke site without additional staff support) and the triadic model (the clinician in a specialist hub connects to patient in remote spoke site with an additional staff member present). At the hub, all outpatient consultation rooms were kitted out with dual screens (to view video and medical records together) and high quality speakers and noise cancelling microphones. A virtual reception desk had also been established, to manage patient entry into the hospital's main virtual waiting areas, and transfer them to the specific clinic waiting area.

As much of the development work within this early adopter site was built around reducing travel from rural sites and building clinician confidence with remote consulting, services predominantly followed the hub-spoke model. However, use of the hub-home model was expanding before the pandemic, involving the creation of patient resources and systems for helpdesk support.

Before COVID-19, Highland was the highest user of Near Me, with over 30 services. Early 2020, shortly before the pandemic, the local project manager leading the scale-up moved to a secondment role with Scottish Government, with continued expansion managed by a member of her team.

Pre-empting expected pressures on the region's health services, most outpatient services stopped, elective operations were postponed and staff were redeployed to acute wards. However, the impact of the pandemic on services was not as profound as anticipated. COVID-19 hospital admissions were relatively low, with 40 ICU beds set up in Raigmore, but no more than 14 of these were ever occupied. This meant an increasing backlog of operations and appointments, with a decreased number of beds available, and limited clinical space.

Whilst much quality improvement work had gone into embedding Near Me within routine practice, significant restructuring was needed to maintain and recover services using video

consulting. The use of spoke sites for dyadic and triadic consulting were stopped, due to infection controls and the use of limited space for priority services. This had a significant impact on services that had become accustomed to providing consultations at the spoke site, and associated routines (e.g. appointment setting, ordering blood tests). It also presented barriers to consultations at home for some patients with low IT literacy and limited access to relevant technology.

Furthermore, access to the outpatient rooms at the hub sites that were previously set up was limited, and so additional space and equipment needed to be found, alongside restructuring of clinicians' workspaces to accommodate physical distancing. Some practitioners resorted to telephone consultations while they waited for relevant IT to be provided.

One thing that has been really challenging in the hospital is social distancing. So we are all wearing a mask [in shared offices]. It is hard enough doing a face to face appointment with a mask, but doing a video consultation with mask on... So now we've had to change the whole area in the office to be able to use Near Me. So we can sit in private rooms, have private conversation and not wear a mask. But we have challenges. I'm ok because I'm on a laptop. But we really need permanent computers. And they can't get the tunnelling through the wall [for an internet cable].

- Moragh, Respiratory consultant

The above quote illustrates that the challenge of consulting via a video screen could generally be overcome if both clinician and patient were able to see one another's lips and full facial expressions. But if local infection control measures required the clinician to wear a mask, the quality of communication was threatened. This story also reveals that the ideal situation of a private space from which to consult was, in reality, not achieved in all settings.

Rapid scale-up was somewhat easier for services already set up for hub-home consultations. Some services were also provided with (or already had access to) laptops, which were in limited supply, and a further 60 iPads were acquired from another health board for use by staff. This allowed staff some mobility within hospital sites, as well as the option to consult with patients from home.

Because we were using Near Me a lot before COVID, anyone who got triaged and selected for Near Me, they would get sent a letter with information and asking them to try it... All our clinic templates were there, so we just had to pick those up and have more of them.....We did a lot of phone calls in the beginning, because we were very reactive to cancelling existing clinics - we just picked up the phone and spoke to people because we didn't know if they could use the equipment, if they had the facilities.... So initially, as a gut reaction, we phoned patients, rather than introduce Near Me at that point. But as things settled in and we had more time, we introduced it.

- Brenda, service manager

The above quote illustrates how, as the service tried to cope quickly with the major changes associated with closing or curtailing certain routine services, there was an understandable tendency to fall back on a familiar and dependable technology (the telephone). This was not only already installed in both clinics and most homes, but also fully understood by all parties.

The existing technological infrastructure and high levels of local knowledge (a combination sometimes known as “absorptive capacity”) made some organisations in Highland particularly able to hit the ground running with a scaled-up service. However, staff still faced challenges in rapidly adapting. For example, the virtual receptionists managing Near Me appointments within the hospital and other community services struggled to keep pace with the increasing volume of virtual waiting areas and patients attending. While the virtual reception desk capacity was adequate for the pre-COVID-19 volume, there was an unmet need to draft in more staff for this role to deal with the sudden increase in patients waiting to be transferred to the appropriate waiting area. Consequently, patients found themselves waiting in the main virtual lobby for prolonged periods, which subsequently caused confusion and delay for clinicians. As a solution, some services (formally and informally) provided patients with a direct link to the virtual waiting room. However, this caused unintended knock-on effects for clinicians, who experienced difficulties monitoring the waiting area alongside their clinical work.

Notwithstanding these issues, activity within Highland continued to increase, and the unanticipated consequences (e.g. shift to hub-home, changes to patient entry pathway, use of phone) brought about new perspectives as to how remote consulting could be applied within particular settings.

In sum, Highland highlights the value of the pre-COVID-19 scaling-up effort (in terms of technical and material infrastructure, local knowledge and expertise, and some care pathways that could be extended or copied) in helping respond quickly to the pandemic. But whilst Near Me was well embedded within organisational infrastructure, the pandemic also brought about significant disruption to existing routines and ways of working, in which a strong quality improvement mindset was still required. The board was under-staffed in some key administrative areas, which subsequently limited capacity to meet the growing demand and breadth of use.

Western Isles

This remote group of islands had been an early adopter of Near Me, with the Western Isles Hospital in Stornoway acting as both a spoke (from which patients on the islands connected to tertiary care specialists on the mainland) and also as a hub (to which patients in more remote sites connected to secondary care specialists). In our original report we conveyed concerns from the staff at Western Isles Hospital that there was a lot of “double handling” of cases and wasted staff time to fit in with the routines and expectations of the mainland hub sites.

As it turned out, in the early stages of the pandemic, the Western Isles had very few cases of COVID-19. Eight were swab confirmed, of which one was hospitalised and there were no deaths (at the time of fieldwork in July 2020). However, there were likely many more

actual cases since testing was initially very restricted, and the tests were sent to Inverness rather than Glasgow, which was viewed as logistically complex.

Despite low numbers of cases, lockdown restrictions were followed, with many people wearing masks in the community before these were mandated; Stornoway was described as a “ghost town”. Healthcare facilities took infection control precautions and restructured services just like the rest of Scotland. Western Isles Hospital put measures in place to drastically reduce footfall, cancelling non-urgent outpatient appointments while also ensuring that essential services such as chemotherapy and targeted therapy infusions (e.g. for arthritis) could continue.

The number of patients flying from Western Isles to the mainland for treatment was dramatically reduced from around 100 per month before the pandemic to a handful. Indeed, the islands were viewed locally as a protected haven from the pandemic, and people were reluctant to leave. One staff member described how they had flown (as a patient) for an essential procedure in Golden Jubilee Hospital, concerned that they might pick up the disease and bring it back to the island:

“The [local specialist] didn’t want to touch me. I flew to Glasgow. I hadn’t been off the island since COVID started. [...] Because of where we live, we were terrified we’d be looking after our own friends and family [if a COVID outbreak occurred]. They offered you a mask when you got to the airport. The Golden Jubilee had organised patient transport to pick me up, it was like off a zombie movie like you’re trying to hide. And I was the only one in a mask! I need to not be scared of this any more.”

- Staff member, Western Isles Hospital, details omitted to protect confidentiality

Because of the lack of trips to the mainland, many patients with specialist conditions were simply not seen, and some informants expressed concerns about potential missed diagnoses (*“most of the burden has been pushed back to primary care; there’ll be cancers that haven’t been seen”* – Keith, service manager, Western Isles Hospital). Whilst new, obvious red flag symptoms (such as coughing up blood) continued to have a referral pathway, more non-specific symptoms such as tiredness or cough (which may or may not be sinister) did not. No critical events have emerged at the time of writing, but informants were concerned that the current arrangements should not continue long term.

Many hospital clinicians in Stornoway had been using Near Me before the pandemic; they have increased the proportion of their work done remotely. Of the remainder, most began doing remote consultations once infection control restrictions were introduced. Whilst one or two complained or found it stressful, overall the pandemic was viewed as an opportunity to maximise the potential of digital services, which were already greatly valued in this remote region.

“COVID hasn’t really changed our approach to digital; it’s just driven it forward”

- Bhavna, Western Isles Hospital

“The main thing for us is [Near Me] activity has gone through the roof locally. Since start of the pandemic [3 months], we’ve had 2500 consultations. There’s been a big drop in the number of consultations with other [health] boards.

Mainland boards have virtually disappeared. It's dribs and drabs. Our consultants have been forced into it. The enthusiasts got their colleagues on board. And mostly, the ones who were struggling can't understand why they took so long."

- Jonathan, service manager, Western Isles Hospital

Instead of seeing tertiary referrals in person, the mainland hospitals cancelled the majority of appointments and shifted to video consultations for a few. This saved a transport budget (an estimated £700,000 in 3 months) for the Western Isles, but it created a growing backlog. The anticipation that many of these referrals will now be dealt with by a hub-and-spoke video appointment has created a looming fear of logistical difficulties, with multiple specialties in multiple mainland hospitals all expecting the spoke site to provide the physical infrastructure and human support (e.g. healthcare support workers) to handle the patient's end of each consultation. This had begun to be a problem before the pandemic, but could become much more severe:

"As far as Near Me goes, Glasgow are finally on board. It was such a big thing to introduce remote consults in such a big health board GGC [Greater Glasgow and Clyde]. ... but COVID has pushed everyone to use it. They've been in touch [asking] how many clinic rooms do you have? So we're bracing for a huge influx of patients. ... It's like a massive jigsaw puzzle trying to fit patients in: one patient for half an hour here, another for half an hour there. We're hoping that new ways of working might allocate more space in the rooms but this will all depend on the numbers and on clinicians and how they want to work. Patients are not going to be flying back and forth to Glasgow. We may need more specialist nurses here depending on which specialties come on board."

- Deirdre, service manager, Western Isles Hospital

The long-term solution is likely to be a scaling back of the hub-spoke model and more patients consulting their specialist directly from home, but this will require considerable additional infrastructure in the community (see section on GP uptake below).

In terms of local services, Western Isles Hospital is now supporting Near Me consultations in the following services: Respiratory, Dermatology, Rheumatology, Dietetics, Occupational Therapy, various care homes (with virtual visiting and some GP consultations), virtual visiting hospital inpatients, Physiotherapy, Paediatrics, Speech and Language Therapy, Orthopaedics, one high street optician, Maternity, CAMHS (child / adolescent mental health), Orthotics, and Medical and Surgical outpatient clinics.

The shift to more video consultations has worked well for some clinical staff (especially the ones who were shielding themselves for medical reasons) and for patients who were well set up with IT at home. However, it has surfaced inequalities of access that had been a largely hypothetical concern before the pandemic:

"The main change [during COVID-19] is we're doing less because we had to reduce footfall into hospital. What we wanted to happen is Near Me would now be happening at home. If they couldn't, they'd offer a phone consultation. I'm not sold on that because I think you at least need to view the patient."

– Deirdre, service manager, Western Isles Hospital

The stop-gap solutions introduced for the acute response are not considered to be fit for purpose long term in this remote locality. In particular, ways need to be developed to deal with newly-presenting specialist conditions for which there is insufficient expertise locally. The respiratory service illustrates this problem well:

“It’s hard to see things developing in a planned way. It’s become very reactive because of COVID. But in my specialty, the key thing is seeing new patients. I used to use telehealth for follow-up. It worked well because I’d already met the patient, if it was lung cancer or interstitial lung disease I’d have got the CT scan, I’ve got a digital stethoscope I can use occasionally for remote assessments [if a healthcare support worker is available locally]. If COVID comes back and stops me travelling, we have to think about how to do that first visit virtually. If the patient is referred with a likely diagnosis or a strong lead, I can pre-investigate so I may not need to examine. But when you’re seeing people over a TV screen and they’re not in first flush of youth, it’s hard to get the right kind of rapport that sets the foundation for the future. If they’ve got COPD [chronic obstructive pulmonary disease], shortness of breath, or a smoker, you’d want to examine them, they may have heart failure, you’ll be reliant on the GP to have examined them. And there’s varied pathways from the GP, some are good at gastro, some heart and lung. It’s hard to get GPSIs [GPs with special interest] on the Western Isles.”

- Eric, respiratory consultant who does remote clinics and monthly visits to Western Isles

This consultant speculated about training more respiratory specialist nurses who lived on the Isles, who would work closely with remote consultants, and also perhaps upskilling paramedics to use ultrasound. He suspected that such an approach would be more feasible than seeking GPs with special interest (because none may come forward and because GPs have multiple competing commitments).

Others talked of better vetting of referral letters, and more structured format, so that sufficient data are in the letter to make an informed decision about whether a face to face appointment is needed.

In sum, the Western Isles (which, in the early months of the pandemic, were mostly spared actual COVID-19 cases) managed well in the short term, but there is concern that medium-term plans to increase hub-spoke video consultations may not be scalable or sustainable.

Orkney

Orkney has 20 inhabited Islands, the largest being the Orkney Mainland, where the Balfour hospital is based. Prior to the pandemic, the hospital mainly acted as a spoke site for secondary care services in NHS Grampian. However, work was underway to engage with hospital, community and GP services to establish local video clinics as part of the board’s ‘care closer to home’ strategy. The Speech and Language Therapy (SLT) service was the main local provider of Near Me clinics for patients at home.

While there was some equipment in stock for dual screens, microphones and speakers, delays in equipment orders meant that a few GP practices were provided with laptops instead. Following GP deployments, attention focused on secondary care services; rising from the one department (SLT) to a total of 44 services.

