Exploring patient experiences of video consultations during Covid-19 in an outpatient care setting using routine feedback data from 955 contacts

**Authors:** Bradwell HL\(^1\), Baines RL\(^1\), Edwards KRJ\(^1\), Stevens SG\(^1\), Atkinson K\(^2\), Wilkinson E\(^2\), Jones RB\(^1\), Chatterjee A\(^1\).

\(^1\) Centre for Health Technology, University of Plymouth, Plymouth, Devon, UK

\(^2\) Cornwall Partnership NHS Foundation Trust, Cornwall, UK

* Corresponding author: hannah.bradwell@plymouth.ac.uk, tel: 07975927341, rebecca.baines@plymouth.ac.uk, katie.edwards@plymouth.ac.uk, sebastian.stevens@plymouth.ac.uk, kate.atkinson3@nhs.net, ellen.wilkinson@nhs.net, ray.jones@plymouth.ac.uk, arunangsum.chatterjee@plymouth.ac.uk

Orcid Numbers:

H. Bradwell: 0000-0002-9103-1069

R. Baines: 0000-0001-9857-1976

K. Edwards: 0000-0001-6212-6010

S. Stevens: 0000-0003-4997-2591

E. Wilkinson: 0000-0001-8564-9201

R. Jones: 0000-0002-2963-3421

A. Chatterjee: 0000-0002-9306-6007

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**Abstract**

**Objectives:** Video consultations (VCs) have been rapidly implemented in response to Covid-19. However, limited research has explored patient experiences of VCs in this context. This research therefore explored patient experiences of VCs during their early stages of implementation in response to Covid-19.

**Design:** Secondary data analysis of routine patient survey responses using descriptive statistics and inductive thematic analysis.

**Setting and participants:** 955 (22.6%) survey responses following a VC using Attend Anywhere in a rural, aging and outpatient care setting between June and July 2020.

**Results:** Most (93.2%) respondents reported having 'good' (n=210, 22.0%) or 'very good' (n=680, 71.2%) experiences with VCs. Most respondents accessed their VC alone (n=806, 84.4%), except for those aged 71+ (n=23/58, 39.7%). Most participants reported feeling listened to and understood (n=904, 94.7%), felt their needs had been met (n=860, 90.1%) and were able to communicate everything they wanted (n=848, 88.8%). Satisfaction with communication was very strongly associated with satisfaction with the technical performance of the VC (p<0.001).

Free text responses had three key themes: i) barriers to VC use including technological difficulties, quality of patient information and accessibility or suitability concerns; ii) potential benefits including reduced stress and anxiety, enhanced accessibility, cost and time savings; and iii) patient suggested improvements including trial calls, turning music off, facilitating photo uploads, expanding written character limit and supporting other internet browsers. Most (92.1%) participants were likely to choose a VC again in the future.

**Conclusions:** The vast majority of respondents reported positive experiences of VCs. Identified benefits of enhanced accessibility, affordability, time, monetary and environmental savings are particularly interesting for future service delivery. Further research is needed, using rapid co-design.
techniques, to improve feedback methods, patient information and experience to support sustainability and to address accessibility and experience of patients excluded from this work, through lack of VC access.

**Article summary: Strengths and limitations of this study**

- Large data set of “real world” patient feedback during the early stages of video consultation use in response to Covid-19.
- Findings from this research provide important and early insights into patient experiences of video consultations following their rapid implementation in response to Covid-19.
- Quantitative and qualitative insight into patient experience, barriers, benefits and suggested improvements.
- Secondary data means we are unable to identify patients providing multiple responses.
- Feedback was collected from patients who had successfully completed a video consultation, data may therefore contain positive bias.
- Experiences or barriers for individuals who have not been able to, or chosen not to use video consultations currently remain unknown.

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**Main text, word count: 6143**
Introduction
COVID-19 is a global health concern (1) that has resulted in the rapid implementation and digitalisation of many healthcare services (2, 3). As a result, the use of video consultations (VCs), a form of telemedicine also referred to as remote or virtual consultations (4), now forms an integral part of both primary and outpatient (ambulatory) care delivery. While limiting viral exposure and reducing the potential risk of infection for both patients and staff (4, 5), video consultations may enable additional visual cues beyond the capabilities of telephone consultations, helping to facilitate the therapeutic relationship and experiences of care delivery (2). However, despite extensive guidance and advice on how to deliver video consultations (6, 7, 8), research exploring patient experiences of video consultations in response to Covid-19 is arguably limited (4, 9, 10).

Isautier et al. (9) have recently published results of an online survey conducted in Australia, seeking to compare patient experience of in-person consultations with telehealth, which they define as appointments with a healthcare provider via video or phone. The majority (369/596, 61.9%) felt their telehealth experience was as good, or better, than in-person appointments, with respondents believing telehealth would be moderately to very useful after Covid-19 restrictions end. The majority of telehealth reported on referred to telephone calls (427, 71.6%), rather than video calls (84, 14.1%), while some patients reported using both (85, 14.3%). While experience was generally positive, free text comments suggested technology limitations, impaired communication compared to face-to-face, issues obtaining prescriptions or results, reduced confidence in doctors, additional burden and lack of physical examination as reasons for poor perceptions of VC.

Recent research by Gilbert et al. (4), provides some insight into the use of VCs in an orthopaedic and urban outpatient setting in the UK. Following a satisfaction questionnaire completed by 104 patients and 51 clinicians, survey respondents indicated high levels of satisfaction for telephone (M patient satisfaction = 90/100, no data for clinicians) and VCs (M patient satisfaction = 85/100, M clinician satisfaction = 78/100). Potential benefits of VCs identified by Gilbert et al. (4), included reduced travel, waiting times and impact of travel on severity of symptoms such as fatigue. Conversely, low levels of reported satisfaction with VCs often related to variable sound or picture quality, low confidence in technology use and limited set-up support. Despite high levels of satisfaction overall, participants in the Gilbert et al. (4) study were more likely to consider a future phone consultation after a phone appointment (94%) than a VC after a video appointment (36%).

Kayser et al. (10), have also reported on 53 lung-transplant patients receiving VCs during the pandemic, demonstrating general patient satisfaction and clinical outcomes of consultations, although limited data is reported on patient experience of the VC.

