Date: 12th October 2020

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Purpose: To provide an objective and subjective review of both Attend Anywhere and Microsoft Teams as video consulting platforms and to provide recommendations to the Trust based on the information gathered to support the ongoing roll out and establishment of virtual clinics.

Please note this document provides an evaluation with recommendations and does not serve as a business case.

Executive Summary:

The NHS Long-term plan and the ICP plan aim to reduce face to face Outpatient appointments. COVID-19 led to huge increases in non-face to face or virtual appointments at Hampshire Hospitals NHS Foundation Trust reaching up to 85% of Outpatient activity in March 2020. Most of these appointments were completed via telephone. As clinicians and patients increasingly understand the benefits of video consulting (outlined in this report), the demand for video appointments is increasing. Video consultations can also be used to conduct patient group sessions.

An evaluation project has been completed to compare two video consultation platforms Microsoft Teams and Attend Anywhere across 19 different categories. Both platforms are also being continually updated and improved therefore the capabilities of each are likely to increase over time. This report recommends that our Trust continue to support both platforms due to the differing needs and preferences of different services, and in order to have a backup platform as part of a business continuity plan.

The results of this comparison show that currently, Attend Anywhere is the most suitable platform for 1:1 consultations, and Microsoft Teams is the most suitable platform for group consultations.

In order to embed video consultations as business as usual in our Outpatient service and to continue to meet the local and national targets for virtual consultations several requirements need to be met across 5 different categories.

- Trust Strategy- A clear, standardised executive message is required to establish that Non-F2F appointments should always be offered in the first instance (business as usual), unless there is a clear clinical indication not to do so. A coordinated and consistent internal and external communications strategy is also recommended.
- Support – IT Support for video consultations is required for both staff and patients.
- System Management – Virtual clinics to be considered as part of future new hospital build plans.
- Training & Development – A standardised set of Internal Professional Standards, Process Flow Maps and Standard Operating Procedures for booking and conducting video consultations is needed alongside training for staff on technical and non-technical aspects of video consultations
- Finance – Attend Anywhere is currently free. A Business Case may be required if Attend Anywhere requires funding.

Furthermore, the following roles need to be assigned.

- Subject Matter Expert for Attend Anywhere and MS Teams
- Asset owner for Attend Anywhere
- Contract Manager for Attend Anywhere

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1 Purpose

The purpose of this paper is to:

- Provide an overview of the national and local shift from face to face Outpatient appointments to virtual or non-face to face appointments.
- Explain the capabilities and drawbacks of both the video platforms we have been trialling at HHFT.
- Provide subjective feedback from both staff and patients who have used both video platforms.
- Provide recommendations that will enable video consultations to be embedded in the Trust in the most robust and effective way, following best practice guidance.

2 Background

The 2019 NHS Long term plan states "We will... redesign services so that over the next five years patients will be able to avoid up to a third of face-to-face outpatient visits, removing the need for up to 30 million outpatient visits a year." [1]

An increase in virtual outpatient activity would also help the Trust to meet its environmental targets. The 'Climate change the implications for Hampshire Hospitals' paper of February 2020 which recommended that HHFT declare a Climate Emergency, stated that "Reducing our outpatient appointments by a third would significantly improve local air quality and save approx. 5,000 tCO2"[2]

Prior to COVID-19, the North and Mid Hants Integrated Care Partnership (ICP) aimed to increase non-face to face (non-F2F) appointments from 6% (39,784) in 19/20, to 7-8% of all outpatient activity for 20/21 (43,201 non-F2F appointments), with an aim to have non-F2F appointments represent 30% of all Outpatient activity by the end of 2024.

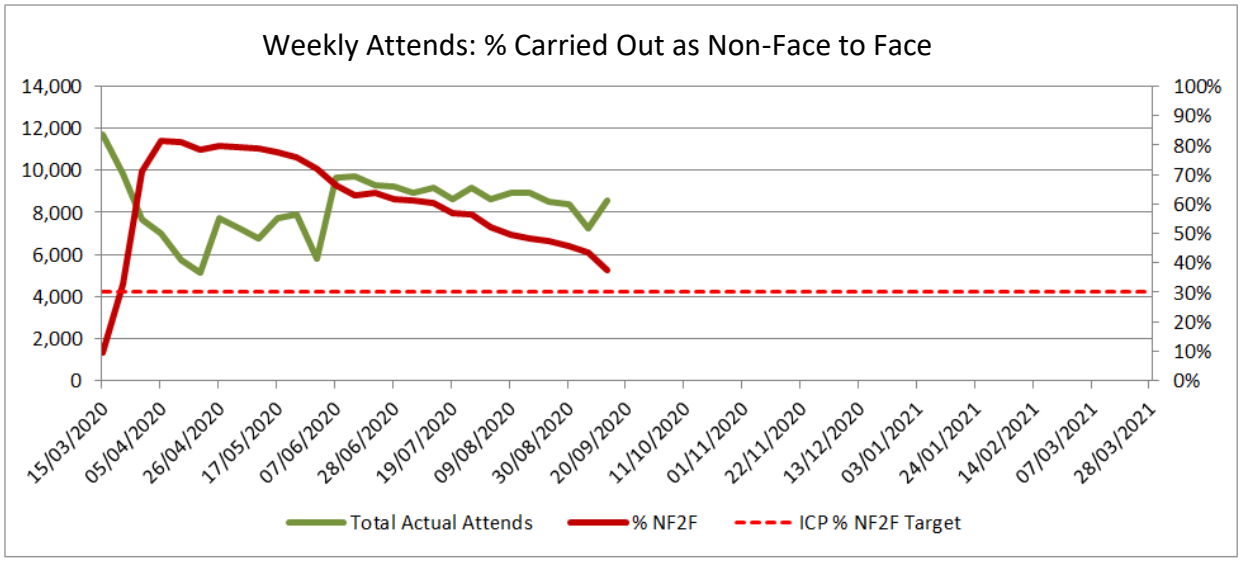
Due to COVID-19, from Monday 30th March, the ICP moved to a nationally recommended position of offering telephone or video consultations as the default option, only bringing in patients for a face to face consultation where absolutely necessary and where there is a clear clinical indication to do so (i.e. requires a physical examination or physical intervention). The 20/21 target for non-F2F Outpatient appointments was increased to 30%.