The local eHealth (IT) team regularly ran virtual training sessions and signposted teams to national webinars and resources. The sudden increase in uptake also accelerated their plans to establish a patient-facing website, through which information and direct internet URL links to the virtual waiting areas of clinical services and GP practices were provided.

As in the Western Isles, the number of confirmed COVID-19 cases remained relatively low (approximately 20 cases by the time of fieldwork, August 2020), but national-level measures to implement infection control and physical distancing were still put in place. Some staff expressed concern about the availability of clinic space for video appointments, especially as physical appointments start to resume and footfall increases; and whether this would be fully acknowledged and addressed by senior management.

The volume of hub-home appointments from Grampian to Orkney increased dramatically with the onset of COVID-19. Most non-urgent outpatient appointments were cancelled and flights from Orkney to Aberdeen went down by 80%. All these appointments took place in the patient's home, due to restrictions on accessing the Balfour. This increase in hub-home appointments from Grampian was a welcome shift from an Orkney perspective. It aligned with their plans to increase video consulting from patients' homes, as well as offering video appointments for a broader range of clinical services to local patients. The Grampian team also contacted patients (e.g. introducing the Near Me option, determining that there was sufficient connection, etc.). Plans to ramp up use of Near Me for dyadic and triadic appointments at Balfour and community hubs were stalled by the pandemic; this option remains on the board's agenda in the long term.

Although many clinicians at the Balfour were aware of Near Me before the pandemic, and were interested in principle, few of them had reached the point of implementing it, until COVID-19:

We were thinking about it. But never got to point of using Near Me before COVID. We probably thought it would be a good idea, but at that particular point we were so busy, we thought it would take a while to get used to.... So we kind of batted it away and moved it into the future. But then COVID happened and we thought of bringing it in....

- Wendy, mental health nurse

Within the more established SLT service, COVID-19 was seen as an opportunity to reflect, and further explore and promote, the use of video in different contexts; in this case, linking in with schools and developing materials to facilitate remote education and training with parents:

We would use lots of paper materials, scanning in, and sending to patients at home ready for the appointment. So people worked really hard on that, and also something about sharing the infrastructure, so one person does it and shares for it to be used next time....And lots of trialling things. Everyone has been trying

stuff out. And been surprised.... So understanding what does work and also what doesn't work.... COVID forced the issue of what we could do by Near Me instead, expanding into different things and seeing what was viable for other types of need....It provided an opportunity to try and investigate that properly, rather than in the middle of service delivery and what you need to do.

- Faye, Speech and Language Therapist

The above quote illustrates that the lull in routine activity that resulted from the COVID response, coupled with the low number of actual COVID-19 cases, created some organisational slack – i.e. available resources which could be channelled into the innovation effort. This aligns with the literature on innovation, which talks about tension for change (a “burning platform”) along with sufficient “slack” (i.e. available time and resource) to set up something new.

Staff were very positive about the technology and quality of connection at Balfour, and commended the efforts of the local eHealth (IT) team in setting up, training staff and providing hands-on, practical assistance. However, connectivity across islands was variable. Insufficient connectivity was one of the main barriers to patient uptake of Near Me, and also limited opportunities for some staff to run their video appointments from home. However, the region is undergoing a number of innovative projects to improve connectivity in some of the island areas.

In sum, Orkney has seen a rapid increase in Near Me appointments from Scotland mainland (NHS Grampian) to patients' homes, and a rise in locally provided video appointments from secondary care services. Local plans to promote and ramp up the facilitated (hub-spoke) appointments at the Balfour and community hubs have been turned on their head, but longer term ambitions to do that are still in place.

Grampian

Prior to COVID-19, the local TEC implementation team at Grampian had done an extensive amount of groundwork, restructuring administrative systems and workflows to mainstream the use of Near Me. Not long before the pandemic, the board's Modernisation team had been working closely with the local eHealth (IT) and Outpatients departments to standardise processes for booking Near Me appointments, centralise the virtual reception desk, set up the patient administration systems for video appointments, and equip all consultation rooms for video appointments (with dual screen, speakers and microphones).

We had already done a huge amount of work prior to March getting the workflows in place and working with the clinic coordinators. We could not have rapidly deployed the way we did, if we did not have that underpinning it...

- Denise, Project Manager

Although all clinic rooms had been kitted out with dual screens and audio-video equipment, these spaces were no longer available. A procurement and prioritisation exercise was done early on, in order to manage the distribution of equipment across the organisation. Staff used personal devices where possible; one advantage of Near Me is that it can run on a personal device (technically and legally as nothing is downloaded).

However, not all could access patient records, and work is still underway to support VPN [virtual private network] access from home.

With expanded use came new ways of working across clinical teams. As well as directing teams to the national guidance and training sessions, shared virtual learning sessions were organised locally. Early adopting clinicians were also recruited to help devise local resources and support peer learning.

They [Modernisation team] realised they needed some clinical champions and realised I was an early adopter and involved me in a few things.... So I put together a four page idiot proof guide.... When I sent that round I had a few people knocking on my door saying I need help with this.

- Tom, paediatric consultant

Tom illustrates the value of local “super-users” – individuals who are slightly ahead of the innovation curve and become both adept and enthusiastic about an innovation, but who are also approachable and keen to support colleagues, often on an informal peer-support basis.

With additional support from within the Modernisation team, a series of engagement exercises were undertaken one month into the rapid deployment. This was to monitor ongoing activity, identify gaps in training, and inform planning and decisions going forward:

And we are starting to see emerging ways of using it, such as multidisciplinary clinical work, as a triaging tool. . So all these emerging models...

- Denise, Project Manager

Denise illustrates another more general feature of innovation – that once a user has adopted an innovation, they often think of ways of improving and extending it, perhaps by linking it with other technologies and services (known as “reinvention”).

One emerging difficulty in Grampian has been the running of the newly established virtual reception, with patients being transferred to the wrong waiting area. The problem seemed to be partly due to administrative staff learning to adapt to these new routines, while also facing a large and growing volume of activity (a situation which contrasted to Orkney above, where a lull in activity allowed staff to introduce the innovation at a pace that was comfortable, and learn as they went). Most boards faced challenges managing patient entry to the correct virtual waiting area during rapid scale-up (discussed further on page 62).

In sum, Grampian highlights the value of a system-level approach, following a quality improvement mindset, partnering with different organisational actors, and establishing structures for shared learning and use of data for continuous improvement and embedding. Unintended consequences did occur from reorganising and mobilising people into new roles, but continued to be addressed through the use of data and other feedback mechanisms.

Greater Glasgow & Clyde

GGC has the largest health board population in Scotland, within a region with relatively high rates of COVID-19 infections and hospital admissions compared with other areas of Scotland. The local eHealth (IT) team were confronted with a “tsunami” of requests to set up Near Me clinics. The relatively small implementation team sat on the board’s daily COVID-19 Management Group meetings, and were able to draw on other departments to expand their team (temporarily) to support implementation across sites.

An extensive amount of work had already gone into the development of an effective implementation process before the pandemic. This provided a useful guiding template for members of the eHealth (IT) team to work alongside clinical teams in the technical and administrative set up of video clinics. Given the high degree of contextual variation across clinical departments, each implementation had to be managed as a mini project, led by a dedicated lead to work through local requirements (e.g. technology, space, appointment systems and pathways). The rechanneling of staff resource to work alongside each service was therefore invaluable. However, it demanded a lot of oversight and training for members to take on these new roles. This challenge was further accentuated by the temporary nature of their roles, with some being pulled to other competing priority areas, as well as remote working, shielding and quarantining.

As we have found in other health boards, MS Teams⁵ quickly established itself as a valuable channel for remote training and collaborative working.

By the time of writing this report, GGC had rolled out Near Me to over 50 clinical departments, with different sub-speciality waiting areas. Services that had already been set up with Near Me also saw greater spread across service team members; some had previously been primarily using Near Me for cross-board specialist care, but now started offering to patients within the region.

So we got up and running and working well with Highlands – probably about 6 months before COVID, was up and running. But that was it....So when COVID came along, we already had a system in place we could quickly rollout with patients all over Scotland.

- Nick, Rheumatology consultant

An unintended consequence of rapid rollout on such a large scale included challenges managing waiting areas, leading to performance issues with the Attend Anywhere platform (some crashing, failures loading) due to high volume of usage. The supplier acted promptly in resolving these issues. But during these brief periods of technical failure, the local eHealth (IT) team were inundated by emails and phone calls from those services unable to run their remote clinics.

⁵ Microsoft (MS) Teams is a secure communication (video, messaging, file sharing) tool, which forms part of the Office 365 software package used by NHS Scotland. As part of the contingency measures in place to address the challenges presented by the COVID-19 pandemic, the planned rollout of MS Teams was accelerated.

Some initial problems were also encountered configuring appointment booking systems, due to the unprecedented pace and scale of implementation, in which some patients received multiple appointment reminders (via text) for different virtual waiting areas:

The main issue has been around booking. There are a variety of different links, and some have had multiple different links sent by text.... That has been the main sticking point for me. It works beautifully from my end and the patient's end, but it's getting that correct link to the patient in a timely fashion. GGC is an enormous organisation, and all the bookings for our appointments are done centrally.... With COVID as well I'm sure we've had different people doing different roles. And I am sure as we become familiar with it things will feel more normal.

- Fiona, Gastroenterology consultant

As well as technical challenges, clinicians have also had difficulty finding adequate space to run their consultations, particularly within the main city hospital. Pre-COVID-19, moves to support hot-desking and working from home meant that some practitioners already had NHS laptops, and could therefore consult from home if needed. But many had to remain on site or did not have necessary space/network for home working. It was felt that more dedicated spaces and more agile forms of booking may be needed going forward:

It is such a big hospital. There is not enough space to have your own office. And where people have an office it is often shared... And it is particularly with audio - you can have your headphones on, but you still need to speak out loud. So if six consultants are doing that all at once, it is just – you can't concentrate, you can't hear. You do need an actual door to close.

- Kathleen, Paediatric dietitian

Staff talked about the way in which rapid rollout has surfaced unresolved health inequalities and digital access issues.

It is something we knew anyway, there are particular parts, especially parts of east Glasgow, there are huge health inequalities. Not just digital. It is absolutely everything. But this new system, new way of working, it has highlighted that equality gap is still there, and therefore, how do we support those families? Because they can't come into clinic, at the moment, we can't go to them unless it's urgent. So these are things now on people's agenda..

- Holly, Paediatric physiotherapist

In sum, GGC highlights the significant challenges to rapid rollout in a large and complex organisation in a setting where there was a high rate of COVID-19 and sudden high demand for Near Me. While resource was channelled into supporting the implementation effort, the extent of change and unanticipated consequences were extensive, and further challenges remain in terms of space/capacity and patient equity of access. Some unintended consequences related to technology performance, patient entry to the virtual waiting area and finding adequate space to run the appointments occurred as a result of the sheer size of the organisation.

3.2.2 GP Services

As noted above, the pandemic saw a significant shift in the uptake and use of video consulting across GP services. In March 2020 the Scottish Government issued a range of guidance to support GP services during the pandemic, to enable the continued provision of services while reducing the number of patients coming into GP premises in order to reduce infection risk. This included specific guidance on the use of Near Me consultations [15, 16].

In our previous evaluation we found no examples of GPs making extensive use of Near Me. Shortly prior to the pandemic (February 2020), only ten (out of 931) GP practices were actively using Near Me; totalling 38 video consultations within the month. The rapid scale-up initiative saw a significant shift in the uptake and use of video consulting across GP services, with approximately two thirds of GP practices starting to use Near Me. But as lockdown restrictions eased, GP activity fell to around a third of practices continuing its use (see Appendix A-B).

While there was a significant shift in the use of Near Me across GP services, there has also been a wide difference in use across practices. Activity data shows that routine use of the technology has been confined to a small number of GP services. Indeed, nearly a third of national activity was attributable to 3% of the practices. In the majority of cases, services continued to use video on a small ad-hoc basis; some had begun to use Near Me, but then later abandoned it.

This data suggests that many GPs may not be opposed in principle but that either the disadvantages in practice were found to outweigh the advantages, or that considerably more work was needed to embed the video into organisational routines. In this section, we explore these issues further, focusing on perspectives on the role of video in primary care and challenges to implementation in this setting.

Role of Near Me in General Practice

The commonest benefit of video compared with phone in general practice was said to be “eyeballing” someone who was said to be sick to decide whether they needed urgent assessment or hospital admission. One GP called this “orbital triage”. Several GPs described doing a quick visual examination of an acutely unwell child and being very confident that the child did not need hospital admission (for example because they could be seen playing). One described an infant whose parent had given a story of unusual body movements; these were clearly seen to be abnormal on a brief video examination, resulting in a tertiary care referral. We were told (by two different GPs) of two contrasting care home patients. In one, “eyeballing” by video link led quickly to the conclusion that an urgent hospital admission was needed; in the other, the supposedly semi-conscious patient “perked up” and joined in a conversation with her GP when she saw her on screen. Whilst skin conditions could often be managed by video, assessment was sometimes impossible because of poor camera quality at the patient’s end.

Video was often described as providing added value for appointments with both children and parents.

It is difficult to get a good picture of how the child is over the phone. But if you see kids, it changes things massively. Usually when they come in – you see the

kids in the waiting room and you already get a good idea of how well they are; they are running around or slump there. So again, it was a massive game changer in terms of assessment of children a lot of it is how the child looks. The second bit to that is reassurance to parents. They feel that you have seen them – a more robust consultation, and so are happier and reassured you have clapped eyes on the children.

- Kenny, GP

A mum wanted to discuss enuresis [bedwetting] in a child. I needed to get an idea of the interactions in the family. I needed something more than just down the telephone line.

- Terry, GP

GPs talked of the difficulty managing risk without the option of bringing the patient in for face to face examination. One experienced GP felt they had picked up a possible malignancy purely from the history, so referred the patient on the basis of that, but the patient was 'triaged' at the secondary care end.