While the early insights provided by Isautier et al. (9) and Gilbert et al. (4) are beneficial, further research with a larger cohort of VC patients from a range of healthcare services would be of value to further develop existing knowledge and understanding of this rapidly evolving area. Furthermore, following the rapid implementation of VCs meaning usual implementation time-frames reduced from years, to months, or in some cases days (11), there may be important learning points that could help facilitate the sustainability of VCs beyond Covid-19 restrictions and the implementation of similar technologies more broadly. Moreover, previous literature exploring the use of VCs conducted prior to the pandemic is arguably now outdated following changes made as a result of Covid-19 (7). Finally, exploring patient experiences of video consultations in a generally aging, rural and deprived region, as we have here, may provide important insights into future digital healthcare interventions and implementations given the aging population on a national scale (12). Research exploring the use of VCs in this rapidly evolving context is therefore justified given the increasing recognition between patient experience and quality improvement opportunities (13).
In summary, this research responds to an identified need to evaluate rapid technology implementations during the pandemic (14) by exploring patient experiences of Attend Anywhere (a telemedicine platform for outpatient care) (15, 16), in Europe’s second most deprived setting – Cornwall. Cornwall and the Isle of Scilly (CioS) is a geographically isolated peninsula in the South West of England that experiences higher than average levels of deprivation, further to 40% of the Cornish population living in remote areas (17). Additionally, CioS has an older age profile (18), with a single acute hospital located in the centre of the county. The question that this research sought to address was as follows:

- How do patients experience video consultations for outpatient services during the Covid-19 pandemic?

Research findings contribute to the emerging field of health and care changes as a result of Covid-19 and have important implications for policy, practice and future research as later described.

Methods

Design

Secondary analysis of routinely collected anonymised patient responses to a post-VC survey designed and distributed by the partner health care provider (Trust).

Setting

Outpatient care in a rural area in Southwest England with older population, during the early implementation of VC in response to COVID-19 (June 1st – July 31st 2020). The implementation process followed guidance provided by NHS England and NHS Improvement (19). The outpatient setting provides services across adult mental health, children’s and adolescent mental health and physical health, including but not limited to; learning disabilities, cardiac services, bladder and bowel, complex care and dementia, eating disorders, personality disorders, psychiatric liaison, palliative care, stroke nursing, speech and language therapy, diabetes, epilepsy, minor injuries, musculoskeletal, neuro-rehabilitation, physiotherapy, podiatry and respiratory nursing.

The Trust started to use Attend Anywhere from 6th April 2020. Some appointments were still carried out face-to-face but many patients were offered video-consultation or telephone contact during the study period. There were 4234 completed Attend Anywhere appointments between 1st June 2020 and 31st July 2020. The patient feedback data used in this study was from 955 out of the 4234 completed video-consultations.

Participants

All patients were invited immediately after receiving a VC to complete an online survey. Participation was voluntary and participants were either patients or their carers. Survey respondents gave consent for their data to be used but some chose to not have comments quoted verbatim.

Data Collection

Data were collected by the Trust using an online survey. The survey (appendix A) was developed by the Trust based on the standardised patient feedback survey questions provided in the national guidance (19). To our knowledge, the survey was not designed with patient or public involvement due to the rapid implementation process. The rapid rollout of this feedback process may also be responsible for some limitations of the survey itself, including limitations in response options (for example the slightly odd age groups used) and understanding of the sample (for example, number of unique individuals and service accessed by patient). However, we have confidence that the data items we have used in our analysis are robust.
Data Analysis
Descriptive statistics are reported for numerical data. Free-text responses were analysed by three researchers using inductive thematic analysis as outlined by Braun and Clarke (20). A comprehensive coding framework was developed by the authors by reviewing survey responses on a line by line basis comparing initial thoughts, ideas and theme definitions. The resulting framework was then used to individually analyse survey responses comparing emerging themes across the data set to determine dominant themes. Thematic analysis was selected for the purposes of this research as it is advocated as a useful and flexible method to generate a rich, yet detailed and complex account of qualitative data (20). Adopting an inductive approach also helped to ensure identified themes arose from the data generated, as opposed to predefined concepts or ideas. Data saturation was defined as the point at which no new generic themes or variations of a given theme emerged (21). Qualitative analysis was supported through the use of NVIVO software.

Patient and public involvement
This study focuses on patient experiences of video consultations. The research question and study has therefore been informed by patient input including analysis of data, reviewing and co-authoring of the manuscript. Findings from this research have also been presented in partnership with a service-user consultant at an Experiences of Care Collaborative (ECCo) meeting within the Trust and other, more external facing co-designed dissemination activities. The service-user consultant will be instrumental in shaping and implementing some of the suggested solutions helping to ensure continued involvement.

Ethics
Ethical approval to conduct this secondary analysis and complete further primary data collection was attained from the Health Research Authority (HRA) and Health and Care Research Wales (HCRW), IRAS ID 286543.

This manuscript has been prepared using SQUIRE reporting guidelines (22).
Results

Patient age and device use

Just under a quarter (955, 22.6%) of 4234 patient VCs resulted in feedback responses. As the data are anonymous it was not possible to know if some individuals had completed the survey more than once in this two month period. Our data are therefore episodes rather than individuals. The highest number of responses was received from the 31-50 year age group (n=333, 34.8%). The lowest number of responses was received from patients aged over 71 (n=58, 6.1%).

Half the patients used a laptop to access their VC (n=487, 50.9%). Device use varied by age ($\chi^2=68.9; 12\text{df}; p<.001$). People aged over 50 were much less likely to use mobiles and more likely to use tablets. The 51-71 age group were more likely to use ‘other’ (probably desk top computers).