To support clinicians and administrative staff with these potential new ways of working, Standard Operating Procedures, Internal Professional Standards and Process Flow Maps outlining how to offer Outpatient appointments during COVID-19 were developed by the Transformation Team in conjunction with other appropriate colleagues. These documents provided guidance on booking and conducting Outpatient appointments, which included advice on virtual consultations, Information Governance during COVID-19, medication prescribing and administrative processes. These documents were distributed rapidly and on the ground support was given by the Transformation Team during its roll out.

As a result of the pandemic, overall outpatient activity reduced, whilst non-F2F numbers significantly increased (Figure 1). Put simply, the relative advantage of virtual consultations suddenly changed dramatically.[3] HHFT Outpatient appointment total DNA rate reduced from 6.1% for April 1st to July 31st 2019, to 4.9% for April 1st to July 31st 2020. The DNA rate for F2F appointments from April 1st to July 31st 2020 was 6.9% and the DNA rate for Non-F2F appointments for the same period was 3.9%. The shift of activity from face to face to non-F2F also highlighted a potential financial benefit. For example, based on non-face to face activity year to date for this financial year, a non-

cash releasing benefit of over £1.6m has been seen from 93,754 appointments being run virtually in the Trust rather than face to face. However, the ability to derive cash releasing benefits from virtual appointments has yet to be quantified or realised.

Figure 1: Percentage of weekly Outpatient attends carried out as Non-Face to Face (March – September 2020)



During the financial year of 19/20, around 6% of HHFT outpatient appointments were completed non-face to face (39,784), with less than 2% being completed via video. From April 1st to July 31st 2020, 93,754 non-F2F appointments were completed (68% of all activity); of which 775 of these were recorded as being completed via video (0.8% of all non F2F activity). Actual video consultation activity is likely to be higher; this is due to administrative challenges with Patient Centre and the National Electronic Referral system (eRS) where no dedicated video appointment type codes are available at present.

From April 1 2020 to August 1 2020 there were over 56,000 appointments cancelled by the hospital. The overall cancellation rate has increased from 25.3% for April 1 – August 1 2019, to 32.4% for the same period this year. Last year, 52% of cancellations were “by hospital”, for the same period this year 81% of cancellations were “by hospital”. It is possible that a proportion of these appointments could have been completed virtually rather than being cancelled. If the Trust continues to cancel appointments that could be offered virtually, this could create a bottleneck of activity which will put clinics under undue pressure (e.g. overbooking) and potentially compromise patient care.

It remains a clinical decision regarding which appointments can be completed non-F2F. Currently most non-F2F appointments are being completed via telephone (99%). However, there are many appointments that require, or would be much improved by the use of video consulting software. The generic benefits of offering virtual appointments, as well as video specific benefits, are outlined in Table 1 below.

Table 1: Benefits of virtual and video consultations

Benefit	Generic Virtual Benefit	Video Specific Benefit
• Ensures that patients continue to receive standard clinical care while reducing footfall of patients through the hospital building[4]	✓	
• Provides person-centred care and meets demand[5]	✓	✓
• Encourages the use of digital tools rather than paper for forms, assessments and feedback	✓	✓
• Enables clinicians and administrative staff to work from home	✓	
• Reduces carbon emissions and other environmental impacts[6]	✓	
• Reduces travel for clinicians and patients, and reduces parking issues for both. • Reduces the need for hospital transport • Reduce travel expense payments	✓	
• Reduces barriers to attending appointments for patients (e.g. child and pet care, time off work).	✓	
• Increases accessibility to appointments for patient with both physical and hidden disabilities	✓	
• Provides a more relaxed environment for patient consultations. HHFT patients have fed back they felt more relaxed being at home for their appointment.[7]	✓	
• Less physical space needed for waiting and consultation rooms	✓	
• Reduction in DNA rates.	✓	
• More patient ownership of the appointment, improving the balance of power[8]	✓	
• Potential financial benefits to the Trust	✓	
• Reduced appointment cost to patient (Time off work, travel, parking and child care costs)	✓	
• Clinician is able to pick up on body language and non-verbal cues		✓
• Increased “human aspect” (Clinicians have reported that the sudden appearance of the patient’s child or pet cat have had positive effects on the atmosphere of the appointment)		✓

• Ability to use closed captions and chat functionality for those with hearing impairments.		
• MS Teams allows sessions to be recorded for training purposes		
• Enables patient group sessions to be completed whilst ensuring physical distancing and eliminating the need for patients and clinicians to be on site		
• Clinicians are able to use screen share to show the patient/patient group visual information such as diagrams, images and videos.		
• Being able to see the clinician provides extra reassurance to the patient		
• Clinician can demonstrate equipment, techniques or exercises to a patient		
• Ease of access for additional attendees such as other clinicians, trainees, relatives, carer or interpreter		

Realisation of the benefits of virtual appointments will require informed planning, standardised processes and adequate technical support and infrastructure. In the context of the NHS Long Term plan, HHFT's environmental and financial targets, and the current COVID-19 climate, rationale and guidance for video consultations is needed.

3 Method

Over the past 4 months, clinicians at HHFT have been trialling two video consultation platforms; *Microsoft (MS) Teams* and *Attend Anywhere*. The Transformation Team have held regular discussions and semi structured interviews with clinicians and administrative staff who have been using either or both platforms. Feedback surveys were sent to all known HHFT users of video consultation platforms. Recorded interviews were held with four of these users.

Feedback from patients has also been gathered via a number of clinicians, via the Friends and Family Test, and local specialty feedback forms.