“One patient complained of rectal bleeding. I referred them [without physical examination] as they'd got altered bowel habit. But the surgeons did telephone triage, they said it was constipation, use [symptomatic remedy]. This sort of thing is right at the edge of what we can manage safely remotely.”

- GP, details omitted for confidentiality reasons

One or two GPs were convinced of the value of video over telephone for more complex, emotionally conversations.

“I enjoy video consultations. Specific ones for people with suspected or early diagnosis of malignancy. Our input is important to the oncologist. The difference between a phone and a video is massive for oncology: they [patients] absolutely need support. They need a practice being able to use the technology, and then to speak about stuff that's highly important information to process, key decisions to make.”

- Derek, GP

Other GPs described patients with mental health conditions who responded well to video consultations. In some cases the patient was reluctant to be seen (e.g. due to low self-image) so needed coaxing to try the video medium, but once introduced to it felt it was a distinct improvement over telephone. However, such cases were anecdotal and seemed rare.

However, around half the GPs we interviewed felt that phone and video were equally unsuitable for emotionally-laden consultations, and disliked even attempting to provide emotional support remotely.

“The phone, the video, it's a narrow range of communication. It doesn't have nuance, and that's stressful. [What do you think is so good about face to face?]. It's familiar. It's what we were doing all our lives. People do better face to face. It's less lonely. But also the risk. I see 40 or 50 patients a day, there's a lot of

risk. There's less human interaction, it's less rewarding, it's a lot more risky. And patients value face to face. Patients value touch. They value touch more than doctors actually, there's a study on that. Small things like a hand on the shoulder, shaking their hand. Really subtle things, we call the patient in ..."

- Della, GP with national service development role

Near Me seemed potentially more useful for out-of-hours (OOH) consultations, where the clinician did not know the patient. Some OOH GPs were very keen on it.

"I do a lot of Attend Anywhere. I log into it from the start [of my shift]. Any patient who understands how to link is fine. You can't do it on the very elderly unless there's a relative. I can't give an exact percentage but in a night shift I'd do more video than phone. We have an OOH coordinator, she's got a separate phone provided by the manager, so I give the phone number of the patient to the coordinator who sends them the link from that phone. [How do you give her the patient's number?] I write it on a piece of paper [laughs]. I'm trying to tell my manager we need to remove that step."

- Fatima, OOH GP

However, most OOH GPs did not use video much. Fatima, who worked full time in OOH, said that many of the other OOH doctors were doing only one or two shifts a week to top up their income. They had little interest, she felt, in improving the organisation of services, and tended to simply contact the patients using the same patterns and technologies they used in their day job. She felt if the use of video was mandated, these doctors would change, but that they had little incentive otherwise.

Reasons for limited use

There were several reasons for poor spread and sustainability of Attend Anywhere across many of the general practices. Main reasons include the following:

Telephone was often adequate

Much of the case mix in general practice consisted of straightforward problems in patients well known to the clinician for which the telephone was considered "perfectly adequate"; it "came naturally"; it was "quick" and there was "no fuss". Many problems which patients discussed by phone were recurrences of conditions that had occurred in the past, such as requests for occasional medication that wasn't on repeat, and details of the previous occurrence were of course on the patient's electronic record. GPs and nurse practitioners could speak on the phone while also looking through the patient's record on screen (this would be more difficult if they were viewing the patient on video, especially if they did not have a second screen or were not used to using one).

Variation of appointments and conditions

General practice encounters are more varied and less predictable than (say) outpatient follow-ups for a particular condition.

"We [general practice] don't just run a pre-set clinic with slots you can switch from face to face to video. It's more dynamic, it's a mix of acute and long term."

In secondary care, they just see the clinic list and send the patient a link [in advance]. Whereas for us, if we're doing an acute review, we need to send the URL to the patient on the same day. Our work isn't pre-planned weeks in advance, you may have to do it within a minute or two. And we see a lot of patients in a day. And the processes are complex – there are lots of areas we have to build it into: care home appointment, acute appointment, routine appointment, minor surgery, family planning, long term condition review, and so on.”

– Trevor, GP with national quality improvement role

Appendix E shows a process map of just one kind of GP encounter, illustrating the point that whilst the clinical condition may be low-risk and even mundane, the organisational steps to achieve that encounter are multiple and often unpredictable.

Among GP services that had managed to routinise Near Me within their clinic, a lot of work had gone into adapting their own practices; either for switching smoothly from phone to video, or to establish administrative structures to assign appointments to video.

“So what I tended to do, if I thought Near Me would be helpful, I would tell them ‘I would quite like to get a bit more information’... I would e mail them the link to the waiting room. And I would stay on the phone, tell them ‘Right, go into the waiting room, get it all set-up, and I will be with you in 10-15 minutes...’. Then, that would give them time to set it all up, and I would then do another call while they were logging in, and trying to get it to work. So very time efficient.”

- Kenny, GP

Work environment and physical spaces

General practices are busy places with different kinds of work taking place in different physical spaces. Kitting out general practice adequately for video consultations requires every (or almost every) room to be supplied, since in reality one clinician cannot evict another clinician from their room to use the video equipment. Some GPs said they had received kit but it was only sufficient for one or two rooms.

Technical infrastructure

There were some (relatively minor) difficulties with technical infrastructure. Most of Scotland now has high-speed broadband, though occasionally patients (and even more occasionally, general practices) were ‘off grid’. A more common problem was the limited helpdesk support for general practice. This quote is from a national GP lead who is very keen on Near Me.

“There are hurdles needed to overcome to make it slicker and more reliable. We need broadband, and email needs to be working. You need the normal software working to send text links. If any of them fail, you can't do the consultation. Health Boards offer eHealth support helpdesks, but they are overwhelmed,... If there was a responsive support desk we'd feel more positive about it. It really is essential to have reliable remote access from home. In reality it's pretty patchy. One of my GP partners was shielding for 4 months, they did all their all clinical

work remotely, but they can be sitting waiting for 90 minutes for it to start working. [What caused the delay?] Trying to log into the practice EPR [Electronic Patient Record] system. Very frustrating.”

- Della, GP

Whilst the last example does not appear to be a problem with the Attend Anywhere platform, as she points out, unless the entire sociotechnical network is functioning smoothly, the service cannot run reliably.

Relationships and continuity of care

Some GPs felt that remote consulting risked diminishing their link or relationship with patients. The GPs who were most opposed to continuing with remote consultations were the ones working in the most deprived areas. They saw the GP as having an important role to play in redressing inequalities through initiatives such as improving access and ensuring continuity of care (they called this the “Starfield model” after the US professor who showed that both access and continuity improved outcomes in primary care [17]). They also offered longer appointment times and had a range of attached staff, such as social workers, community link workers and welfare advisers. They talked about bringing a range of local services together “under one roof”. Such enriched provision also helped improve recruitment and retention of GPs in deprived areas.

Shifting long-term to a remote model, said these GPs, would erode the important function of the physical building to serve as a hub for the delivery of highly personalised and multi-professional care packages which helped those with complex needs. GPs whose focus was on such patients were cynical of claims that digital appointments are “shorter”, “more efficient”, “more patient-centred” or “more cost-effective”. On the contrary, they said, a digital first policy might lead to the patient having several phone or video appointments with different clinicians and still not get to the bottom of what was troubling them – a situation that would be unproductive and stressful for both patients and GPs.

Relative risk of infection

Regions with low incidence of COVID-19 (e.g. the island health boards) saw a steady decline in the use of remote consulting due to the lower risk from patients attending the clinic following the national peak. GP services in the Western Isles made rapid and radical changes oriented to the acute COVID-19 response. As one GP said, “we were braced and ready” for COVID-19, with most practices rapidly introducing telephone triage for all calls, hot hubs, physical zoning within the practice and PPE for patients attending in person. The Health Board had undertaken some modelling and anticipated up to 5000 cases on the islands; they had matched GPs with “buddies” to cover in the event of COVID-related absence. In fact, no healthcare staff became ill. As with the hospital, the small number of actual COVID-19 cases produced something of a mismatch between provision and need.

Perhaps because local modelling had used worst-case scenario numbers, investment in VC equipment was high across health boards, and local GP practices were generously supplied with webcams, microphones, extra screens and in some cases new laptops. But after an initial flurry of video consultations in some practices (and none at all in others), the majority of remote encounters have occurred by phone. There was some resentment

about this, since at least two specialist nurses were both shielding and had high caseloads (and were not substitutable) but were, at least at the time of our interviews, not fully equipped to run video clinics from home.

“Setting up GPs [for remote consulting] is a political football. There’s an anticipation [when you supply the kit] that they’re going to do more remote. But there’s little understanding that instructing technical teams to ‘do stuff’ for GPs won’t make the GPs change behaviour. GPs are private contractors. They’ve got to get facilities, screens, [virtual] waiting areas and then they can come on board. But the GPs are now saying ‘we think we can do 80% [of consultations] over the phone’. That has been a consistent message. And they may have a very good reason for it.”

- Keith, service manager, Western Isles Hospital

3.2.3 Care homes

Care homes were another priority concern for the rollout of Near Me during COVID-19. In this section we focus on the approaches, benefits and challenges to using video consulting within this setting. Most care homes acted as recipients of /patients for a video consultation, and so did not have a dedicated Near Me virtual waiting area. Therefore, it was not possible to capture the activity data for this setting.

The Care Inspectorate led a national engagement exercise to help introduce and prepare care home staff for video consultations. The project followed a phased approach following the regional progress of the HIS deployment support. The Care Inspectorate provided care home managers with information, guidance on technical set-up, training to staff and links to training materials on supporting the video consultation process. Engagement was via phone/email during April and June 2020, involving 800 care homes in total. Details on this engagement exercise are described elsewhere [8].

The exercise revealed significant digital access issues for many care homes, with just over half (about 56%) having internet connectivity throughout the premises, about 39% with partial connectivity and 5% with no internet connection.

“It may well be the care home has connectivity in the offices or in the communal spaces. Not that many had connectivity throughout the care home, or if they did, they did not have devices available to use in the private environment... The bricks and mortar is very different. You may have old granite buildings that don’t have very good connectivity. They may have new annexes outside but the main structural beams impact connectivity... Also location of the building, if the care home is in a black spot they are going to struggle..”

- Annabelle, national stakeholder

Access to internet and hardware devices has had a significant bearing on capacity to introduce and support the use of Near Me for care home residents. A number of national initiatives providing mobile devices to care homes have contributed to their ability to utilise the Near Me service, including the Tech Device Network (Scottish Care run initiative for organisations to donate technology) and a regional private donation to care homes across Aberdeenshire. However, demand has continued to outstrip supply. Care home staff have

had to securely coordinate the sharing of devices among residents, while maintaining infection controls and residents' privacy.

Implementation has also relied on the presence of individuals with the technical knowledge and skill to configure workable solutions and support residents. This includes ability to use (and support use) of the technology, but also ability to adapt and configure bespoke solutions that met the particular needs and capabilities of the user. It also relied on local capabilities in facilitating the consultation (assessment and dialogue) between the patient and clinician:

“You have to be really organised to make sure they’re there for when the doctor is contacting. It would be nice if more people could use it more independently. For some residents we could actually explore that, them using it more independently. But the way you have to sign in and so on, at the moment it is quite difficult with most of the residents. They really need support with it...”

- Donna, care home manager

“We’ve done plenty of unplanned appointments. Quite often, a resident has these mini strokes. She passes out... she is complex from a medical perspective.. So last time it happened we were able to ring the surgery - they came on a video call – we took the tablet right up to the person and the medic could see how responsive she was, watching in real time what her responses were. So she was able to use us as an extension of her arms to do that quick assessment.”

- Bharat, care home manager

“I saw one in a care home via video link. Dialled in, member of staff on duty had come out of retirement, used an ipad, I said I would like to clap eyes on patient, she said we’re using it [ipad] to link family members. She angled the ipad badly, I could only see the top of the patient’s face, but even though it was badly angled, I could see the patient wasn’t as sick as the call had implied. When she heard me she said oh hello doctor, we have a bit of a chat.”

- Lynne, GP

But taking on these new roles and practices has been a challenge for care homes, operating under stressful conditions and strains related to the constant threat of COVID:

“It is challenging taking these new things on. Especially under stress. Also you have to understand, care homes are under a significant amount of distress. There are a lot more challenges we are having to deal with. COVID 19 is ever present. If one resident gets COVID, how many will I lose? So a very challenging environment. So for anything you are not comfortable with, it is easy to say ‘hang on a minute...’.”

- Bharat, care home manager

Notwithstanding these various constraints, care home staff welcomed the possibility of using Near Me as an alternative to physical visits. Wider perceived benefits beyond

infection control included quicker access to unscheduled and scheduled care, more effective 'virtual' wards, and reduced stress for residents travelling out to hospital sites.

But whilst the care home workstream was primarily focused on support for remote consulting, staff were keen to highlight the impact of Near Me on social connection and engagement in other group events (e.g. exercise classes, meditation) during the pandemic. A small number of NHS care homes had the facility to manage their own virtual waiting areas, and so offered the opportunity for virtual visits by family, while others utilise other video call applications (e.g. WhatsApp, FaceTime).

“And one lady, to start off with, was not sure. But she has got used to it now. And her daughter calls, and they can have dinner together and see what each other is eating, so it is really nice to be honest.... The relatives have said they found it really easy getting into the waiting area...And the staff are quite ok with it.

- Tanya, care home manager

“I will never forget. We were able to provide a video call for someone with end of life care. And the family were able to have that last contact with their mum. Awful experience for myself. But great that we were able to support that.”

- Bethany, care home nurse

Applying the technology (and video calling more general) for social connection raises interesting questions and challenges in relation to the scope of the Near Me programme, during and beyond the pandemic. While the engagement exercise sought to support to improve access to clinical appointments, staff were of the view that the use of video to support residents' social and mental wellbeing was very much part of the caring role, especially while visiting opportunities are restricted to deal with COVID-19.