Table 1. Use of devices for the video consultation by age group.

| AGE GROUP | DEVICE | TOTAL |
|-----------|--------|-------|
|           | Laptop | Mobile| Tablet| Other |
| <18       | 82 (50.3) | 44 (27.0) | 32 (19.6) | 5 (3.1) | 163 (100) |
| 18-30     | 76 (52.1) | 35 (24.0) | 24 (16.7) | 11 (7.5) | 146 (100) |
| 31-50     | 167 (50.2) | 87 (26.1) | 64 (19.2) | 15 (4.5) | 333 (100) |
| 51-71     | 120 (49.6) | 20 (8.3) | 70 (28.9) | 32 (13.2) | 242 (100) |
| >71       | 36 (62.1) | 1 (1.7%) | 16 (27.6) | 5 (8.6) | 58 (100) |
| Total     | 487 (50.9) | 189 (19.8) | 209 (21.9) | 70 (7.3) | 942 (100) # |

# 13 respondents did not answer age group

Quantitative analysis

Overall experience and future intention

Most (n=890, 93.2%) patients reported having a ‘good’ (n=210, 22.0%), or ‘very good’ (n=680, 71.2%) overall experience of VC. A small number of respondents had a ‘poor’ (n=13, 1.4%), or ‘very poor’ experience (n=17, 1.8%). Future intention is also a measure of satisfaction with VC; nine out of ten respondents were ‘very likely’ (n=704, 73.7%) or ‘somewhat likely’ (n=176, 18.4%) to choose a VC in the future. Very few respondents (n=28, 2.9%) suggested they were ‘somewhat unlikely’ (n=17, 1.8%) or ‘very unlikely’ (n=11, 1.2%) to use VCs in the future. We are able to look at two aspects of overall satisfaction: satisfaction with the technology (video and sound) and satisfaction with the communication (more related to the clinician’s performance in this situation).

Technical satisfaction

Three-quarters of patients had a ‘very positive’ experience of sound and video quality (n=732, 76.6%, n=728, 76.2% respectively). When combined 67.6% (646) had a very positive experience of both video and sound (Table 2).

Satisfaction with communication

The vast majority of patients felt they had been listened to and understood (n=904, 94.7%); had had their needs met (n=860, 90.1%) and felt they had been able to communicate everything they wanted, although to a slightly lesser extent (n=848, 88.8%). Overall 85.7% (818) rated all three aspects positively (Table 2).

Association between satisfaction with technology and communication

Satisfaction with communication was very strongly associated with satisfaction with the technical performance ($\chi^2=104.0; \text{df}=1; p<0.001$) (Table 3). Only 41/955 people were less satisfied with the communication despite being satisfied with the technology. On the other hand, 213/955 remained positive about the communication despite being less positive about the technology.
Influence of age and device on outcome

Age was significantly associated with satisfaction with the technical experience, though interestingly satisfaction with audio and video was lowest in the under 30s and highest in the over 71s (Table 2). On the other hand older people were more likely to use laptops and ‘other’ (Table 1) while mobile and tablet users had better technical experience (Table 2). This seemed rather contradictory indicating some interaction between age and device, so we explored this further (Appendix B). People aged 30 and under were less likely to be positive about the technical experience, particularly those that used tablets. Those in the 31-71 age groups who used laptops or ‘other’ were less likely to be positive about the technology. The over 71s were more positive about the technology performance.

Table 2. Four indicators of satisfaction with video-consultation shown by age and by device used, showing p-value from \( \chi^2 \) test. P-values less than 0.05 highlighted.

| AGE   | Positive overall | Would choose VC again | Positive about technology | Positive about communication | Total number patients |
|-------|------------------|-----------------------|---------------------------|-------------------------------|-----------------------|
| <18   | 153 (93.9)       | 146 (89.6)            | 94 (57.7)                 | 137 (84.0)                    | 163                   |
| 18-30 | 133 (91.1)       | 134 (91.8)            | 92 (63.0)                 | 131 (89.7)                    | 146                   |
| 31-50 | 316 (94.9)       | 313 (94.0)            | 240 (72.1)                | 290 (87.1)                    | 333                   |
| 51-71 | 224 (92.6)       | 225 (93.0)            | 168 (69.4)                | 200 (82.6)                    | 242                   |
| >71   | 55 (94.8)        | 53 (91.4)             | 46 (79.3)                 | 53 (91.4)                     | 58                    |
| Total | 881 (93.5)       | 871 (92.5)            | 640 (67.9)                | 811 (86.1)                    | 942                   |
| P (\( \chi^2 \); 4 df) | 0.55 (3.0) | 0.49 (3.4) | **0.003 (15.8)** | 0.18 (6.2) |

| DEVICE | Positive overall | Would choose VC again | Positive about technology | Positive about communication | Total number patients |
|--------|------------------|-----------------------|---------------------------|-------------------------------|-----------------------|
| Laptop | 445 (91.4)       | 441 (90.6)            | 307 (63.0)                | 407 (83.6)                    | 487                   |
| Mobile | 184 (97.4)       | 179 (94.7)            | 147 (77.8)                | 168 (88.9)                    | 189                   |
| Tablet | 200 (95.7)       | 195 (93.3)            | 152 (72.7)                | 183 (87.6)                    | 209                   |
| Other  | 61 (87.1)        | 65 (92.9)             | 40 (57.1)                 | 60 (85.7)                     | 70                    |
| Total  | 890 (93.2)       | 880 (92.1)            | 646 (67.6)                | 818 (85.7)                    | 955                   |
| P (\( \chi^2 \); 3 df) | **0.003 (13.8)** | 0.28 (3.9) | <0.001 (19.6) | 0.27 (3.9) |

#13 missing ages

Table 3. Crosstabulation of being positive about technology with being positive about communication

| Positive about technology | Positive about communication | Total |
|---------------------------|------------------------------|-------|
| No                        | No                           | 96 (70.1%) | 213 (26.0%) | 309 (32.4%) |
| No                        | Yes                          | 41 (29.9%) | 605 (74.0%) | 646 (67.6%) |
| Yes                       | No                           | 137     | 818         | 955        |

#13 missing ages

Independence and accessibility

Most (806, 84.4%) respondents stated that they could access their VC alone. However, more respondents over the age of 71 reported needing help (n=35/58, 60.3%) than those who could access their VC alone (n=23/58, 39.7%). This was the only age group to report such results, with most patients in other age groups able to access the VC alone (range 79.8%-95.2%).

Ease of joining
Most participants reported that it was ‘very easy’ or ‘easy’ to join the VC call (n=849, 88.9%), but this was strongly associated with age with 92.6% (286) of those under 31 reducing to 69.0% (40) of the over 71s (χ²=28.6, 3df, p<0.001).