A wider perspective on video for Outpatient consultations has been gathered from a number of sources. The Transformation Team held discussions with other NHS Trusts rolling out video consultations, sharing learning and experiences. These Trusts include University Hospital *Southampton* NHS *Foundation Trust*, East and North Hertfordshire NHS Trust, Cornwall Partnership NHS Foundation Trust, Isle of Wight NHS Trust, Royal Free London NHS Foundation Trust and Midlands Partnership NHS Foundation Trust. Other sources of information on conducting video consultations that were reviewed for this document include webinars, research articles and case studies, existing patient information leaflets and SOP/guidance documents, as well as websites on video consultations. Information from social media was also reviewed including feeds from the Twitter accounts of Attend Anywhere, Microsoft Teams, NHSNearMe, Wales Digital and others. Large scale national reports have also been considered, including the Sheffield Children's evaluation into non face to face appointments[9], a report from National Voices on virtual consultations[10] and the findings from NHSNearMe's Public Engagement[11]. These reports were released in July

and September 2020 and provide feedback from over 9000 patients and 1300 clinicians on video consultations in the Outpatient setting.

Scenario call testing (e.g. 1:1 consultation, group sessions) was conducted on both Attend Anywhere and MS Teams, via a number of device combinations (e.g. laptop, desktop, tablets, mobiles). The logistics, practicalities, features and functionality of both platforms have been tested and compared. AccuRx video consultation platform was briefly reviewed and considered for this report. However, challenges with Patient Centre not linking to the central NHS spine for demographics made this option unviable at present.

The evaluation of Attend Anywhere and MS Teams platforms is based on the information available at the time of writing this document, both from internal and external sources (as outlined above). From this evaluation, recommendations have been made to Hampshire Hospitals NHS Foundation Trust in relation to establishing and embedding video consultations as a viable method of delivering patient consultations in the Outpatient setting.

The two video consultation platforms were evaluated across the categories outlined in Table 2.

Table 2: The categories that both Attend Anywhere and MS Teams were evaluated against

Evaluation Categories	
1. Ease of use for patient to join the video call	11. Ability to request feedback from patients during/following a call
2. Waiting Area	12. Ability to invite additional clinician/family member/interpreter to the video call
3. Ease of use for administrative staff or clinicians to set up the video call.	13. Screen share
4. Ease of use for clinicians to join the video call	14. User Guides
5. Cost to Trust	15. Accessibility
6. Cost to patient	16. Clinical Training
7. Patient group consultations	17. Gathering Data
8. Video consultations with more than one clinician	18. System Requirements
9. Reliability	19. Troubleshooting
10. Remote Working	

4 Results

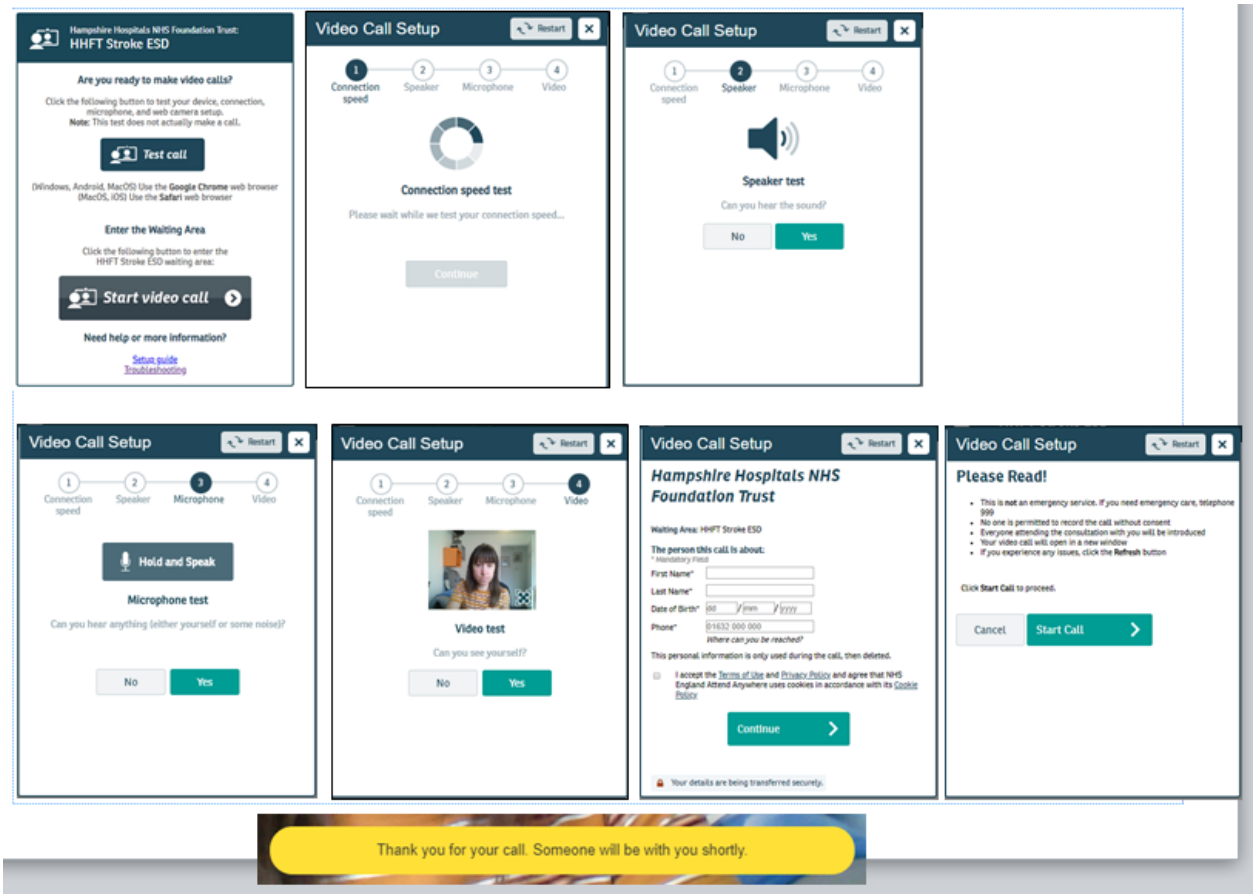
A great number of factors need to be considered when evaluating both Attend Anywhere and MS Teams as viable platforms for video consultations at HHFT. All of these factors have been subcategorised below:

4.1 Ease of Use for Patient to Join the Video Call

Attend Anywhere: The patient either clicks on a URL or enters the URL into their web browser. They are then taken through a series of short tests to check their connection speed, microphone and camera. The following screen

requires them to enter their name, surname, date of birth and phone number on an automated form. There are a total of eight clicks when joining an appointment via Attend Anywhere; 1 to click on the link, and 7 screens to click through prior to joining the call (Figure 2) Additional clicks may be necessary to allow access to device camera and microphone.

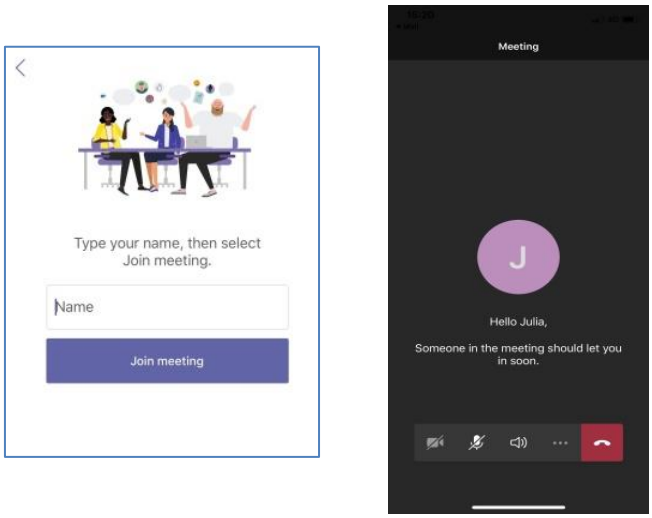
Figure 2: Screenshots of Attend Anywhere sign in process for the patient



Once these stages have been completed, a recorded message is played to the patient, along with a written message which is displayed on the screen (which can be personalised per waiting area). Music is played whilst the patient is waiting for their appointment, which acts as an indication that they are on hold. No app is required for Attend Anywhere and the process for accessing an appointment does not vary between devices.

MS Teams: This platform is also accessed via an electronic link, but requires the patient to download the free Teams app if they wish to access the link via a mobile phone or tablet. This is similar to downloading other apps such as WhatsApp, Zoom, and Skype and is readily available from the App Store or Play Store. There are a total of 4 clicks to download the link. There is a total of between 4 and 7 clicks when accessing an appointment via MS Teams (separate to the clicks needed to download the app), depending on which device is used and whether the app or a web browser is used. If accessing on a computer or laptop, there is no requirement to download any software. When the patient accesses Teams, they need to enter their name and are shown a message on a hold screen while they wait for the clinician to accept them into the call (Figure 3). No audio message or hold music is played. No device testing takes place when joining a video consultation.

Figure 3: Screenshots of MS Teams sign in process for the patient



Some HHFT clinicians using Teams have fed back that patients successfully join Teams calls on a variety of devices including mobiles, laptops and tablets. However, there have been patients who have needed extra support to access the appointment. Often patients attempt to sign up to MS Teams which is not required as they can join the call as a guest. This is explained in the patient information leaflet for MS Teams, but it is a commonly reported error by users.

Feedback from users has shown that patients often need assistance the first time of usage on both platforms. However, if the patient has a further appointment, they become more comfortable with the technology, and require less support to access video consultations, irrespective of which platform is used.

The Attend Anywhere platform is arguably the more patient-friendly of the two platforms as there is direct access to the appointment without the need for additional software, and device checks are inherent to the login process.

4.2 Waiting Area

Attend Anywhere: Attend Anywhere was co-produced with patients and has been designed specifically for patient consultations. Permanent waiting areas can be set up for each speciality/service with no known limit to the number that can be created (UHS currently have 150 separate waiting areas). The waiting area feature is inherent within Attend Anywhere and enables each Trust to display their logo, personalise the waiting area message, and for staff to message patients with the “notify” feature. This function is useful for clinics running late (HHFT data shows that up to 36% of Outpatient clinics run >10 mins late) or for patients who may have mistakenly joined the waiting area on the wrong date or time for example. All patients using the same waiting area, access it via the same URL without the risk of patients joining each other’s consultations. Following a consultation, clinicians are able to leave the call and the patient will return to the waiting area. This can be useful for patients who need to see multiple clinicians.

MS Teams: Currently, Teams does not have a permanent waiting area function within the software; third party companies do offer this bolt-on for MS Teams but this would require further financial investment. Meeting URL’s can be re-used for a drop-in session for example, but chat messages and meetings can be re-accessed by any previous attendees making it unsuitable for any confidential clinical sessions. Teams has a lobby function which prevents (by default) non-HHFT attendees from joining the call until admitted by the clinician. However, HHFT staff (by default)

are able to bypass this lobby function if they are a patient. This setting can be changed to prevent all but the organiser from entering the call directly but must be changed for every unique URL generated. Despite patients being shown a standardised message while they are waiting, there is currently no way to personalise this message, or provide live updates.

The Attend Anywhere waiting areas have more potential for creating permanent virtual clinic infrastructure with more flexibility and options for personalisation. During an interview conducted on 2 July 2020, Ellen Wilkinson, CIO & Medical Director of Cornwall Partnership NHS Foundation Trust described the difference between Teams and Attend as "the difference between being invited to a board room (MS Teams) rather than to a patient waiting area with flowers and a magazine (Attend Anywhere)."