Work is ongoing to expand the use of Near Me in care home settings, and plans have been set out in the Adult Social Care Winter Preparedness Plan 2020/2021 to use video for remote care and chronic condition monitoring of care home residents.⁶ This social dimension in relation to Near Me aligns well with another workstream within the TEC programme to trial another technology platform called vCreate, a secure video messaging service which links patients, families and clinical teams⁷. The 12-week pilot is a collaboration between the Care Inspectorate, Scottish Care, COSLA, and the NHS West of Scotland Innovation Hub. Participating care homes are in locations throughout Scotland⁸. While the pilot is still ongoing, our study suggests that such development would have a positive impact on quality of care, in which shared learning and joined-up working between the Near Me and VCreate initiatives would be mutually beneficial. Significant challenges would need to be addressed however, in terms of IT infrastructure, staff confidence with technology and the customisability of bespoke hardware devices to meet the diverse and complex needs and capabilities of the user.

⁶ [Adult Social Care Winter Preparedness Plan, 2020-2021](#)

⁷ <https://www.vcreate.tv/>

⁸ [Care Inspectorate news release - August 2020](#)

3.3 Data synthesis using NASSS

In our previous evaluation we used the domains of the NASSS framework to assess the reasons for both the adoption and use of Attend Anywhere, and its relatively limited uptake to March 2020 [1]. While those findings remain relevant to Near Me programme, recent events demand the need to review these findings in the context of the pandemic.

In this section we will explore the impact of COVID-19 on the uptake and use of Near Me across the NASSS domains and highlight implications for further, spread and sustainability going forward. To this end, we will summarise the scale-up experience and build on our previous findings for each domain.

3.3.1 Clinical appropriateness and extended use across specialties

Before the pandemic, Near Me consultations were most readily implemented for routine follow-up of chronic, stable conditions, especially when the main purpose of the consultation was to convey test results and affirm that the patient remained asymptomatic. Clinicians generally considered it clinically inappropriate and unsafe to use remote consultations for poorly-defined and less predictable conditions, rare conditions, and those where specialist tests or treatments were unavailable locally. In relatively high-volume specialties such as diabetes and heart failure with well-established clinical networks (e.g. where specialist nurses and GPs with special interest worked from a community hospital with a specialist available for phone advice), local staff considered that video consultations were rarely clinically needed.

In the context of COVID-19, and depending on the condition and sector (i.e. more so in secondary care), video consultations became an acceptable alternative to bringing the patient into clinic or conducting the appointment via phone. This has included extended use across a range of clinical contexts as an alternative to scheduled face to face appointments at the clinic, for triaging assessment and for out of hours care.

There has been a significant expansion in areas where little or no formal physical examination is required, but where non-verbal cues and facial expressions are important (e.g. psychiatry, psychology, mental health, respiratory, speech and language therapy). In such settings, and in the context of COVID-19, video was often considered even better than face to face, because PPE was not needed.

“So I did use Near Me for a patient that the GP was worried about and that worked really well. Because, I could see her, and she could see me, and that made a real difference compared to a telephone call....Also face to face we are looking at people’s non-verbal communication. Near Me allows us to do that, which the telephone does not.”

- Wendy, community mental health nurse

“Near Me is the only way to have face to face because currently a face to face is a mask-to-mask – you can’t actually see each other And a lot of people had said it is good for children, because for a child seeing someone behind a mask is quite scary, whereas you can try to create a normal conversation over video.”

- Delian, service improvement lead

Near Me has also provided a better alternative than phone for limited visual assessment that does not require physical contact or a high-quality/close up image (e.g. physiotherapy), for “eyeballing” a child or elderly person to assess whether they were, broadly speaking, ill or well, for routine monitoring of chronic conditions, and for showing patients how to use a device.

“Been doing phone clinics now for about seven weeks. It is very difficult over the phone. With skin, it is so subjective, what they [the patient] thinks is really bad, and describing it is really bad. But if I see it, it may not be that bad. But I’m having to go off everything they are telling me... .When I do follow up I try to give the option, and the bulk opt for video over telephone – they feel as I feel it is far better to see you. A lot of old people who are not too unwell and it is just touching base, would prefer telephone. But majority prefer Near Me.”

- Theresa, dermatology nurse specialist

“From our perspective, something that has been very helpful has been seeing the patient you are talking to because lots of things can happen to them and so getting an idea of them generally is very useful.”

- Harry, Haematology consultant

These advantages of basic visual assessment have also led to video being tried out for clinical encounters previously assumed as requiring face to face consultations (e.g. dentistry check-up, fitting/demonstrating medical devices).

“Even if they have got a hole and they are not in pain and maybe just trapping food up. There is a putty they can use and I can demonstrate it. And say to them you are ok and we will just get you in when you can. But if you can see if it is swollen or an abscess or you just know it must be sore, you can see it and so you can bring them in....”

- Lucy, dentist

“We’ve been programming hearing aids and sending these by post. Now imagine trying to talk someone through ‘Put it in your ear...’. Doing that by telephone is doable, but it is not very easy and not very personable. And them being able to show me how they are putting it in their ear.”

- Neil, Audiology consultant

Video has played an important role within paediatric settings, for speaking with parents while observing and interacting with the child. Whilst this can work very well, it depends on good technical connection as the following quote illustrates:

“Also I saw a little one, a 2 year old with gait abnormality but only in last 15 days so I was concerned more. Very difficult to see it on VC..... Sometimes it works really well, ...I would have been able to do a fantastic VC but for technical error! The screen was getting frozen because mum had poor internet connection. So what I normally do [to assess gait] is I tell them to place their laptop carefully, then take the child to the corner of the room, and say I’d like him to walk

towards me. And this way normally I can examine the child's gait really well. But in this one, they just had to bring him in [50 miles round trip]."

- Nisreen, Paediatrician

This extended use of Near Me has been, in no small part, due to a high degree of preparatory work and creativity among practitioners. Across all specialities, but especially among AHPs, we have seen many examples of adapting ways of working and interacting with patients to take account of the physical and symbolic differences in the technology-supported environment.

"I think what this has shown us is there are things we can do via Near Me....The COVID pandemic has given us permission to try it, to see how it works. And if it works it works, if it doesn't, then it doesn't matter because it is better than nothing."

- Tessa, Paediatric physiotherapist

But as highlighted in our previous report, not all conditions are appropriately managed through a remote video consultation, and still required patients to attend the clinic or have a home visit (e.g. some clinical examinations, essential medical tests). Other media, such as sending a digital photo to the clinician instead of (or in conjunction with) video were found to be more clinically or socially appropriate (e.g. for small lesions, sexual health issues).

These accounts are in line with the perspectives expressed through the patient and clinician engagement surveys. Some clinicians talked about being on the 'learning curve' in working out what can and can't be done effectively through different communication channels. Continuing to harness and share this learning across specialities will be important going forward.

3.3.2 Technological benefits and challenges

As noted in the previous evaluation, the Near Me technology was, in general, considered dependable and produced high-quality video and audio, partly due to the software and partly because many services had invested in high-quality peripherals such as screens and noise-cancelling microphones. As noted on page 25, the software platform (Attend Anywhere) was also under significant strain due a sudden increase in the volume of consultations, resulting in periods of service degradations in the initial response phase. However these were dealt with promptly by the technology supplier. The user experience surveys also indicate that the quality and performance of the software remained largely consistent with that reported by users before the pandemic [1].

However, Near Me functionality and performance was considered limited for group clinics, whereby allied health professionals and multi-disciplinary teams sought to use the platform with more than five people.

An important usability feature of the Near Me platform is the 'single point of entry' to a virtual waiting area via a consistent URL. Within many of the hospital settings, this functionality was further simplified for patients through a virtual reception desk, in which the receptionist would welcome the patient and transfer them to the appropriate waiting

area. Alternatively, patients would gain direct access to the virtual waiting room URL (e.g. via the service website, text, appointment letter).

This alignment with outpatient workflows was an important facilitating factor for the rapid rollout of Near Me. Hospital and community care services had undergone significant work embedding these processes within local outpatient workflows and administrative roles. Much of this was grounded within the previous scaling up activity undertaken as part of the TEC programme before the pandemic. However, within most general practice settings, the provision and management of the waiting area required additional logistical work; often on the part of the practitioner while consulting with the patient. Consequently, the technology provider has recently incorporated additional adapted functionality allowing clinicians to send a URL link directly to the patient's phone. The outcome of this modification was beyond the scope of this evaluation. But it illustrates the value of close cross-sectoral dialogue and collaboration for the co-evolution of more usable and workable solutions.

Another important theme within this domain relates to material infrastructure and IT support. In the previous evaluation we found that providing clinicians with the optimal material surroundings for a high-quality video consultation was a key facilitating factor. This included the space for the clinician at the hub, as well as at spoke locations for the dyadic and triadic consultations.

A major challenge across all sites, including GP and hospital and other community care settings, has been establishing adequate space and equipment for a video consultation. During the pandemic, staff have worked pragmatically and adaptively within various organisational and practical constraints, with technology to hand. This aided reductions in hospital footfall, increased home working, and a mutual awareness and understanding (among staff and patients) on how the crisis has impacted service access and provision.

Particularly for the larger city hospitals, moves towards hot-desking and shared office space were not conducive to the routine use of Near Me. Going forward, some have expressed concerns that service recovery will bring further demands on physical space, and the potential need for more agile and economic ways of managing these for the purposes of video consulting:

“The space is there, it just needs to be more efficiently reassigned ... So there needs to be more fluidity in how we use our outpatient rooms....The concept of hot-desking, you should be able to book into a hot desk somewhere, that can actually be closed off. So opening up more places that has the relevant technology that is potentially sharable, and obviously wipe down for hygiene reasons.”

- Fiona, Gastro consultant

3.3.3 Value of Near Me for patients, staff and services

Prior to the pandemic, staff and patients described various advantages of the Near Me service over conventional clinic appointments. The main benefits perceived by staff and patients included less need for travel (including patient travel, staff travel and the costs of staff accompanying patients transported between sites), environmental benefits (reduced carbon footprint) and less stress and hassle. Our analysis of interview and survey data

reveal that that these perceived benefits remain prominent among staff and patients. Indeed, many practitioners adopting Near Me in response to the pandemic described intentions on long-term use for these reasons. In addition, participants emphasised the following benefits based on their experiences during the pandemic.

Reduced Infection Risk

The main reported benefit was the use of video to reduce risk of infection from COVID-19 and allowing services to keep running in the face of limited clinical space, physical distancing and shielding requirements. Video worked well for staff shielding at home and for minimising time spent in shared office spaces. Some teams alternated between home-based and clinic-based work to minimise risk of the whole team becoming infected at the same time. While minimising the risk of infection was seen as video's main role during the pandemic, many believe it to be a more lasting role for the future.

“We do have some patients that need to come in face to face, so that has to be factored in... We all share an office.... So we kind of have a system in place with one or two of us working from home at one time.... You can do Near Me on any device, so there's no issue linking in with the patient. There were some issues initially linking in with the hospital system from home. But that has been a revelation that we can actually do that.... And so for us that has been a huge change to how we work. And something that I think we are keen to carry on if management allow us to.”

- Harry, haematology consultant

Video was also used to allow some aspects of the appointment to be conducted remotely, thereby minimising the time patients spend physically in the hospital and maintaining service provision where clinically appropriate:

“Sure, you need them in at some point for a flow test. But what you can do, and what we have started to do, is an initial assessment, monitoring what they drink, getting a real handle on the symptoms while we are waiting to be able to bring routine non-urgent appointments into the clinic, while we are waiting for that doing part of the appointment.”

- Craig, Urology nurse specialist

Realignment of Care Pathways

While stressful in some ways, the pandemic created the opportunity to focus on much needed change within outpatient care pathways, and allowed staff to align the use of Near Me with planned or ongoing developments (e.g. patient-initiated appointments):

“We took the opportunity to re-vet patients, and looking at patient-initiated appointments, rather than rescheduling for return slots. So in a way putting onus back onto patient when they feel symptoms requiring review.... There was a lot of recognition that this needed to change in outpatients – it has just been the catalyst to make it happen.... “

- Nick, Rheumatology consultant

More Flexible Working

The pandemic has foregrounded new possibilities for more flexible remote working, including the running of Near Me appointments from clinicians' homes. The option to work from home longer-term was also welcomed by many staff, since it offered more flexible working and less travel. However, some felt uncomfortable running appointments from their homes. Concerns were also raised about jeopardising patient trust in the clinicians or service.

“There is an issue for those not able to get kids into child care, they have an issue – kids running around everywhere... Sometimes you might have the cat walking across the screen....”

- Wendy, mental health nurse

The above quote raises an important question regarding the home working set-up for remote consulting. It is not just a matter of sufficient technical arrangements, but also a need to meet social and cultural expectations of the patient during their clinical encounter. While there is a mutual understanding among patients and staff about necessities of working from home during the pandemic, there will be a need to consider how this is managed longer term.

A national policy decision to provide the Near Me software platform (Attend Anywhere) to all NHS organisations in the country had been made previously. At the start of the pandemic, the contract with Attend Anywhere was extended by two years and capacity increased to support wide-scale adoption. In the context of the pandemic, there was a strong case for a solution that had already been shown to work in some settings, and where funding, expertise and infrastructural supports were already in place.

While video is likely to remain part of business as usual, there would still be value in a system-wide approach to assess the sustainability and cost-benefits of different Near Me service models, as well as other modes of remote consulting. The extended use of Near Me during COVID-19 has further highlighted the role of Near Me as being part of a wider suite of tools, both synchronous (e.g. telephone, interactive software over shared screens) and asynchronous (e.g. online forms, messages, photos) functionality.