Perceived savings
Two thirds of patients reported a perceived saving in time (n=662, 69.3%) and more than half saving money (n=544, 59.9%). There was no difference by age.

Qualitative Results
Twelve percent (119/955) people made 1384 free text comments in response to one or more of 16 questions. People who rated their overall experience good or very good were much less likely to comment about their overall satisfaction (11.8% Vs 43.1%, p<0.001).

Inductive thematic analysis of free text responses identified three main themes: barriers, benefits and patient suggested improvements. Each theme and their corresponding sub-themes are presented in turn below supported by verbatim examples. Please note, some participants requested that their comments were not published. Their data were included in analysis and production of the above themes but their quotes are not included below.

Table 4: Qualitative patient feedback themes, sub-themes and codes

| Theme                      | Sub-theme                              | Codes                                                                 |
|----------------------------|----------------------------------------|-----------------------------------------------------------------------|
| Barriers                   | Technological issues                   | Equipment issues, connectivity issues, sound quality, video quality, joining issues, difficult to communicate as a result of sound or video issues |
|                            | Quality of patient information and support | Jargon, accuracy, complexity of language, lack of technical support, human error |
|                            | Accessibility and suitability concerns  | Suitability of certain conditions including hearing impaired, lack of suitable/compatible devices, up to date browsers, access to support |
| Benefits                   | Reduced anxiety and stress             | Comfort, face to face element, relaxing and anxiety reducing, safer, patients better supported, family members present, ability to open up more |
|                            | Perceived savings                      | Travel, money, time, environment, childcare, work hours, arranging lifts |
|                            | Enhanced accessibility                 | Increased access, comfort, childcare, arranging lifts, fatigue |
| Suggested improvements     | Technological improvements             | Simplify information, turn off music, allow document editing, allow photo upload before appointment, support use in other browsers, improve sound, incorporate eye movement desensitization and reprocessing package, expand character limit |
|                            | Implementation                         | Continued future use, sustainability |
|                            | Administrative improvements             | Allow trial VC, notify if appointments are running late, provide reminders |
|                            | Patient support improvements           | Simplify patient information, simplify sign in process, provide community kiosk |

Barriers
Barriers most frequently described by participants related to technological difficulties, quality of patient information and accessibility or suitability concerns.

Technology
Many participants identified concerns of connectivity, “platform glitches” (unique identifier, P94) or experienced delays between video and sound. For example, “the picture kept freezing and pixelating” (P741); “the video quality is so poor it’s really hard to get much done” (P332). Similarly, “the connection was awful and so did not work for speech therapy” (P888). Experiences of “platform glitches” appeared to have important implications for the perceived quality of consultations. In some cases, technical difficulties meant patients felt that their “needs were not met” (P305), i.e. “couldn’t continue the call due to technical issues” (P663).

Quality of Patient Information and Support

The quality of patient information, particularly joining instructions was also repeatedly called into question by survey respondents. One participant described the joining process as “stupidly complex” (P52). Others described being “directed to a troubleshooting, jargon filled, suggestions page” (P95).

The complexity of language used in these documents was described by the same participant as not “good enough” (P95).

The accuracy of joining instructions was also questioned by some participants; “the link doesn’t open as the instructions suggest” (P236). Similarly, “the link […] sent in the instructions did not work” (P863). Although a video version of the information was provided, this was described by participants as in need of further development and refinement to ensure inclusivity, particularly for “deaf patients” (P582).

Furthermore, some participants reported admin or clinician errors. Although seemingly rare, such errors often impaired patient access and subsequent experience. For example, “no link [was] sent” (P12); “was not able to join […] not sure which link” (P215), there was “a mix up with admin about time of appointment” (P12). One participant appeared to receive no answer - “unfortunately there was no answer after an hour…pleased this waiting time was at home and didn’t involve a wasted journey” (P573).

Accessibility

Access to relevant devices, browsers, digital skills and/or confidence were also described as problematic by some participants. For example, “unfortunately I was not up to date with technology” (P319). Some participants reported needing to download alterative browsers or borrow other people’s devices due to “outdated” (P671) models. Similar to the quantitative findings presented above, some participants reported needing help from family members or friends to support their VC use. Such support appeared to be vital “without [them] it would have been impossible” (P540). Another “96 year old had to pay for a carer to be present [and] 2 hours of IT help from someone else” (P47).

Suitability concerns

Some participants suggested face-to-face appointments may be better suited for certain individuals or conditions. For example, individuals who rely on lip reading suggested that “face to face is easier” (P457) due to encountered video and sound delays. Character limitations in the VC chat function was also reported as unhelpful by some participants. Finally, some patients suggested that physical, or mobility examinations may be better suited for face-to-face consultations, although this conclusion was not unanimous. Further exploration of which settings and conditions VCs may be most acceptable and appropriate for could be beneficial.
Interestingly no participants described the therapeutic relationship or quality of care delivered by individual healthcare professionals as a barrier or limitation of VC use. This may reflect the questions asked in the survey but is an interesting point to consider.

**Perceived benefits**

In contrast to perceived barriers, participants described a number of benefits to VC use. The majority of respondents repeatedly described their VC experience as “fantastic,” “excellent,” “amazing,” “wonderful,” “positive” and “useful” (P558, P579, P153, P863, P600, P667). Participants also appeared to appreciate being able to have “family members join the appointment” (P15). One participant also reported enjoying seeing “a friendly face who understood my needs” (P474), identifying a potential benefit over and above alternative methods of remote consultation such as telephone calls.

*Less stressful and anxious experience*

Other benefits frequently described by participants included a less anxious and “far less stressful” (P796) experience. Several participants reported feeling “more relaxed” (P563) and less “rushed” (P392) as a result of avoiding certain stressors including arranging transport, arriving on time, finding and paying for parking and avoiding traffic. A reduction in anxiety and stress was also reported among children, particularly for children who experienced anxiety about appointments or leaving the house.

*Enhanced comfort and ability to disclose personal/clinically relevant information*

Some participants suggested that the removal of “so much stress” (P290) meant that they had “more time to focus on what needs [needed] taking through” (P290). Several participants suggested that because they “didn’t feel so stressed” (P695) and were in the comfort of their “own home” (P564), they were “able to open up more” (P695) often feeling more “comfortable” and “relaxed” (P564).