4.3 Ease of Use for Administrative Staff or Clinicians to Set Up the Video Call

Attend Anywhere: This platform has a fixed URL for each waiting room. This URL is sent to the patient either directly from the website to the patient's mobile or email address. The URL can also be added to outpatient letters/texts, or added to the Trust website as direct link.

MS Teams: Teams currently requires each individual appointment URL to be created within MS Outlook and sent to the patient and clinician either within an email or a calendar invite. Due to this, adding a unique URL to an appointment letter or to a text reminder would be labour intensive and impractical. The use of a single URL for multiple patient appointments within MS Teams would create an Information Governance risk as some patients would be able to re-access the URL during another patient's consultation, being able to bypass the lobby function (e.g. those with Teams accounts) and being able to view all chat activity. MS Teams also does not allow the URL to be sent directly to a mobile phone number directly via text.

Some administrative staff have quickly learned how to set up MS Teams appointments and have been supporting their peers and clinicians with video appointments. Some clinicians do not have administrative staff available to set up the MS Teams appointments for them so are required to set them up themselves. Some services have set up specific email addresses to send appointment invites from, but in the long-term, a single link that can be sent out via the appointment letter or text, or added to the website, would mean less administrative work and also less risk for miscommunication or Information Governance breach. To date the Trust has had one Datix filed in August 2020 where a MS Teams video appointment invitation containing patient identifiable information was emailed to the wrong patient.

When the full version of Office 365 is rolled out within the Trust (Date TBC), it is expected that setting up MS Teams appointments and meetings will become much simpler for all users. This will bring a calendar function within the MS Teams app, which will allow those setting up the appointment and those accessing the appointment URL to do so from within the MS Teams app. There would even be the option to allow patients to self-select appointments; recent research shows this is increasingly what patients want.[12]

4.4 Ease of Use for Clinicians to Join the Video Call

Attend Anywhere: Attend Anywhere requires the clinician to access their waiting area via a URL, which can be bookmarked. A password is required to access their waiting area and there is an option to "*keep me signed in for today*". The names of patients who are logged into that waiting area are displayed on the screen for the clinician to see. If there is more than one patient in the same waiting area with the same name, the patient can be identified by their date of birth. The patient's telephone number is also displayed on the screen so if there are any issues with the video call, the clinician may call the patient by telephone instead. The clinician clicks on the name of the patient they

wish to call and selects "join call". A single Attend Anywhere waiting room can be in use by more than one clinician at any time.

MS Teams: Teams does not require an additional log in or password if the clinician is already logged into their Trust computer. If the clinician is remote working or working from their own laptop the clinician may require Multi Factor Authentication to access MS Teams. The clinician requires access to individual MS Teams meeting link/URL for each patient appointment. MS Teams meeting links can be re-named to make it clear to the clinician which meeting/appointment they are clicking on. For example:

Mrs Smith July 5th 10:00 Click Here

These meeting links can then be saved to MS Teams by either the clinician or admin, for ease of access on the day of the appointment. This, however is currently via a work around process and not via distinct functionality inherent within MS Teams

Attend Anywhere platform appears the most clinician friendly of the two platforms as there is one URL for all patient appointments and the patient's telephone number is displayed on screen.

4.5 Cost to Trust

Attend Anywhere: The Trust is not currently being charged for Attend Anywhere. At the time of publishing this report (October 2020) we were informed that central funding for Attend Anywhere has been agreed for a further 12 months.

MS Teams: Teams licences have been purchased by the Trust and further funding for O365 for the whole Trust going forwards, has been agreed. Using MS Teams for patient consultations will not incur any extra cost for the Trust.

4.6 Cost to Patient

Attend Anywhere: Around 85% of Attend Anywhere calls do not use any of the patient's mobile data allowance as the site has been whitelisted by several mobile providers[14] (currently agreed until October 31st 2020)

MS Teams: Teams usage does come out of the patient's data allowance for mobile devices.
Both platforms can be accessed via Wi-Fi, and can incur costs to patient and clinician.

4.7 Patient Group Consultations

Attend Anywhere: This platform, like many other similar platforms, is not designed for conducting virtual patient group sessions. Only one patient can be brought into a video call at any one time from the waiting area. A clinician can invite additional attendees into a consultation but this takes time and number of attendees is capped at around 5 attendees.

MS Teams: Teams enables a group of patients (up to 300) to be invited to a session with no risk of patients seeing each other's email addresses. Features useful for group sessions include a raise your hand feature, chat function, live polls and screen share with audio. It also enables smaller "break out" rooms for smaller group discussions. Teams has recently increased the number of participants visible on one screen from 9 to 49 in their latest update.

There are several specialties across the Trust who provide patient group sessions as a vital part of their service. For example psychology, pain, physiotherapy, cardiac rehab and diabetes all provide group patient sessions. MS Teams is currently the only platform available for clinicians to complete patient group sessions virtually. Discussions with

other Trusts has not revealed any other suitable platforms. Zoom is being used by some Trusts but has not been supported by HHFT due to security concerns and additional costs (£240 per user per year) and additional support required. Patient group video sessions via MS Teams have commenced at HHFT with positive outcomes and feedback. Nick Coulson Psychology Assistant said of the first group video session "It went really well thanks! All three patients are keen to continue and we hope to add another three to have a group of 6!" Camilla Cox, Diabetes/Community Dietitian, stated "Overall the [video] groups I've started have been well received"

4.8 Video Consultations with More Than One Clinician

Attend Anywhere: This platform has a meeting room feature allowing clinicians to meet and have discussions separately to the patient consultations. This feature has not been tested at HHFT.