3.3.4 Concerns raised by intended adopters (staff and patients)

In our previous evaluation, concerns we heard were not about the Attend Anywhere technology but about the concept of video consulting in general or the logistics of the service. Although our data indicates strong support for the use of Near Me beyond the pandemic, there are a number of key areas of concern to be addressed going forward.

Quality and Safety of Care

There is the need to consider quality and safety of care. Concerns have been raised about missed cues and reduced examinations. During the pandemic, there has been a strong incentive to use Near Me as it is perceived as better than the face to face alternatives due to infection control measures. But assuming that the pandemic recedes, the balance between clinical safety and risk would shift again:

“I think many of staff that have been on it can’t wait for it to go back to normal. And get to do the usual clinic. And that is understandable, because that is how we work...But what is more powerful, and we have to keep reminding staff, is that our parents and clients really like it.”

- Kathleen, paediatric physiotherapist

There are unanswered questions about regulation and governance going forward. The crisis saw some relaxing of governance and regulatory requirements. This came as a relief for many, highlighting the importance of creating organisational cultures that are conducive for experimentation and risk-taking. But while these regulatory structures are burdensome, quality control serves an important purpose. In sustaining and building on recent developments, it will be important to find the right balance between safety and risk.

“Concern around clinical risk. I think that is something that hasn’t been aired as much as I would have expected. It kind of just had to happen, and almost as if the clinical risk bit will be thought about as we go along. But I have some anxieties still about what happens if you miss somebody who has something or can’t examine this.”

- Nick, Rheumatology consultant

Digital Access and Inequalities

The interview and survey data raise concerns related to digital access and inequalities. Clinicians have reported that a small proportion of their appointments have had to be done via phone because patients had problems using video technology. This was particularly the case among many older adults, and had led to wider problems as physical distancing and lockdown restrictions limited usual channels for social support from family and friends. In addition, physical or cognitive impairments sometimes made it more difficult for the older person who was struggling to get to grips with technology-mediated consultations.

“I had a significant proportion that had to revert to a phone call because of technical issues. My issue, I was not sure if the problem was my end or their [patient] end. And then how do you help them troubleshoot? You need another technical support, if you like, at the ready, so you can say ‘OK I’m having an issue in waiting X’ And then they get pulled in, and say ‘OK, talk me through what the problems are....”

- Monica, Ageing and Health consultant

The move towards video consultation has also surfaced unresolved issues of poverty and financial hardship, including access to appropriate (up to date) computing/mobile devices and internet/mobile data allowances. Such concerns have also been raised through a recent report about Deep End GP practices (which serve socio-economically deprived populations) [18].

It is something we knew anyway, there are particular parts, especially parts of east Glasgow, there are huge health inequalities. Not just digital. It is absolutely every(thing)... But this new system, new way of working, it has highlighted that equality gap is still there, and therefore how do we support those families.

Because they can't come into clinic, at the moment, we can't go to them unless it's urgent. So how do we help support the families.

- Kathleen, paediatric dietician

Consideration also needed to be given to physical, cognitive and sensory capacities related to a patient's condition, in which services have sought to adapt and accommodate these. Similarly, within some mental health services, there have been barriers associated with anxiety around the use of the technology.

One client had general anxiety. She had black tape over the camera. Over a course of Near Me sessions they worked over removing that black tape.... Quite often you see Google chrome will use your camera – this just fed into her anxiety and paranoid thinking.

- Sam, Project Manager

Limited access to private spaces

The clinician interviews and engagement survey data both highlight problems associated with people who have limited access to safe and private spaces within their home. Clinicians felt that the impact of this was particularly salient for consultations involving a high degree of sensitivity, and where the person's comfort and privacy is an important part of the remote therapy (e.g. psychology/psychiatry, counselling, addiction services). They felt that access for these groups need to be maintained by enabling choice for a face to face appointment, or by providing community-based facilities for a private consultation.

The concerns discussed above also reflect findings from the public engagement exercise described above, in which problems of poor connectivity, technology access, mobile data allowance and availability of private space could impede care quality or access. Additionally, quality of the call and usability was found to have a significant impact on patient-reported outcomes in terms of their ability to manage and cope with their condition.

Need for joined-up government working

Many of our interviewees felt that more work needs to be done at NHS board and national level, through joined-up government working, to address issues associated with equity of access. This could include helping people get technically set up at home for the video appointment, building digital skills and confidence, providing relevant technology and internet connectivity, and linking in with schools, libraries and other community facilities for people to access technology outside of the home. Some work of this kind has already commenced, such as the Connecting Scotland initiative⁹, which is providing devices to people's homes and improving their digital literacy, to improve their social connections.

"We need more people like X--- [social worker who helps people get broadband] and her support staff. We need to do more for people who don't have access to broadband or can't afford a laptop. I had a call from a consultant in Newcastle last year saying what do you do if people can't afford (it)? If it suits, but people

⁹ Connecting Scotland is a Scottish Government initiative set up in response to COVID-19 to help get every citizen online through technology provision and education, <https://connecting.scot>

need to be vetted very carefully. I don't believe that it [remote] should be the default. We've come a long way in healthcare we don't want to ruin it now. It really needs to be looked at properly."

- Deirdre, service manager

Staff wellbeing and supervision

Concerns have been raised in relation to staff wellbeing and supervision, in the context of continuing remote ways of working and consulting with patients.

One GP, who held a national leadership role in GP training, considered that remote consulting was negatively affecting the mental health of doctors. Whilst he recognised the value of video, he was also concerned that the registrars and young GPs would not gain sufficient breadth and richness of experience if most of their consultations occurred by phone and video.

"So I teach registrars. Medically, medicolegally they're scared. It's about widening your margin of error. So for example you'd have a lady, an old lady and you'd say 'Just climb up on the couch, I'll give you a wee hand, take your time', and you'd be waiting for her to do it in her own time and giving her a bit of a help, that's the sort of subtle thing that widens your margin of error. It helps you manage the risk. [...] And I think – I haven't measured it formally but I think – there's not so many second and third points that get raised in a phone or video consultation. There's less hidden agenda stuff. We're losing that. [You mean the Balint¹⁰ type stuff?] Yes exactly."

- Colin, GP with national training role

While home working had benefits (e.g. flexible working, less travel, shielding) there were also downsides (e.g. less immediate access to colleagues for support/advice). Some staff also talked about the effect of quarantining and remote working on their social and mental wellbeing. As previously highlighted in the case narratives (see section 3.2.2), a number of GPs raised concerns about the potential impact of remote working on clinician-patient relationships, loss of personal care and interaction, dissatisfaction and anxiety among staff.

"So we've been working at the COVID hub, doing a lot of phone consultations, occasional video. Everyone's been speaking positively. This is the future. We could keep it like this, do the majority of our consultations like this. Quicker, more efficient. My worry is that this [remote] is being embraced as the way forward. But I think it's fundamentally better to do this face to face.... There's a lot of loneliness. I mean, there's more lonely areas anyway I know that, like call centres, people working there, I know that. But we're not thinking enough about loneliness.... There's a lack of nuance in the [telephone] conversation. It's superficial. It's not catching things. It's having an insidious effect on mental health".

¹⁰ Balint approach means psychodynamic conversation oriented to exploring the patient's unvoiced concerns

Similarly, some clinicians within the secondary and community care settings raised concerns about the cognitive demand of dedicated phone or video clinics, and the need to consider this within clinic schedules.

“It looks so simple, but takes a whole other level of effort and communication skill to do it well. And I think we may underestimate the energy it takes. I generally – at the end of a couple of phone clinics – it has exhausted me. And the video, it is another level of effort, so it is tiring....And the risk of miscommunication. So maybe double checking things.....Also I say I will send you this link - normally we would show them a booklet, but on video we may have to send them things...I think you need to build in rest time or just time in between.”

- Niamh, Respiratory nurse specialist

3.3.5 Organisational issues arising from the rapid scale-up

Most participants felt that a positive element seen in response to COVID-19 has been the common sense of purpose and collaboration across their organisation. Most of the staff participants we interviewed contrasted their experiences in relation to the organisational contexts. The pandemic helped bring about a more conducive set of organisational conditions to accelerate the use of Near Me, including a positive narrative about the technology (to minimise risk of infection), slack resources (redirecting staff/equipment) and senior management and clinician buy-in (with national directive and reporting mechanisms). Centralised command-and-control structures within health boards facilitated quick decisions and responses, while reduced governance and assurances meant mistakes could be acknowledged and learnt from. The literature on organisational innovation shows that a judicious balance is needed between top-down change with firm goals and milestones, and bottom-up, more organic change that is more responsive and contingent.

However, the pandemic also brought further (and evolving) organisational challenges, as services were required to completely restructure existing systems, workflows and organisational boundaries. Hence, a continued quality improvement approach to continual monitoring, adaptation and knowledge sharing was needed to adapt and respond to unanticipated consequences. This included three main areas.

Disruption to work routines

In the previous evaluation we observed the importance of routines, which can be defined as “a repetitive pattern of interdependent action involving multiple actors” [19]. As routines tend to be interdependent with other routines, if one routine changes it can generate additional work in other routines and processes. In response to COVID-19, service teams within GP, hospital and community care settings had to drastically reorganise hard-wired routines and workflows to review, prioritise and contact patients for remote appointments.

“We had to call people up saying would you be happy to have a video consultation. And this was difficult because patients were not picking up the phone. Having 10 people say ‘no’ and two people say ‘yes’ – it was bad use of

time....So we started putting out appointment letters to all patients on the waiting list asking 'would you prefer a video consultation?'. And then we were starting to get more numbers contacting us and we were able to book in."

- Neil, Audiology consultant

"I went through a prioritisation exercise....I see all the primary kids for school inspection. Huge amount of data – I worked with the admin team to cross reference scores from a school inspection - looking at enamel discrepancies. I developed a RAG (red, amber, green) system [on a spreadsheet] adding in an extra code to determine who to offer Near Me to....Categorising who needs to be seen soon, and of those who needs to be seen as soon as possible."

- Lucy, Dentist

Accessing clinical information

Staff also faced disruption to logistical workflows involved in requesting and accessing tests (e.g. bloods) which would have previously been obtained at the clinic or spoke sites. Again this required new ways of coordinating work and sharing data across organisational boundaries, as well as providing self-monitoring equipment to patients to conduct some tests themselves over video. While these have offered as an interim workaround, there are growing concerns about the dependability and sustainability of these practices.

"We are providing people with oximeters...Pulse oximeters are not the most accurate – there was a big debate about which ones to use. We had discussions around use of high-spec. but then decided – the devices are not used in isolation. They are used while on video, and we are looking at patient, their colour and breathing, instructing them on how to use. So we decided to go with middle range cost. And this has now been approved by procurement – so these will get sent out – for single patient use."

- Nicole, Respiratory physiotherapist

The oximeter¹¹ example raises complex questions about the role of pulse oximetry in remote monitoring of patients with both acute and post-acute COVID-19, a subject on which there is much ongoing research. In this case, we use it as an example of a much wider issue: the transfer of the work of testing and monitoring from the clinic to the patient's home, with video supervision where needed. As the quote above illustrates, such a shift raises complex questions about quality control, technological exclusion (not everyone can learn to use an oximeter) and how the test or technology result is conveyed to the clinician and entered on the record. Even if (as in this case) the technology is simple, dependable and freestanding, the system into which it must fit is relatively complex.

Appointment management

Rapid rollout has meant a significant impact on the administrative structures supporting Near Me appointments. In particular, the administrative resources and mechanisms for

¹¹ A pulse oximeter is a small device placed on the finger to measure oxygen in the blood

enabling patient entry into the virtual waiting area were stretched, as outpatient teams faced growing numbers of virtual waiting areas alongside a high volume of patients entering virtually. Clinicians frequently reported problems locating patients who had entered or been transferred to the wrong waiting area.

“I had one clinic when no one turned up because they were all in the wrong waiting room.... I phoned them up to say you have an appointment to see me and they said, yeah I’m in the waiting room.... I don’t know whether the patient was sent the wrong letter, and put in the wrong waiting room.... It is a whole new learning process for the admin teams.”

- Tom, paediatric consultant

Hence, a continued quality improvement approach for ongoing monitoring and knowledge sharing was needed to adapt and respond to the evolving and unanticipated consequences for work routines. The national scale-up programme helped establish the local infrastructure, local tacit (know how) knowledge, service readiness and positive attitudes to hit the ground running in scaling up video consultations; albeit more within the hospital and other community service settings than general practice. However, successful reorganisation of workflows and routines demanded strong leadership, good internal communication, and effective rechanneling of slack (available) resources to adapt and respond quickly to unanticipated consequences.

3.3.6 Wider contextual issues

As described in the Background section, there had been long-established strategic drivers for introducing Near Me in Scotland, with strong national policy support for such systems to reduce the human, financial and environmental burden of travel. Since 2016 the TEC programme has played a key role in supporting technical and human resource needed to introduce and support the new service model, and facilitated inter-organisation learning and leveraging national-level resources for support (e.g. the national VC support team).

Clearly the COVID-19 pandemic, and the national response to containing the virus, has meant a seismic shift, in which the use of Near Me was mandated across NHS organisations. But these wider system conditions have played a key role in realising the rapid pace of scale-up; through which there has been a reciprocal effect of further strengthening of inter-organisational networks, policy support and the national profile of Near Me. Video consulting now forms a key pillar within the national remobilisation strategy, and the strong Near Me branding is further expanding and aligning with other technology-supported care initiatives.

As highlighted in the previous evaluation, ongoing infrastructural developments to enhance internet and mobile phone connectivity across rural and remote regions have not yet had full impact (e.g. ‘Reaching Out 100%’ infrastructure initiative and the 4G Infill programme). However, recent events also reveal significant infrastructural challenges in other areas, which have a bearing on equity of access to care services. Notably, there was great variation in the internet and mobile connectivity within care homes, with nearly half facing limited connectivity due to geography, local investment and building structures.