*Personal savings*

Other benefits described by participants included time, monetary and environmental savings. Some patients reported saving “over £20 in transportation costs” (P98), others reported “this has been a crucial saving, not only in time and money but also stress, as I would have had to rely on public transport [...] around 5 hours [of] travel” (P895). Perceptions of now being able to ‘afford’ an appointment as a result of these time and cost savings were repeatedly referred to by some participants. For example, video consultations “have genuinely changed my life, [...] being accessible for my needs and being able to afford an appointment” (P153). Travel and cost savings may be particularly prevalent in “Cornwall” where it “is always difficult to travel for appointments” (P262).

*Enhanced accessibility*

Although some individuals described reduced accessibility as previously described, the majority of free text responses suggested VCs facilitated service accessibility in a number ways. Firstly, due to certain conditions and reduced mobility, some respondents found “trips to the hospital very tiring and difficult” (P20). VCs removed this experience for a number of respondents. Childcare and employment cost savings were also described by participants when talking about enhanced accessibility. For example, one participant suggested that if relying on a face-to-face appointment they “would have been dragging all three kids along for what ended up being something that the video call was able to address” (P863). The “option of video call” was also considered “useful” for
those who are employed or “working parents” (P335). Some respondents reported now being able to schedule weekly appointments around their employment, an option that was not always possible when relying on face-to-face appointments alone. Furthermore, a number of patients who are “not able to drive” or “can’t drive” described VCs as “much more convenient” (P307, P846, P307) due to enhanced independence and removal of reliance on others.

Due to the benefits encountered, numerous participants expressed a strong desire for VCs to be made available beyond the COVID-19 pandemic: “I [...] hope that all of our future appointments will be held this way” (P863) highlighting an important element of patient choice.

**Patient suggested improvements**

The final theme identified related to patient suggested improvements. Suggestions most frequently described included the simplification of patient guidance and information, specifically device-specific advice and suggested device use for optimum VC experiences. For example, some patients reported positioning their “iPad onto the floor, so I could show [...] my feet and me walking” (P248). This would have been less feasible if using “a desktop computer” (P248). Other participants suggested it was “a bit challenging getting camera in position to demonstrate me doing the exercises” (P809). Providing device specific information and recommending particular devices based on service requirements and availability may therefore be beneficial.

Other suggested solutions related to the platform functionality; specifically the ability to “turn off the music while sitting in the waiting room” (P388) or have “better waiting room music” (P463) as it was considered “terrible” (P517) and repetitive by some. Patients also expressed a desire to be able to “upload photos or videos” (P20) to the consultation and an ability to “change the mobile camera being used” (P145). Further platform related improvements included expanding its functionality to “other browsers” (P342) and having the character limit expanded beyond 200 characters for patients who need to use the text function.

Finally, in recognition of digital skills and at times a lack of confidence, some participants expressed a desire for a ‘practice run through’ or community kiosks to be made available so people could familiarise themselves with the technology prior to their consultation. Interestingly, no suggestions for healthcare training were proposed by participants although this may again reflect the questions asked in the feedback survey.

**Discussion**

This research addressed a gap in existing literature by contributing towards early insight research exploring patient experiences of the rapid rollout of VCs for outpatient care during the Covid-19 pandemic (14), with implications for policy, practice and future research.

**Summary of findings**

The vast majority of participants rated their experiences of VCs as ‘good’ or ‘very good,’ reported feeling listened to and understood, felt able to communicate everything they wanted to and felt that their needs had been met. Many reported saving time and money and over 90% would likely choose a VC again in the future although it remains unclear whether this is as a result of no perceived ‘alternative’ option due to the global pandemic or positive patient experiences. Further exploration of this finding would be beneficial including the exploration of patient experience over time. Nevertheless, this Trust and others should consider making VC a permanent option of their provision and not just for the duration of the pandemic.
Questions often raised about video consultations are that it loses the personal touch, that being on screen means a loss of non-verbal communication, and that as a result the consultation may not be as effective (23). This did not seem to be the case for most patients responding to this feedback form. This routine feedback form asked questions about technical aspects and about the interaction with the clinician. Those patients who had a good technical experience also had a good overall experience; communication with the clinician did not seem to be a concern.

The Trust of course needs to ensure equity of access and most raise concerns about the barriers for older people. Patients aged 71 or over were the only age group where a larger percentage of respondents reported needing support in accessing their VC than those who access it alone. Nevertheless, there was no clear age gradient in satisfaction with VC. Indeed, older people were more likely to be positive about the technology than younger people. This may reflect higher expectations among younger people. While high levels of positive experience were reported across all device types, more users of tablet or mobile devices were positive. The relationship between age, device use, and positive experience of VC is complex. We know that for older adults, the small size of mobile phones can pose a barrier to use, coupled with declining dexterity and vision, mobiles are mainly used by older adults for calls and texting (24), while tablet computers are increasing in popularity for online access among older people (25). We also know that people in the older working age groups may be more likely to prefer the technologies they are or were familiar with at work (often desktops with poor cameras and sound systems), while older people new to computing use tablets as their ‘entry’ device (26).

Barriers described by participants included technological difficulties, quality of patient information, administrative errors and accessibility or suitability concerns. For example, connectivity concerns and a delay between video and sound were repeatedly identified by participants. Similarly, the complexity and use of jargon in patient facing information was repeatedly called into question by participants. Although converted into a video, patient information was considered to be in need of further development and refinement to ensure inclusivity, particularly for people in the deaf community. Conversely, identified benefits included reduced stress and anxiety, the opportunity to ‘open up more’ as a result of enhanced comfort, cost and time savings, increased sense of affordability and service accessibility. Finally, participants suggested a number of improvements such as the simplification of patient information including device recommendations and suggestions, ability to turn off the waiting room music and opportunities to have a ‘practice run’ through to increase familiarity.