MS Teams: This platform enables a set-up where a group of clinicians can have a discussion between themselves prior to and following a patient consultation with no risk of the patient being able to join in this discussion as a unique MS Teams invite can be used for the clinicians only. The patients unique invite URL can be copy and pasted into the chat box of the clinicians meeting, where they can easily go between the appointments with the patients and the clinician only URL, as demonstrated below by HHFT Paediatrician Ian Rodd completing a paediatric nephrology clinic with his UHS colleague Dr Shuman Haq (Figure 4). However this set-up is a work around rather than a feature of MS Teams.

Figure 4: Clinicians having a discussion on MS Teams between video consultations showing links to patient consultations on the right of the screen.

Both Attend Anywhere and Teams allow video consultations with more than one clinician, and allows access to clinicians outside of HHFT when required. Both platforms have the functionality to dial other clinicians into the conversation during patient consultation. However, MS Teams is limited to only being able to dial in other clinicians from the same organisation.

4.9 Reliability

Attend Anywhere: The Attend Anywhere platform went down on the 11th May 2020 and again on the 13th May 2020, and this was reported on in the national press.[15] On the 19th May 2020 the platform went down again for over 2 hours.[16]

Locally, HHFT clinicians were unable to access Attend Anywhere calls from 20th July 2020 – 23rd July 2020 and again on the 28th July – 30th July due to internal network issues. During these times patient appointments had to be cancelled, re-scheduled, completed via MS Teams or completed via clinician's personal devices. This was escalated to IT who were able to resolve the problem and no further issues have been reported to date. Some anecdotal experiences of audio and visual asynchrony have been reported by HHFT staff.

MS Teams: There have been no reports of outages or downtimes for this system. The most frequently reported issues from HHFT staff have been related to connectivity and video freezing.

To date, MS Teams appears to be the more reliable platform for patient video consultations.

4.10 Remote Working

Attend Anywhere: Clinicians can access Attend Anywhere from any device with a camera and microphone that is connected to the internet. They must have their log in page and password available.

MS Teams: MS Teams can be accessed from any device with a camera and microphone that is connected to the internet. If this is a mobile or tablet, the Teams App will need to be downloaded. Clinicians will need to log in using their HHFT log in (may require Multi Factor Authentication), and will need to have the meeting link available.

Both Attend Anywhere and Teams are accessible to remote workers. Clinicians who need to set up a video call with very little advance warning (such as Palliative Care for example) sending a link to Attend Anywhere is slightly simpler than setting up a Teams appointment (refer to section 4.3). The introduction of O365 with calendar and bookings functionalities may make this process simpler for MS Teams in the future.

4.11 Ability to Request Feedback from Patients During/ Following a Video Call

Attend Anywhere: Attend Anywhere has the function of automatically re-directing the patient to a webpage following a call. Currently at HHFT, the Friends & Family test has been designated as this webpage.

MS Teams: Links to feedback forms can be posted into the appointment chat. However it will rely on the clinician to direct the patient to the link as the patient is not automatically re-directed.

With both Teams and Attend Anywhere, a link can be posted into the chat function for the patient to access a feedback form. However, Attend Anywhere is the only platform where patients are automatically re-directed to a feedback page post consultation.

4.12 Ability to Invite Additional Clinician/ Family Member/ Interpreter to the Video Call

Attend Anywhere: During an Attend Anywhere video call clinicians can click on "invite" to add additional attendees to the call via mobile number or email. In order to add additional attendees from within HHFT, their contact details would need to be known and entered manually.

MS Teams: MS Teams meeting links can be emailed to additional attendees ahead of, or during a video consultation. HHFT staff members can be immediately added to a Teams call at any point as all accounts are linked via the MS

Outlook address book.

Both Teams and Attend Anywhere have the functionality to invite third parties into the call whether that is another clinician, a relative or an interpreter. In MS Teams, this currently needs to be sent from a separate screen as an email, unless they are an HHFT staff member in which case they can be easily and directly called into the meeting and no link is required. In Attend Anywhere, the "invite" button is used in all cases.

4.13 Screen Share

Attend Anywhere: Clinicians can share their screen during Attend Anywhere calls once they have installed the Google Chrome screen sharing browser extension.

MS Teams: All meeting attendees are able to share their screen.

4.14 User Guides

Attend Anywhere: This platform is being widely used across the UK. As a result, there are many user guides and videos available on the web to access, providing information for both patients and clinicians. Attend Anywhere also creates a user guide for your waiting room, which can be branded with HHFT logos and either digitally or physically sent to the patient.

MS Teams: This platform required user guides and patient information leaflets to be written locally for patients, administrative staff and clinicians. These documents have been published internally at HHFT and are currently in use within the Trust, and are available in different formats. Feedback from HHFT patients is that 100% of patients asked, reported that the MS Teams User Guide provided was clear and easy to follow.[17]

4.15 Accessibility

According to the Accessible Information Standard, all organisations that provide NHS care are legally obligated to "ensure that patients, service users, carers and parents with information and / or communication needs related to or caused by a disability, impairment or sensory loss have these needs met."[18] Video consultations can enable increased accessibility for those with communication difficulties

Attend Anywhere: Attend anywhere enables the addition of an extra participant if the patient or clinician needs extra support such as a sign language interpreter or a translator (refer to section 4.11). It also has a chat function which can be used for those who are hard of hearing or have other communication difficulties. A closed caption function is planned to be added by early 2021.[19]

MS Teams: Teams also enables the addition of an extra participant if the patient or clinician needs extra support such as a sign language interpreter or a translator (refer to section 4.12). In addition, there is a closed caption function which can make the appointment more inclusive to participants who are deaf or hard-of-hearing, people with different levels of language proficiency, and participants in loud places by giving them another way to follow along.

Both platforms have features which could improve accessibility of appointments for those with disabilities. However, further patient testing is required to make decisive recommendations.

With either platform the requirement of a suitable device to access video consultations could lead to exclusion of certain patient groups from accessing appointments and needs to be taken into account.

4.16 Clinical Training

Both Attend Anywhere and Teams enable the addition of an extra participant for training purposes. Only Teams currently enables sessions to be recorded which could also be useful for training. However, Information Governance guidance around the recording and sharing of patient consultation videos has yet to be established at HHFT.