Finally, participants in the island and rural boards drew attention to the capacity limitations in supporting the 'hub-spoke' (dyadic/triadic) model and implications of a rapid increase in use, especially as service remobilise in the 'new normal'. While these models are important for extending clinical scope (e.g. physical examinations, medical tests) and addressing patient access issues (e.g. connectivity, privacy), they require additional resource for various kinds of double-handling (e.g. appointments needed to be made, rooms booked and staff members made available, at two sites). Effective cross-board communication and collaboration will be key going forward, in order to strategically plan and resource this model when numbers increase, as well as effective and coordinated efforts to support the hub-home model (between boards) when clinically appropriate.

4. Discussion

4.1 Summary of findings

This rapid evaluation has identified a number of key findings.

First, and impressively, in many though not all settings, Scotland's national-level groundwork and strategic planning around video consulting between 2018 and early 2020 created the technical infrastructure, service readiness and positive attitudes which allowed services to hit the ground running and transform, at pace and scale, to a remote-first mode of operating as the pandemic took hold. Between March and June 2020 there was a 50-fold increase in video consultations.

Second, video took off in hospital and other community care services much more than in GP settings, mainly because a) in many cases GPs felt that video was not needed because phone would suffice for most appointments conducted remotely, and b) GP consultations were more varied and so there were logistical challenges aligning video consultations with appointment booking workflows, when telephone did not suffice.

Third, the shift to video occurred most smoothly in services that had already been doing some video consultations, where local enthusiasts could spread their learning and champion the approach, and where a reduction in demand (due to COVID-related service restrictions) created some space for thinking, planning and trying out new approaches.

Fourth, not all clinical conditions or patient groups could be accommodated using the video medium, which raises important issues around how the needs of these groups might be met.

Fifth, our data showed that patients from disadvantaged groups or areas had particular barriers to benefiting from video consultations, including lack of internet access, low bandwidth, inability to afford the data connection, and language barriers.

Sixth, technical performance and dependability is a concern among clinicians and has a significant bearing on the patient experience and clinical quality of the consultation. While the technology application is generally dependable and easy to use, wider technical issues (including connectivity and hardware) must also be in place. Clinicians talked about a need for effective reviews regarding the appropriateness of video for individual patients, IT support (for patient set-up and troubleshooting) and the option of video appointments at

spoke facilities within the community to minimise risk of technical issues at patients' homes.

Seventh, the main unintended consequences of rapid scale-up (alongside wider reorganisation activities) included a short (quickly resolved) period of technology performance issues during the early phase, difficulties managing patient entry into the correct waiting areas, and limited availability/assurances of technically-equipped spaces. The impact of these was alleviated through structured knowledge transfer pathways at both organisational and national levels.

Finally, while the pandemic has caused significant disruption to staff and patients, it has also demonstrated an effective capacity for intra- and inter-organisational collaboration. An important aspect of the national response has been the ongoing communication and knowledge-sharing between all elements of the innovation process, maintained by the TEC programme leads. The '12 week scale-up' initiative was grounded in years of experience of embedding Near Me within routine clinical practices, structured to promote a quality improvement mindset and transfer knowledge on the key implementation principles (i.e. the 3-step approach, described on p. 25) and the formation of community networks for collective sense-making and shared learning (webinars, case stories, web resources).

4.2 Opportunities going forward

The pandemic has dramatically altered the 'relative advantage' (benefits over existing solutions) [20] for video consulting because of infection control pressures (and indeed public health requirements to quarantine and shield). As the pandemic wanes, the relative advantage of video compared to face to face will undoubtedly change. However, there was broad consensus among interviewees that the pandemic has meant a long-term shift regarding the role and risk-benefit balance for video consulting in the 'new normal'. Going forward, it is important to harness and further support these achievements, while acknowledging concerns about quality, safety and sustainability.

As noted above, the pandemic has seen a significant expansion in the use of Near Me across a range of clinical contexts. These changes have been most prominent in areas where little or no formal physical examination is required, but where non-verbal cues and facial expressions are important (e.g. psychiatry, psychology, mental health, respiratory, speech and language therapy and paediatrics). Practitioners' capacity to try-out the technology and adapt clinical practices have been afforded by attributes of the innovation (e.g. because there was a national licence, it was possible for a clinician to try out the medium without committing themselves), as well as slack (available) resources in some settings (e.g. the lull in routine activity). Furthermore, we have seen extended use of other technologies (such as telephone, sending digital photos), which were deemed most practical or clinically appropriate in some situations. Going forward, it will be necessary to understand the extent to which these new practices that have been introduced for infection control during the pandemic are fit-for-purpose in the long term, and how they can be made better and safer.

With a view of containing COVID-19, emphasis on the value of Near Me has shifted from convenience and efficiency (e.g. reducing travel, saving time) to safety and risk management (i.e. reducing risk of infection). Video consulting now forms a key pillar in the

healthcare remobilisation plans and will form business as usual in the foreseeable future. But there will still be value in a system-level approach to evaluating the societal and economic impact. The advantages of reduced travel, service capacity and flexible working will remain influential factors in terms of longer-term service redesign. In addition, questions remain regarding long term sustainability for different Near Me models as activity increases (e.g. managing 'spoke' sites, providing support at home), and the cost-benefits of different modes of remote interaction for different clinical contexts (e.g. video, telephone, photo, email).

The analysis highlights a number of unintended consequences that may have been difficult to fully address in a crisis, but should become a focus longer term. This includes problems of digital inequality, related to IT literacy and skills training, financial hardship, poor housing, weak social networks, cognitive and physical capabilities and internet/mobile connectivity. It will require a nationwide effort to improve digital skills and confidence, establish community-based facilities, assist set-up at home and ensure adequate access to equipment and broadband/mobile data. But it is important to appreciate that upskilling and supporting the population in digital access will never fully overcome the structural and social-cultural barriers to access, and so the option of face to face appointments or visits for vulnerable and excluded groups will continue to be needed.

Other unintended consequences to be studied more closely relate to the impact on the healthcare workforce. Remote consulting has been associated with greater cognitive load on staff and loss of personal care for patients, impacting upon professional identity, social and mental wellbeing. Concerns have also been raised for practitioners in training to observe experienced practitioners and gain the tacit knowledge that enables them to manage clinical risk appropriately. The rapid scale-up of Near Me has brought new possibilities and benefits of working remotely. But it should not be assumed that what has been necessary in a crisis represents what clinicians want or need beyond it. It will therefore, be important to engage with clinicians and healthcare staff more widely to identify potential negative impacts and ways to mitigate these.

Analysis across the different organisations revealed that scale-up was most extensive in hospital and other community care settings, where much groundwork for implementation had been done prior to the pandemic. These settings were characterised by a significant presence of clinical champions, pre-existing technical and material infrastructure, and direct links to IT support. GP services tended to default to telephone partly due to limited access to relevant technology (e.g. not all consultations rooms could be technically set up), logistical challenges to aligning video with GP workflows, and because telephone was sufficient for most remote consultations. Further work is needed to understand the role of video in these settings, improve local IT infrastructures and helpdesk support channels, and align video with administrative workflows. Continued efforts should seek to cultivate a community of practice (groups of practitioners who share an interest in something and are trying to get better at it) for shared learning, alongside an iterative and co-adaptive approach to embedding Near Me within local organisational routines and systems; a gradual and resource-intensive approach that was not possible in a crisis, but may lend well longer term.

At a national level, the TEC programme team had taken the formal role in disseminating information and supporting well-planned and funded quality improvement initiatives prior to the pandemic. It is no accident that Scotland's relative success in rapidly scaling-up video consultations during COVID-19 (compared to other countries during the same time period) follows a concerted capacity-building effort, not just in relation to technology implementation, but also more broadly in relation to "bottom-up" service improvement with a focus on buy-in. Going forward, it will be important to maintain this judicious balance between top-down change with firm goals and milestones, and bottom-up, more organic change that is more responsive and contingent. To this end, attention should be paid to the overall narrative or "organising vision" (clear and consistent vision among stakeholders as to what will be achieved) within which the change is framed, informed by ongoing inter-stakeholder dialogue, which brings different priorities and accountabilities.

4.3 Recommendations for ongoing scale-up and sustainability

In our previous evaluation of the Near Me programme up to March 2020, we proposed ten recommendations to support the scale-up and sustainability of the service model. These were subsequently built into the Near Me work plan. Drawing on the findings from the current evaluation we have reviewed progress on these previous recommendations and provided four additional recommendations. These are detailed below.

Recommendation 1: For each clinical specialty, produce national guidance offering 'rules of thumb' for what is generally safe for video consultations

During the pandemic, there has been a strong incentive to use Near Me as it is perceived as better than the face to face alternatives due to infection control measures. As we previously found, some but not all conditions are appropriately managed through a remote video consultation. However, there has been an extended use of Near Me by a wider range of specialities within the hub-home model. These mainly included consultations involving little or no formal physical examination where non-verbal cues and facial expressions are important (e.g. psychiatry, psychology, mental health, respiratory, speech and language therapy, paediatric care). Significant progress has been made in developing guidance across different specialities, including, psychiatry, psychological therapies, maternity, pharmacy and paediatrics¹².

It should not be assumed that guidance alone will drive adoption. Other knowledge transfer mechanisms for shared learning and peer support need to be maintained (e.g. through live and recorded webinars), which should be continually drawn on to inform best practice.

Recommendation 2: Basic training and multiple try-out opportunities for staff and patients

The development and dissemination of patient facing materials and staff training resources were underway prior to the pandemic. Online patient information, video resources and test call function are available, which patients can be directed to via their care provider website

¹² Clinical speciality guidance documents available on the TEC website: <https://tec.scot/nearme/clinical-specialty-guidance>

and information leaflets¹³. The rapid scale-up initiative also expanded guidance for staff on the setting up and running of video appointments across different care settings (across primary care, outpatients, care homes and prison services), as well as a series of practical webinars and virtual training sessions. This has provided a rich set of legacy learning materials hosted on the TEC website and NES portal. Because there was a national licence, it was possible for a clinician to try out the medium without committing themselves, and explore how to adapt and extend the innovation to better embed it locally.

It will be important to maintain these opportunities for shared learning, support and testing as staff seek to remobilise and redesign services.

Recommendation 3: Develop and disseminate system-level analysis of the growing evidence about significant financial savings from Near Me

The pandemic has meant a significant shift regarding the financial case for Near Me. Remote consulting is now deemed to be part of business as usual, when clinically appropriate, and forms a key strategic pillar for service recovery in the new normal.

While Near Me will continue to be mainstreamed in the foreseeable future, it will be important to undertake a system-level analysis that accounts for the sustainability of Near Me as part of wider service redesign. This should incorporate the (often hidden) infrastructural requirements for remote consulting and the cost-benefit comparisons of different Near Me models (home-hub, hub-spoke), as well as other (synchronous and asynchronous) communication channels.

Recommendation 4: Identify and address clinical and care governance issues

Prior to the pandemic, some clinicians were opposed to video consultations because they felt it threatened the quality and safety of the clinical consultation. Others were supportive in principle but saw no immediate clinical need to set up, and wanted to observe the outcomes of other services within their specialty.

As the pandemic recedes, professional and regulatory bodies will have an important role to play in revisiting traditional definitions of good clinical practice in health and social care, building on the lessons learnt during the pandemic. Progress has been made in gaining RCGP endorsement of the Near Me guidance for GP practices¹⁴ but more work needs to be done across different specialities.

Recommendation 5: Working with professional networks, disseminate stories of up-and-running services across GP, hospital and other community specialities

There was a strong positive narrative around the technology-supported change during the pandemic, communicated by respected leaders and clinical champions and supported by case studies and progress report via the TEC website. The national profile and inter-organisational networks around the Near Me programme has further strengthened over the

¹³ Patient information and resources can be found at: <https://www.nearme.scot>

¹⁴ Improving the use of Near Me video consulting in GP practices: <https://tec.scot/wp-content/uploads/2020/09/Near-Me-Primary-Care-Guidance.pdf>

course of the pandemic, including close partnership with the HIS and other national bodies to engage services and disseminate outputs.

Efforts to support inter-stakeholder dialogue should focus on new and emerging ways of working where there are conflicting perspectives, priorities and accountabilities associated with quality, safety and governance (e.g. group clinics, mental health, general practice) and wide gaps in the uptake and use of Near Me between health boards and within specialities.

Recommendation 6: Communicate the “gaining a service” narrative

In the previous evaluation we found that some staff in remote community hospitals were concerned that the introduction of video clinics meant ‘losing’ a consultant-led service (e.g. monthly in-person visits would cease), although others in the same settings depicted the change as ‘gaining a service’ (access to certain specialists).

To some extent, these concerns have been overtaken by challenges of the pandemic. However, it will be important to remain aware of these differing perspectives and workforce implications during the remobilisation phase, as new service models and remote working practices take form.

Recommendation 7: Support local champions

The pandemic saw the importance of organisational learning through local clinical ‘champions’ (who extol the benefits of an innovation to others, including at board level where decisions are made).

It is important to continue supporting these individuals, as services look to incorporate remote consulting practices within long-term service redesign.

Recommendation 8: Provide set-up support for ready-to-roll sites, paying careful attention to routines, IT support and material infrastructure

The pandemic has seen a significant increase in the levels of support to accelerate clinic set-up through the rechannelling of local resources and the ‘three step’ guiding framework to implementation.

Some key infrastructural issues still need to be fully worked out, including logistics and sustainability of the ‘spoke’ sites, management of physical hospital/office space, IT infrastructure and helpdesk support mechanisms in some localities.

Recommendation 9: Maintaining a Quality Improvement Collaborative to maximise inter-site learning

Significant progress had already been made prior to the pandemic with regard to establishing structured approaches to identifying, training and bringing together quality improvement leads, which subsequently became a key facilitating factor for rapid scale-up during the pandemic.