Comparison with existing literature

Generally, our results continue to demonstrate general positive experiences for patients receiving VC’s during the pandemic (4, 9, 10). Congruent with Gilbert et al. (4) (feedback following VC also conducted during Covid-19), we found positively perceived aspects of VCs included reduced travel times and reduced impact of travel on symptom severity such as fatigue (4). Other similarities with Gilbert et al. (4) include the disruptive impact of video and sound quality and low confidence reported among some participants (4). This also echoes results of Isautier et al. (9), with technology limitations being a reason for poor experience. Our results indicating age differences in independent use and family involvement are also congruent with other research (27). However, given the difficulties that many older people have in travelling to outpatient clinics (28) and the high acceptability of VC in our study for older people no quick assumptions should be made about the unsuitability of VC for older people. Our participants reported higher levels of satisfaction and willingness to use VCs in the future than those in previous work (4). The previous feedback was collected within an entirely orthopaedic service, which could suggest greater satisfaction and use intentions are seen here due to the variety of services included, which may better translate to VC than orthopaedics, as perhaps a more ‘hands-on’ service. However, this would need further
exploration, as survey limitations impair our understanding of exactly which service our participants accessed. Other contributions of this research include the identification of additional benefits including enhanced comfort and subsequent ability to ‘open up more’, increased sense of affordability and accessibility and difficulties faced as a result of perceived inadequacy with existing patient information. Furthermore, the research by Gilbert et al. (4) had a smaller sample size, collected from an orthopaedic service in an urban area, differing from the rural and aging setting in our work (17, 18). Issautier et al. (9) also had a smaller number of VC responses, collected from a general survey rather than directly following a VC, with Kayser et al. (10) also reporting on a small sample size, with limited patient experience information and single centre focus (lung transplant patients). In contrast to Issautier et al. (9) suggesting telehealth limitations included poorer quality of communication, our results suggested the large majority of patients were satisfied with the VC aspects related to communication, with combined technical satisfaction being lower, congruent with Kayser et al (10). Here, we additionally provide further insight into the influence of patient age and device used in predicting overall VC experience, with implications for targeted consultations in future.

Strengths and limitations
Strengths of this research include the exploration of a relatively large dataset of patient experiences from an outpatient setting during the early stages of VC implementation. Unlike existing literature, this research explores the use of VCs in both physical and mental health services, helping to address limitations within existing COVID-response literature (4, 10). However, the limitations of this research must also be acknowledged. Firstly, the main limitation is that it is a self-selected sample of individuals who have attended a VC and chosen to provide feedback. Experiences or barriers for individuals who have not been able to, or chosen not to use VCs currently remain unknown, as do the experiences of those who chose not to provide feedback following their VC. Nevertheless, we know that many hundreds of patients have had a positive experience of VC. Secondly, due to the anonymous nature of the data set, we were unable to identify how many individuals completed the survey on more than one occasion. Thirdly, this research relies on secondary data and the subsequent questions/scales used by the Trust. While informed by the “One week implementation guide for NHS Trusts and NHS Foundation Trusts” provided by NHS England and NHS Improvement (19), the survey has some limitations, and to the researchers’ knowledge, the survey was not created in co-design with all relevant stakeholders including patients and carers. The questions asked may not therefore reflect the most important aspects of VC experience from a patient perspective. Finally, this research explores patient perceptions of VC use, staff experiences also needs to be explored and compared to identify areas of similarities and divergence, and best support sustainment for all stakeholders.

Implications for practice and policy makers
Our study identified a number of practical implications. Patient suggested solutions include: providing practice run-throughs to increase confidence and limit set-up time during the consultation, facilitating the ability to turn off waiting room music, notifications when appointments are running late and providing community kiosks, which could all be explored and implemented where possible. Other suggested platform improvements include the ability to upload photos or videos to the appointment, swap between cameras as used, extend the capabilities of Attend Anywhere to other internet browsers and expand the character restrictions of the text chat function, which may be particularly important for accessibility for deaf patients. Routinely collecting and responding to patient feedback in near real time is likely to be an integral aspect of identifying potential solutions and celebrating areas of best practice.

Efforts should also be made to simplify and improve patient information, highlighted as a key barrier. This may best be achieved in co-design with patients. While the implementation of VCs was
a rapid response, actively involving patients and the public in the creation of digital related information may help to improve accessibility, relevance and understanding, potentially removing one of the key identified barriers to patients joining their VC. An implication of this work is thus an identified need to establish best practice for rapid co-design, when implementation timing is critical. Any future patient information may also include guidance for patients on camera positioning, to reduce another barrier identified in this work. Healthcare services may also benefit from recommending particular devices based on their functionality and service requirements. For example, larger, more static screens may be suitable for interactive CBT, child therapies or family-based interventions. Alternatively, services that require mobility assessments may be better suited to more portable devices such as mobiles or tablets.

Finally, in response to patients noting administrative and human errors, the collaborative development of checklists and supportive training may be beneficial. Trusts could perhaps include on-screen checklists on patient records to ensure scheduling VCs is followed by the provision of an appropriate link, patient facing guidance and set-up support.

Implications for future research

Further research is required to explore and compare areas of divergence and similarities between the experiences of healthcare professionals and patients. Such research would support sustainment of VCs for both parties to the consultation. Based on the limitations of this work and reliance on feedback from patients who successfully accessed a VC, future research could explore challenges and barriers faced by individuals choosing not, or unable, to use VCs, particularly those considered to be ‘seldom heard’ or marginalised in the context of digital health. This may develop a more nuanced understanding of ways to increase accessibility and acceptability. Critical exploration of what works for who, when, and in what circumstances would also aid in supporting suitability guidance. By doing so, the potential benefits and experiences of VCs could be best realised. Stakeholders including researchers, innovators, patients and health and care professionals should continue to identify and engage with individuals considered to be ‘seldom heard’ or excluded in a digital context as this may differ to other contexts and previous definitions (29). Similarly, there is an important balance to be struck between acknowledging an increase in accessibility for some patient groups as a result of digitalisation (who may usually encounter difficulties in accessing face-to-face services), while also acknowledging a reduction in accessibility for others. This aspect needs urgent further work, and reiterates the importance of patient choice and availability of multiple mediums to access health and care services in the modern and rapidly evolving world.

This consideration may also be true for patients of different ages, considering our results show some older patients required support in accessing their VC. Patients in the older age bracket also represented the smallest group in our sample, based on successful VC use, thus future consideration needs to be given to accessibility. Indeed, consideration is particularly needed for older adults without access to family support to help facilitate VCs.