4.17 Gathering Data

Neither platform retains any patient identifiable information. However, Attend Anywhere provides multiple reports on number and length of appointments which is useful for reporting and data analysis. Data can be accessed from MS Teams but is not specific to patient consultations. MS Teams reporting shows that an audio/video call took place and the reporting summarises the number of minutes on the usage report but does not show whether a call is specifically for the purposes of a patient consultation.

4.18 System Requirements for Both Clinicians and Patients

	System Requirements			
	Attend Anywhere		MS Teams	
Windows computer	**Minimum requirements:** 2GHz dual-core i5 processor 3GB of RAM	**Operating System:** Microsoft Windows 7 or later	**Minimum requirements:** 1.6 GHz (32-bit or 64-bit). 2.0 GB of RAM 3.0 GB of available disk space (hard disk)	**Operating System:** Microsoft Windows 7 or later Windows Server 2012 R2+, Windows 10, or Windows 8.1 in 32-bit and 64-bit
Apple computer	**Minimum requirements:** Intel 2GHz dual-core i5 processor 3GB of RAM	**Operating System:** (Using Chrome) MacOS version 10.11 or later (Using Safari) MacOS version 10.12 (Sierra) or later	**Minimum requirements:** Intel processor, Core 2 Duo 2.0 GB RAM 1.5 GB of available disk space (hard disk)	**Operating System:** Mac OS X 10.11 El Capitan or later
Android tablet or smartphone	**Minimum requirements:** Less than two years old, with a front-facing camera	**Operating System:** Android 5.1 or later	**Minimum requirements:** Android phones and tablets	**Operating System:** Support is limited to the last four major versions of Android
Apple iPhone	**Minimum requirements:** iPhone 5s or later	**Operating System:** iOS 12.4 or later	**Minimum requirements:** Compatible with iPhone,	**Operating System:** Support is limited to the two most recent major versions of iOS

Apple or iPad	**Minimum requirements:** iPad Air or later, iPad (2017) or later, iPad Mini 2 or later, iPad Pro	**Operating System:** iPadOS 13 or later	**Minimum requirements:** iPad, and iPod touch.	**Operating System:** Support is limited to the two most recent major versions of iOS
Web browser	Chrome 77 or later Safari 12.4 or later		Google Chrome, the latest version plus two previous versions Safari 13+ Microsoft Edge (Chromium-based), the latest version plus two previous versions Microsoft Edge, RS2 or later	
App Available / Required	Not available/ Not required		Yes, available on all devices/ Required for most mobile devices and tablets (If an unsupported browser version is detected, it will block access to the web interface and recommend that the user download the desktop client or mobile app)	
Bandwidth requirements	Minimum download speed: 0.3 Mbps Min upload speed: 0.15 Mbps		Minimum download speed: 0.5 – 1 mbps Minimum upload speed: 0.5 – 1 mbps	
Internet Requirements	Required internet connection. No offline function.		Required internet connection. No offline function.	
Mobile device data usage	Patients do not use any data while waiting for a clinician to join A 20 minute video consultation uses about 230 MB on a mobile device, and 450 MB on a PC Currently whitelisted (free data usage) by most mobile providers until the 31st October 2020 Data use is less on lower-speed internet connections, or on a less powerful computer, tablet, or smartphone Data use increases when there are more than two participants in the call.		One site reports the following data usage: 225MB- 675MB per hour for Peer-to-peer video calling 225MB- 450MB per hour of data for Group Video calling Another site reports the following data usage: 2.7 GB per hour using Video and Audio	
Required equipment	A computer, mobile device or tablet with: A web camera (built-in or USB) A microphone (usually built in to most laptop computers and external webcams)		A computer, mobile device or tablet with: A web camera (built-in or USB) A microphone (usually built in to most laptop computers and external webcams)	

	Speakers and headsets, if required (speakers are usually built into most laptop computers, but not necessarily into external webcams)	Speakers and headsets, if required (speakers are usually built into most laptop computers, but not necessarily into external webcams)
Other equipment recommendations	A second monitor for service providers (Video consultation on one, patient information on the other)	A second monitor for service providers (Video consultation on one, patient information on the other)
Further information	For further information please see here.	For further information please see here.

4.19 Troubleshooting

Attend Anywhere: A troubleshooting link is provided on Attend Anywhere for both patients and clinicians to try and address problems encountered during video consultations.

MS Teams: Help section with help topics is provided within the platform. HHFT users can contact IT Service Desk for assistance with Teams.

5 Clinician & Patient Feedback

5.1 Clinicians

A survey was sent out on 16/06/20 to HHFT clinicians to gather their feedback on virtual clinics. 34 responses have been received to date. Of these 34 clinicians, 13 are completing both telephone and video consultations, 18 are completing telephone consultations only, 1 is completing neither telephone or video appointments and 1 is completing video consultations only. 7 clinicians have used both Teams and Attend Anywhere for patient consultations, 4 of these stated that they prefer Teams and their reasons included “dreadful echo on Attend” “frequent outage on Attend” “audio/video quality better with Teams”. 3 clinicians who had used both platforms stated that they prefer Attend Anywhere and their reasons included “simple, easy to use and works well. I think that it is easier for the patients” “The patient doesn’t have to download anything. It’s more straightforward to set up” “Teams is too complicated to set up if the patient hasn’t used Teams before” “Attend is definitely easier for patients”.

5.2 Patients

Minimal feedback from patients regarding video consultation platforms has been collated. Most patient feedback relates to video consultation as a modality. One critical care patient who was invited to a follow-up appointment via Teams, when asked about any issues connecting to the platform responded “No, made sure I downloaded everything prior to appt. Worried initially but worked fine.”