Recent events reveal the importance of a system-level, quality improvement approach to ensuring ongoing adaptation and organisational resilience. It will be important to

proactively maintain and expand on existing communities of practices for ongoing monitoring and improvement.

Recommendation 10: Strengthening the national branding

Efforts in late 2019 to get a single, patient-focused national brand (“Near Me”) accepted likely contributed to the success of rapid scale-up, providing a consistent and familiar message to patients and staff.

An important challenge will be managing and maintaining the scope of this national brand as service models evolve across care settings (e.g. group clinics, virtual visiting, social care), potentially involving other platforms, technology enabled care initiatives and associated platforms.

We have also added four new recommendations, based on research undertaken during the pandemic.

Recommendation 11: Review and address digital inequalities

Review service use and develop digitally-enabled care pathways to increase inclusion, ensuring all patients receive the same level of access and care regardless of their digital preferences, access to technology and IT literacy. This will require a multi-faceted approach through joined-up government working, to address issues such as financial hardship, communication/language barriers, physical/sensory/cognitive capabilities and IT literacy/confidence. Proposed strategies include community-based facilities to access private spaces with adequate technology/connectivity, digital skills training for patients and staff, free public wifi/mobile connectivity and public awareness-raising. Opportunities to assess and support patient set-up/access should also be incorporated in the administrative pathways (e.g. when booking appointments).

Recommendation 12: Engage and support GP services

Further work is needed to cultivate communities of practice across GP settings for collective ‘sense-making’ (asking questions, exchanging different viewpoints, reflecting collectively) and shared learning. Investment is also needed in local IT infrastructure and helpdesk support structures, in order to embed video appointments within the administrative routines and workflows.

Recommendation 13: Supporting set-up in care homes

Targeted support should be provided to care home organisations and their residents. A high degree of variation across care homes (in terms of technical infrastructures, in-house technical skills, and availability of the remote option from local healthcare providers) calls for close collaborative working across sectors to help care home managers and staff devise workable arrangements. Attention will need to be paid to the diverse and unique capabilities (and preferences) of the service users. This work should be aligned with other streams of work to improve digital access and social connectivity within these settings.

Near Me and the pilot vCreate secure video messaging initiative should collaborate in order to benefit from shared learning and joined-up working.

Recommendation 14: Monitor the impact of remote consulting on the welfare of the health and care workforce

It is important to consider how remote consulting impacts professional identity, mental health and training. The pandemic has brought new possibilities and benefits of working remotely with patients and colleagues. But it is also important to engage with clinicians and healthcare staff more widely to identify potential negative impacts and opportunities to mitigate these.

4.4 Limitations and future research

This study provides a socio-technical (people and technology) perspective that links different levels of data collection and analysis across the NASSS dimensions and illuminates key factors that contributed to rapid scale-up. The context of this study presented a number of challenges. This was a rapid evaluation conducted at the height of the pandemic. Interviews were conducted remotely (via phone/video) and many participants were also dealing with and adapting to significant change within their working environments. But with the support of project managers and service staff (facilitating recruitment, participating in interviews/focus groups and providing supporting documents), as well as the TEC team (providing activity data, surveys and reports), the research team were able to build a rich picture of the people's perspectives, experiences and challenges to rapid scale-up in this complex and evolving setting.

It is important to acknowledge that the interviews were conducted within a sub-set of health boards and services, and during a fixed period during the pandemic. Whilst sites were selected to include variations in geography (urban, rural, islands), clinical context, local (NHS territorial health boards) and adoption progress, the findings should not be seen as an exhaustive account. However, the key themes and lessons highlighted in the analysis should be relevant and informative to the other sites and the programme as a whole.

The activity data was captured through the Near Me (Attend Anywhere) platform, which provided useful information on the uptake and use of the system. However, there are limitations to relying on this frequency data alone. For example, it cannot provide some of the key service level outcomes, such as video activity as a proportion of all consultations. Given the important role of other technology/systems to support remote consulting (e.g. phone), it would be useful to gain further insight into the relative proportion of appointment types across services. The recording and extraction of such data would require significant time and resource, especially as services had to rapidly restructure administration systems. This level of data would, however, be beneficial for ongoing formative evaluation of remote consulting practices, as services seek to sustain this service model beyond the pandemic.

Patient recruitment for interviews was difficult due to the remote nature of this study, especially for digitally excluded groups. However, the TEC team's public and clinician engagement work employed multiple approaches to access a diverse sample, including online, telephone and written surveys, and proactive engagement with a range of groups. The majority of survey responses were captured via online surveys, which raises potential

for sample bias. However, efforts were also made to access participants who may not be able (or willing) to participate online (e.g. via phone/written questionnaires), and to enrol hard to reach groups. Therefore, it has provided a unique and highly informative data set, which has been instrumental for informing our overall analysis. It also illuminates the need to further explore the needs of disadvantaged groups in more detail, and find effective ways of engaging them in the ongoing co-design of Near Me service models.

The post-consultation survey data provided a unique insight into the patient and staff perspective immediately after the consultation, which was instrumental in providing broader perspectives on user experience as part of the mixed-methods approach. As with any self-reporting method, it relies on the willingness of participants to respond, which presents potential sample bias. In this particular study, our analysis was based on a large patient sample. But it is important to note that these were reflective of a sub-set of patients using the technology (response rate 15%). There were some limitations with regard to the type of data. For example, information governance requirements meant that personal level data (basic demographics) could not be captured. Patient administration systems may therefore, play another important role in understanding and addressing potential barriers and inequalities across different groups.

Future research needs to focus on how healthcare organisations move forward to the 'new normal'. While much transformation has happened in response to the pandemic, the challenge will be to strategically build on these developments. Key areas to address in this regard include quality of care and patient safety, (including appropriateness of video, conducting physical examinations), health inequalities (including digital access, financial hardship and language/communication), infrastructure (including IT and material aspects) and workforce implications (including staff supervision, training, social and mental wellbeing).

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This evaluation would not have been possible without the cooperation of a number of people and organisations. Staff across the study sites gave freely of their time to support and engage in this study. Local project leads within participating Health Boards provided essential support, introducing researchers to clinical service teams and other relevant members of the organisation. Importantly, a number of senior staff from the Scottish Government and the TEC programme worked to guide and inform the research team and supported the principle of an independent evaluation. They were also available to the research team when needed to facilitate research site access and data collection, and kept us informed of ongoing developments relevant to the Near Me programme.

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Appendices

Appendix A: Near Me activity across Health Boards

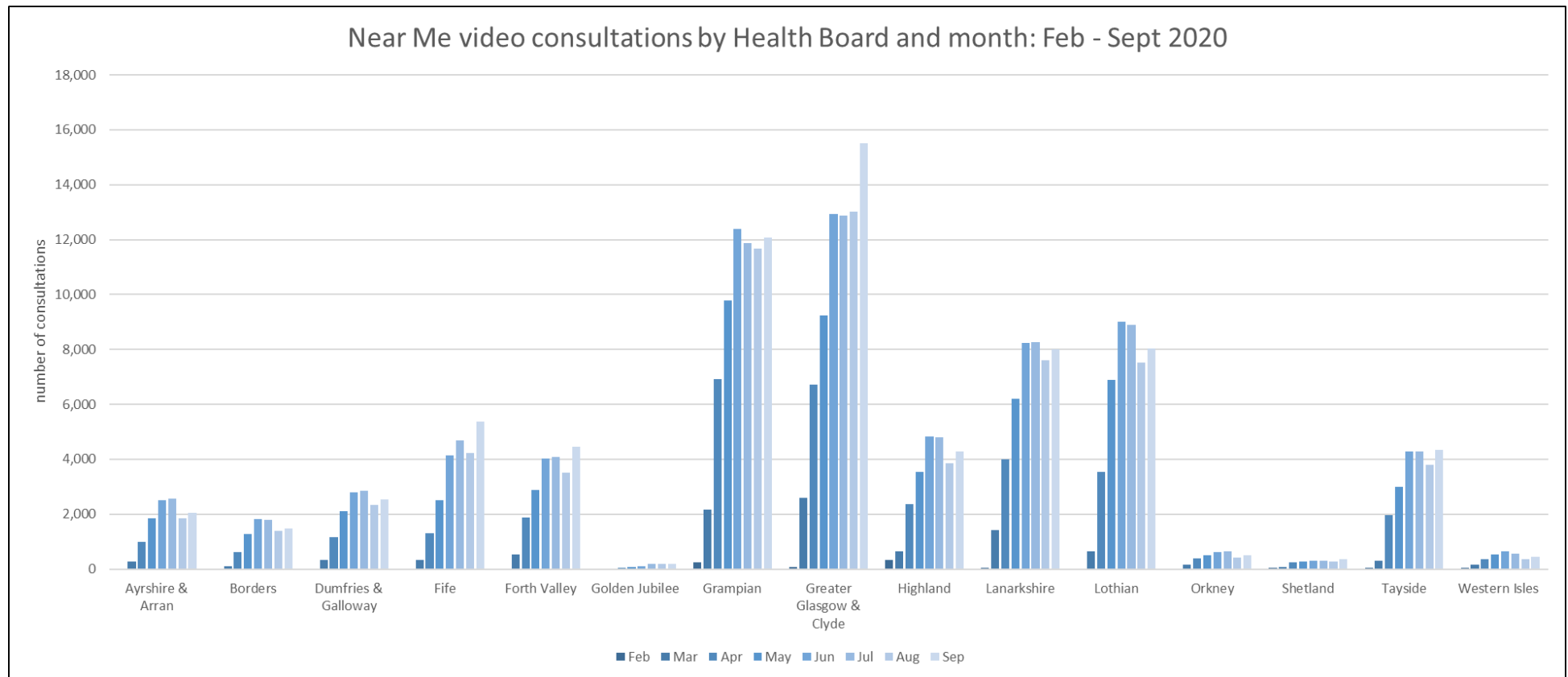
Appendix A1: Near Me activity by month and setting, Feb-Sep 2020

Month 2020	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Hospital / Other community								
Ayrshire & Arran	26	94	573	1364	1993	1957	1442	1632
Borders	8	75	437	1079	1622	1698	1355	1441
Dumfries & Galloway	27	205	795	1804	2543	2652	2124	2294
Fife	3	133	734	1679	3245	3848	3544	4564
Forth Valley	26	318	1340	2395	3534	3694	3156	3861
Golden Jubilee	4	27	59	71	108	177	186	196
Grampian	214	1284	4497	6869	9393	9154	8932	9696
Greater Glasgow & Clyde	87	1227	3724	6904	10981	11331	11527	14053
Highland	338	471	1564	2793	3953	4042	3183	3459
Lanarkshire	59	336	1625	3715	5795	6064	5661	6265
Lothian	7	35	1244	3828	6341	6486	5480	6062
Orkney	11	87	233	353	489	496	353	400
Shetland	31	34	207	247	266	261	235	323
Tayside	48	204	1492	2452	3813	3853	3446	3927
Western Isles	33	151	311	512	626	510	339	442
Total Hospital / Other Community	922	4681	18835	36065	54702	56223	50963	58615
General Practice								
Ayrshire & Arran	5	168	412	486	518	606	422	412
Borders	0	36	170	203	193	103	40	26
Dumfries & Galloway	1	122	357	301	259	192	214	256
Fife	0	205	579	841	901	843	683	808
Forth Valley	1	209	528	477	495	395	342	588
Grampian	21	895	2417	2911	2990	2726	2752	2385
Greater Glasgow & Clyde	0	1382	2998	2335	1937	1544	1477	1457
Highland	5	176	814	734	886	744	659	829
Lanarkshire	0	1082	2375	2483	2449	2198	1934	1735
Lothian	0	624	2301	3061	2668	2407	2030	1966
Orkney	0	62	148	165	140	141	58	114
Shetland	5	34	53	42	29	30	28	32
Tayside	0	95	474	531	460	442	354	410
Western Isles	0	12	59	32	25	41	17	5

Month 2020	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Total General Practice	38	5,102	13,685	14,602	13,950	12,412	11,010	11,023
Total overall activity*	960	9,783	32,520	50,667	68,652	68,635	61,973	69,638