Other implications for future research include a need to identify the mechanisms that give rise to the positive patient experiences and high levels of intention to use VCs in the future as demonstrated by the Trust in this research. By doing so, other Trusts and healthcare services can engage with acknowledged areas of best practice that serve the needs of both patients and health care professionals. Economic evaluations that incorporate clinician, patient and environmental savings may also be beneficial, although it is important to emphasise that potential cost savings should not take precedence over patient safety, quality of care and stakeholder experience.

Additionally, suggestions made in this research that video consultations improve the ‘affordability’ of appointments and sharing of personal or clinically relevant information are important areas of future
interest. Future research questions could include: how and in what ways, have video consultations affected patient accessibility? Similarly, how if at all, do video consultations affect the therapeutic relationship? Future research could compare patient feedback or levels of satisfaction with more conventional face-to-face consultations or other VC platforms. Additionally, the range and type of consultations available to patients are currently limited and expressed satisfaction may reflect a lack of choice or alternatives. Future research may review and compare patient experiences over time, particularly during times of heightened and reduced Covid-19 restrictions.

Finally, the implications for practice noted above on development of improved patient information and an administrative checklist for clinicians may both benefit from a collaborative co-design approach. Future research could look to re-assess patient experience based on implementation of the co-designed items. Indeed, the creation of patient feedback surveys themselves may also benefit from co-design with all relevant stakeholders to ensure valued aspects of service delivery, patient safety and quality of care are considered (13, 30). Where possible, surveys should also include narrative and quantitative questions as a reliance on quantitative measures alone can give rise to an over-inflated perception of patient experience and satisfaction as frequently demonstrated in existing literature (31). While the exclusion of patient input in survey design may be as a result of rapid implementation, exploring rapid co-design methods may be an interesting area of future work.

Conclusion
In conclusion, the majority of patients reported positive experiences of video consultations for outpatient care purposes in a rural, aging and deprived setting. Patients often felt listened to, able to communicate their needs and understood, providing a positive and safe alternative to face-to-face consultations during the pandemic. However, some barriers identified including technological difficulties, accessibility of patient information and accessibility or suitability concerns require further attention if the potential benefits of video consultation are to be best realised and use is to be sustained. Implications of this research include the possible implementation of patient suggested improvements, including trial calls, turning music off, facilitating photo uploads, expanding written character limit and supporting VCs on other browsers. Future work may explore accessibility and experience of patients excluded from this work, through lack of VC access. Future research may also seek to explore rapid co-design techniques, which may improve patient information and feedback methods.

Authors contributions:
All authors read and approved the manuscript.
HB analysed and interpreted results and led on producing the manuscript.
RB analysed and interpreted results and substantively contributed towards the manuscript.
KE analysed and interpreted results and substantively contributed towards the manuscript.
SS reviewed and contributed towards the manuscript.
KA provided expertise in patient experience and engagement, reviewed and substantively contributed towards the manuscript.
EW facilitated access to patient experience data, provided contextual data, reviewed and substantively contributed towards the manuscript.
RU analysed and interpreted results, reviewed and substantively contributed towards the manuscript.
AC reviewed and substantively contributed towards the manuscript.

Data sharing statement: Not all patients have consented for their comments to be published, thus the full dataset is not available publicly, but interested parties may enquire with the authors for further details.
References
1. Aprahamian I, Cesari M. Geriatric Syndromes and SARS-COV-2: More than Just Being Old. J Frailty Aging. 2020;9(3):127-129.
2. Greenhalgh T, Wherton J, Shaw S, Morrison C. Video consultations for covid-19. BMJ. 2020;368:m998.
3. Ohannessian R, Duong TA, Odone A. Global Telemedicine Implementation and Integration Within Health Systems to Fight the COVID-19 Pandemic: A Call to Action. JMIR Public Health Surveill. 2020;6(2):e18810.
4. Gilbert AW, Billany JCT, Adam R, Martin L, Tobin R, Bagdai S, et al. Rapid implementation of virtual clinics due to COVID-19: report and early evaluation of a quality improvement initiative. BMJ Open Quality. 2020;9(2):e000985. doi: 10.1136/bmjqq-2020-000985
5. Hollander JE, Carr BG. Virtually Perfect? Telemedicine for Covid-19. New England Journal of Medicine. 2020;382(18):1679-816
6. Iyengar K, Jain VK, Vaishya R. Pitfalls in telemedicine consultations in the era of COVID 19 and how to avoid them. Diabetes & Metabolic Syndrome: Clinical Research & Reviews. 2020;14(5), 797-799.
7. Greenhalgh T, Shaw S, Seuren L, Wherton J. NHS, Video consultation information for NHS Trusts and Foundation Trusts. IRIHS Research Group. 2020. Available from: https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/08/C0638-nhs-vc-info-for-nhs-trusts.pdf (Accessed 4th December 2020).
8. RCN. Remote Consultations Guidance Under COVID-19 Restrictions. Royal College of Nursing. (2020) https://www.rcn.org.uk/professional-development/publications/rcn-remote-consultations-guidance-under-covid-19-restrictions-pub-009256 (Accessed 20th November 2020).
9. Isautier JM, Copp T, Ayre J, Cvejic E, Meyerowitz-Katz G, Batcup C, et al. People’s Experiences and Satisfaction With Telehealth During the COVID-19 Pandemic in Australia: Cross-Sectional Survey Study. J Med Internet Res 2020;22(12):e24531. DOI: 10.2196/24531
10. Kayser MZ, Valtin C, Greer M, Karow B, Fuge J, Gottlieb J. Video Consultation During the COVID-19 Pandemic: A Single Center’s Experience with Lung Transplant Recipients. Telemedicine and e-Health. 2020. https://doi.org/10.1089/tmj.2020.0170
11. Barsom EZ, Feenstra TM, Bemelman WA. et al. Coping with COVID-19: scaling up virtual care to standard practice. Nat Med. 2020;26, 632–634. https://doi.org/10.1038/s41591-020-0845-0
12. Age UK report. How old is the UK? An Investigation into the Ageing Population of Britain. Age UK. 2018. Available from: https://www.ageukmobility.co.uk/mobility-news/article/how-old-is-the-uk (Accessed 4th December 2020).
13. Flott K, Darzi A, Mayer E. Care pathway and organisational features driving patient experience: statistical analysis of large NHS datasets. BMJ Open. 2018;8(7):e020411. doi: 10.1136/bmjopen-2017-020411.
14. GOV.UK. Rapid evaluation of digital health products during the COVID-19 pandemic. 2020. Available from: https://www.gov.uk/guidance/rapid-evaluation-of-digital-health-products-during-the-covid-19-pandemic#rapid-evaluation-checklist. (Accessed 3rd December 2020).
15. NHS England and NHS Improvement. Attend Anywhere. 2020 Available from: https://england.nhs.attendanywhere.com/resourcecentre/Content/Public_Topics/Discover.htm. (Accessed 3rd October 2020).
16. Remote consultations. NHS England and NHS improvement coronavirus. Specialty guides for patient management. 2020. Available from: https://www.england.nhs.uk/coronavirus/publication/specialty_guides. (Accessed 3rd October 2020).
17. Cornwall Council. Cornwall: a brief description. 2015. Available from: https://www.cornwall.gov.uk/media/20392018/cornwall-statistics-infographic-a3-proof3.pdf (Accessed 4th December 2020).