General patient feedback regarding video consultations was sought from one HHFT Speech and Language therapist who sent surveys to their patients. Out of 10 respondents, most of whom were over 65, 9 stated that they would prefer to have their appointments via video consultations. Furthermore, the qualitative feedback included comments such as they felt “more relaxed” completing the appointment at home. Two patients who had appointments via telephone reported via the Friends and Family Test that they felt their appointment would have been improved by the use of video.

6 Report Limitations

6.1 Data

There are video consultations taking place across the Trust that are not being captured by Patient Centre for three main reasons.

- Errors in the administrative process where appointments are not being booked or outcomed under the correct code due to lack of knowledge and training, and staff being redeployed.
- Video consultations do not have dedicated appointment type codes available within Patient Centre or eRS.
- Some outpatient appointments are not booked onto Patient Centre therefore this activity is never captured.

6.2 Users - Clinicians

775 video consultations have been completed at HHFT since April 1st, by 36 different clinicians. A survey has been sent out to all known HHFT users of video consultation platforms and to all consultants, with a low response rate. Uptake remains low. HHFT has 32 Attend Anywhere waiting areas, 18 of which have been used for consultations. 191 accounts have been created, of which 67 have signed in.

6.3 Users - Patients

Other than the survey sent out by one Speech and Language Therapist, and second-hand feedback via discussions with clinicians, we currently do not have a feedback mechanism in place (other than Friends and Family Test) for patients to comment on their experience of video consultations. From 204 Friends and Family feedback comments on virtual outpatient appointments from March - August 2020, only 1 patient mentioned having a video appointment with 2 patients suggesting that the appointment would have been improved by the use of video.

6.4 Trial Period

Video consultations have only been officially part of the Outpatient service since March this year which limits the amount of feedback available. Further limitations to this trial period include:

- COVID-19 pandemic making the trial period a time of unusual circumstances
- Limited staff resources to train staff and gather feedback
- Limited staff resources to deliver video consultations
- Limited hardware. Difficulty obtaining webcams and microphones
- IT issues with a sudden increase in staff working from home and increased pressure on IT Support during COVID-19
- Limited space and room availability for clinicians to complete consultations confidentially and without distractions.
- Only two video consultation platforms have been trialled at HHFT, others are available.

7 Conclusions & Recommendations

Both Attend Anywhere and MS Teams have been used as video consulting platforms successfully over the past few months at HHFT. Clinicians and patients have given both positive and negative feedback for both platforms. Each platform has pros and cons to their usability, flexibility and connectivity for video consultations.

Based on the evaluation, Attend Anywhere is likely to be the most appropriate platform for one to one patient consultations, with MS Teams being more appropriate for group patient video sessions.

Other Trusts who have compared video consultation platforms have chosen a model of multiple platforms in order to provide a full range of functionalities to meet the needs of widely differing clinics and clinicians.

Considering the fact that both platforms are likely to develop further functionalities, it is suggested that the Trust allow the continued use of both platforms, keeping Attend Anywhere as the first choice for one to one patient appointments, whilst allowing Teams to remain for patient group sessions. MS Teams is a tried and tested suitable platform, available to all HHFT clinicians making it a firm choice for business continuity plans if the Attend Anywhere platform experiences outages.

8 Implementation Requirements

If the Trust was to implement video consultations as business as usual, following the recommendations outlined, here is what would need to be considered:

8.1 Trust Strategy

The Trust to provide a clear, standardised executive message that establishes Non-F2F appointments should always be offered in the first instance (business as usual), unless there is a clear clinical indication not to do so.

Fully support the Patient Centre upgrade to allow video consultations to be booked under specific appointment type codes.

Fully support the creation of specific eRS video appointment codes to allow new patient appointments to be booked and coded correctly.

The Trust to provide coordinated and consistent internal and external communications messages regarding the roll out of video consultations. A communication strategy should be produced outlining the information to be shared leading up to and during roll out and sustaining business as usual.

8.2 Support

Standardised IT support and processes are required to manage technical issues with both Attend Anywhere and MS Teams. Separate support is required for patients and for staff.

Establish a clear structure for the ongoing roll out/support of video consultation software and hardware.

8.3 System Management

Virtual clinic outpatient appointment rooms/hubs to be part of the planned care restoration plans, and when designing the new hospital.

Fully support and expedite if possible the roll out of Office365 to enable full functionality of MS Teams for staff and patient users. It is recommended that a further review of is undertaken at this point to establish whether the increased functionalities will allow MS Teams to be the sole platform for video consultations.

8.4 Training & Development

Increase in resource for the virtual consultations programme to enable further support for both staff and patients with training. Training needs for the clinician have been identified as;

A. Technical training on how to use either or both video consulting platform
B. Training on how to complete a successful video consultation. "Softer skills" that experienced clinicians have taken years to perfect in a face to face setting. These are a new skill set for all clinicians.
C. How to train others via video consultations. Training a colleague or student via video consultations would be extremely beneficial and unobtrusive but it is a new learning environment for both teacher and student.

Publish a set of standard user guides for both Attend Anywhere and MS Teams, and general guidance on video consultations for HHFT.

Publish a standardised set of Internal Professional Standards, Process Flow Maps and Standard Operating Procedures for booking and conducting video consultations.

Establish a standardised Trust-wide approach to gathering patient feedback and ensuring patients are involved and equitably represented in the design of virtual consultations & guidance documents. Nothing about us without us.[20]

8.5 Financial Considerations

A full financial assessment may be required to establish whether Attend Anywhere is a viable video consultation platform option beyond the free trial period.

9 Next Steps

If the Trust decides to establish video consultations as business as usual the following roles would need to be in place.

- Subject Matter Expert – Required for training, trouble shooting and updating of guidance and information for both Attend Anywhere and MS Teams
- Asset owner – Overarching owner for Attend Anywhere in the Trust.
- Contract Manager –Required for Attend Anywhere. Responsible for negotiating contracts with NHSi and any Third Parties. A Business Plan may need to be produced by the Contract Manager for Attend Anywhere.

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