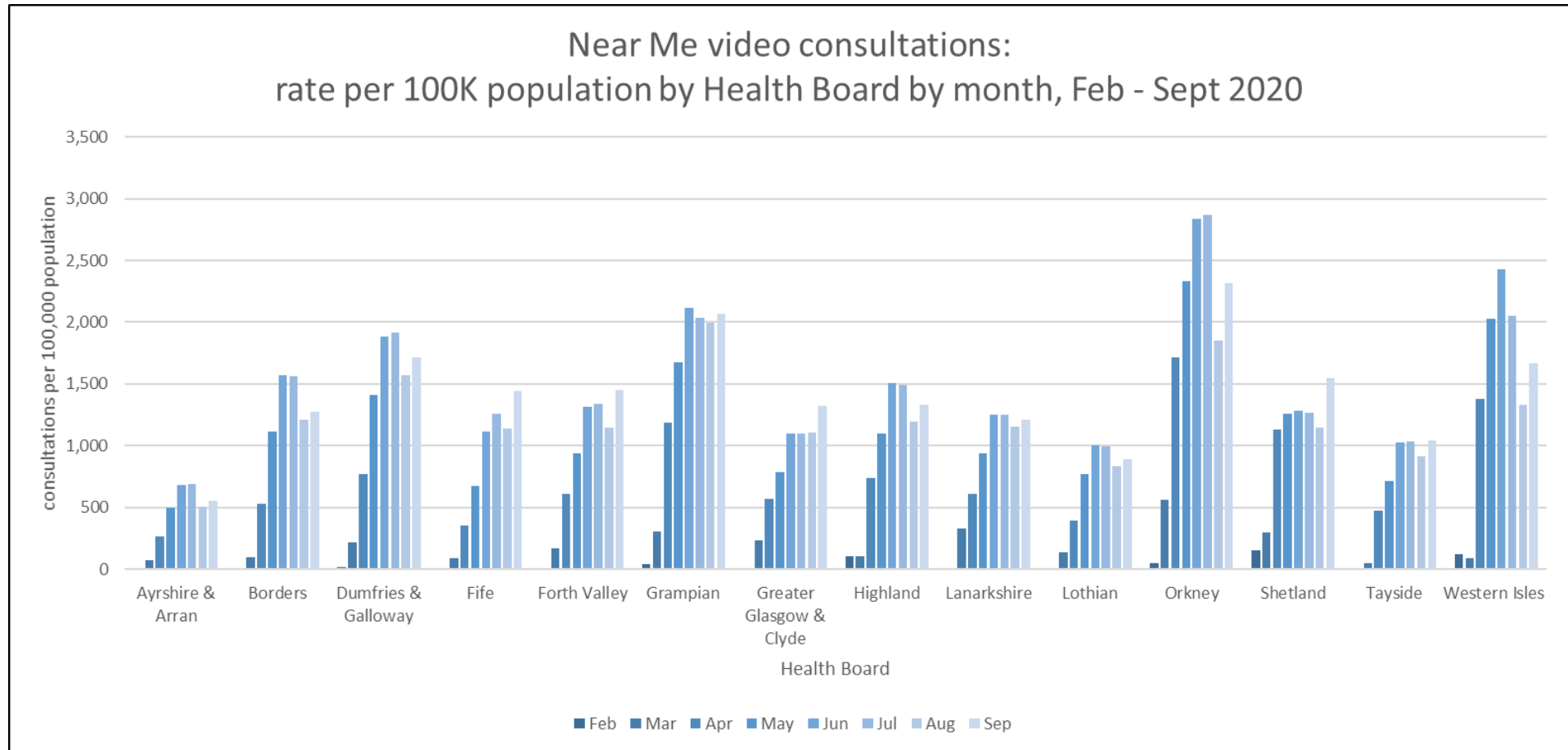
* Excludes 3rd sector organisations and other administrative systems (e.g. virtual reception desk, demos)

Appendix A2: Near Me activity by month and Health Board, Feb – Sept 2020



Appendix B: Near Me activity in relation to Health Board populations

Appendix B1: Near Me consultations per 100,000 population: by month and Health Board: Feb - Sept 2020



Appendix C: Near Me activity by specialty

Appendix C1: Near Me activity across specialities: Feb-Sep 2020

Clinical Speciality*	Number of Video Consultations
Psychiatry/Psychology	69,834
Community Mental Health	25,042
Physiotherapy	22,909
Paediatrics	20,354
Speech and Language Therapy	14,241
Community nursing and health visiting	10,570
Psychotherapy/counselling	9,242
Trauma and orthopaedic surgery	6,492
Endocrinology & Diabetes	4,899
Occupational therapy	4,689
Oncology	4,577
Neurology	4,543
Dermatology	4,259
Dietetics	4,191
Dental	4,195
Respiratory	3,847
Obstetrics and Gynaecology	3,169
Midwifery	3,069
Rehabilitation medicine	2,877
Ophthalmology	2,352
Gastroenterology	2,846
Infectious diseases	2,720
Learning disability	2,543
General surgery	2,313
Advice services	2,177
Occupational medicine	2,083
Ear, Nose & Throat	1,863
Chronic pain	1,813
Rheumatology	1,539
Prosthetic/Orthotics	1,792
Haematology	1,460
Chiropody/Podiatry	1,406
Sexual & Reproductive health	1,190
Urology	1,149
Clinical Genetics	1,075
Palliative Medicine	962
Accident and Emergency	899
Cardiology	723
Addiction services	651
Geriatric medicine	542
Clinical Radiology	231
Intensive Care Medicine	738
Pharmacy	277

Clinical Speciality*	Number of Video Consultations
Social work	409
Renal medicine	453
Neurosurgery	363
Public health	354
Sleep therapy	252
Anaesthetics	203
Cardiothoracic surgery	154
Chemical pathology	16
Total	260,547**

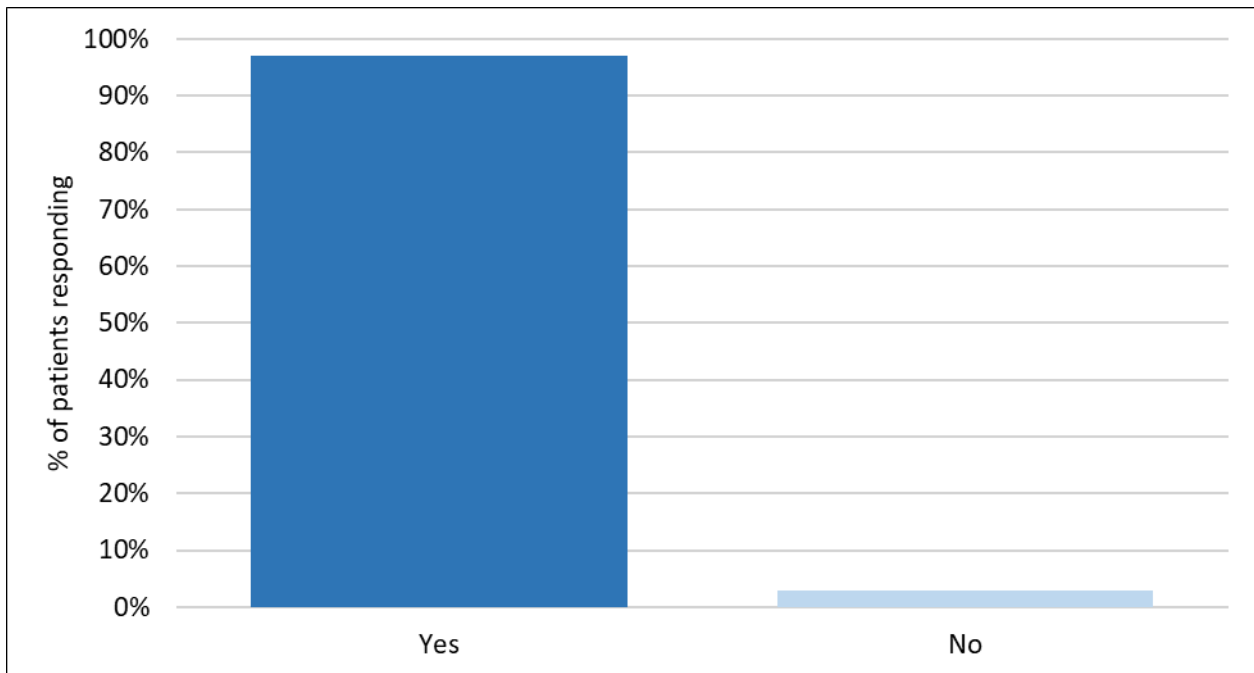
* Speciality is the grouping of services by clinical area. Health Boards may have more than one service within a particular speciality. Some specialities are delivered in both hospitals and community settings.

** Excludes activity for services that conducted less than five consultations during the data collection period, general practice and where it was not possible to determine clinical context of the consultation.

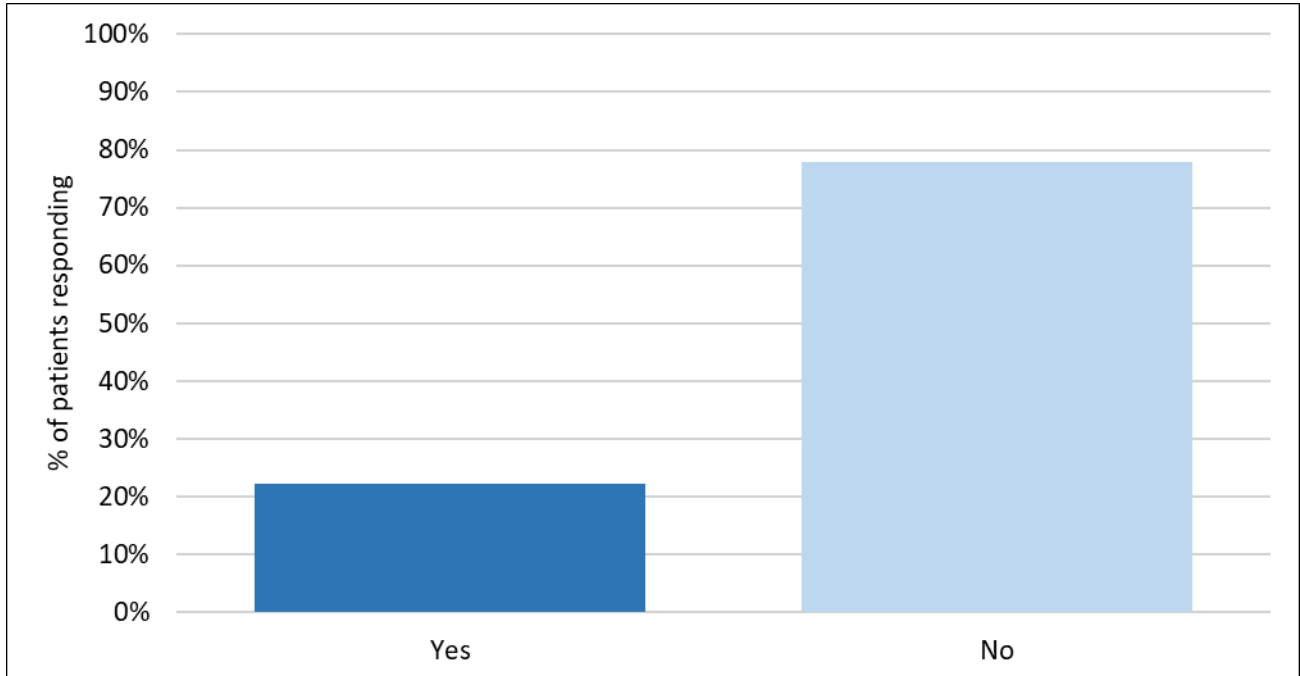
Appendix D: Near Me post-consultation surveys

Appendix D1: Patient surveys

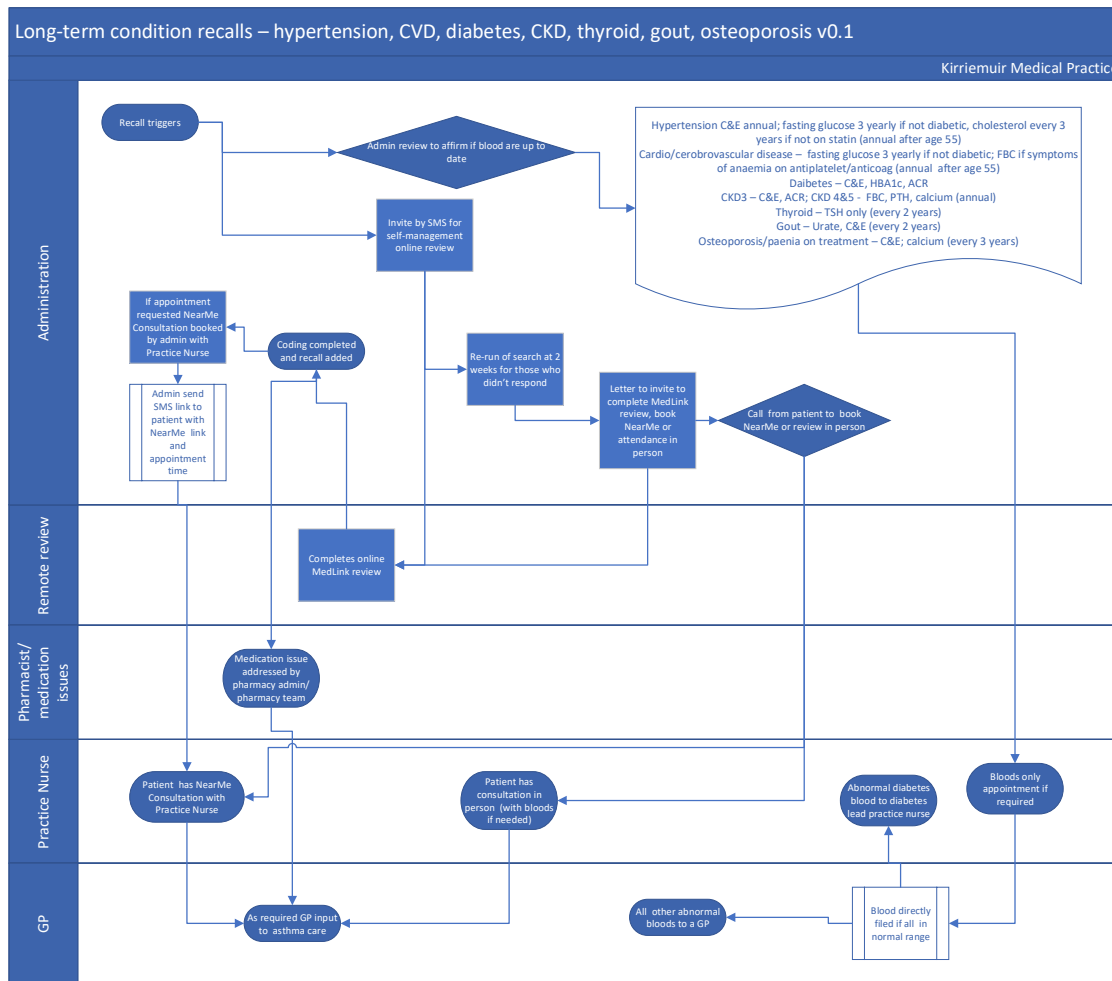
Would you use video consulting again? (N=18714)



Did you have any technical problems? (N = 18817)



Appendix E: Example of process map of a routine long term condition review in general practice (reproduced with permission of Kirriemuir Medical Practice)





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