18. Cornwall Council. Director of Public Health Annual Report: 2019-20. 2019. Available at: https://www.cornwall.gov.uk/media/44165950/ph-2019-20-annual-report_august-2020_web.pdf (accessed 4th December 2020).

19. NHS East Suffolk and North Essex. 'Attend Anywhere' Patient Feedback _ ESNEFT. 2020. Available from: https://forms.office.com/Pages/ResponsePage.aspx?id=kp4VA82yl0umSQ9Q55Ctvy006tkePahBGL4hxWVu7AVUQVlNQ1g1REM4UFQwNDUwTU9NTUc1My4u (Accessed 3rd December 2020).

20. Braun V, Clarke V. Using thematic analysis in psychology. Qualitative Research in Psychology. 2006;3(2):77-101, DOI: 10.1191/1478088706qp063oa

21. Saunders B, Sim J, Kingston T, Baker S, Waterfield J, Bartlam B, et al. Saturation in qualitative research: exploring its conceptualization and operationalization. Quality & quantity. 2018;52(4):1893–1907. https://doi.org/10.1007/s11135-017-0574-8

22. Ogrinc G, Davies L, Goodman D, Batalden P, Davidoff F, Stevens D. SQUIRE 2.0 (Standards for Quality Improvement Reporting Excellence): revised publication guidelines from a detailed consensus process.

23. Statton S, Jones R, Thomas M, North T, Endacott R, Frost A, et al. Professional learning needs in using video calls identified through workshops. BMC Medical Education. 2016;16(1):140.

24. Mcgauthrey R, Zeltmann S, Mcmurtrey M. Motivations and obstacles to smartphone use by the elderly: developing a research framework. International Journal of Electronic Finance. 2013;7:177-195. 10.1504/IJEF.2013.058601.

25. Vaportzis E, Clausen MG, Gow AJ. Older Adults Perceptions of Technology and Barriers to Interacting with Tablet Computers: A Focus Group Study. Front Psychol. 2017;8:1687. doi:10.3389/fpsyg.2017.01687.

26. Biswas M, Romeo M, Cangelosi A, Jones R. Are older people any different from younger people in the way they want to interact with robots? Scenario based survey. Journal on Multimodal User Interfaces. 2019;14(2) 10.1007/s12193-019-00306-x

27. Antoni E, Jaboli M, Samarasinghe M, et al. PWE-132 Is The NHS Ready for Video-Conference Consultations in Outpatient Clinics? BMJ Gut 2016;65:A203-A204.

28. Age UK. Painful Journeys: Why getting to hospital appointments is a major issue for older people. 2017. Available from: In-depth policy report. https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/reports-and-briefings/active-communities/rb_dec17_painful_journeys_indepth_report.pdf (Accessed 10th December 2020).

29. Burt J, Campbell J, Abel G, Aboulghate A, Ahmed F, Asprey A, et al. Improving patient experience in primary care: a multimethod programme of research on the measurement and improvement of patient experience. Programme Grants Appl Res. 2017;5(9) 10.3310/pgf05090

30. Baines R, Donovan J, Regan de Bere S, Archer J, and Jones RB. Comparing psychiatric care experiences shared online with validated questionnaires: do they include the same content? Patient Experience Journal. 2019;6(1), Article 12.

31. Edwards, C. & Staniszewska, S. Accessing the user’s perspective. Health & Social Care in the Community. 2000;8(6):417-424.

Appendices

Appendix A – Survey Questions and Response Options

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Each question beginning with ‘COMMENT’ allowed for a free-text response.

1. Please tick this box if you do not wish your comments to be made public
2. Service Line
3. Department
4. Team
5. Overall, how was your experience of our service?
   very poor, poor, neither good nor poor, good, very good, don't know
6. COMMENTS: Overall, how was your experience of our service?...
7. How easy was it to join the video appointment?
   very difficult, difficult, neither easy or difficult, easy, very easy
8. COMMENTS: How easy was it to join the video appointment?...
9. Joining the call
   very negative, negative, unsure, very positive
10. COMMENTS: Joining the call...
11. Sound quality
    very negative, negative, unsure, very positive
12. COMMENTS: Sound quality...
13. Video quality
    very negative, negative, unsure, very positive
14. COMMENTS: Video quality...
15. Being able to communicate everything you wanted to
    very negative, negative, unsure, very positive
16. COMMENTS: Being able to communicate everything you wanted to...
17. Feeling listened to and understood?
    very negative, negative, unsure, very positive
18. COMMENTS: Feeling listened to and understood?...
19. Feeling your needs were met
    very negative, negative, unsure, very positive
20. COMMENTS: Feeling your needs were met...
21. How likely are you to choose a video appointment as an option in your future care?
    very unlikely, somewhat unlikely, neither likely nor unlikely, somewhat likely, very likely
22. COMMENTS: How likely are you to choose a video appointment as an option...
23. Were you able to access this video appointment by yourself?
    yes, no, someone helped me
24. COMMENTS: Were you able to access this video appointment by yourself?...
25. What type of device did you use for your video appointment?
    laptop, mobile, tablet, other
26. COMMENTS: What type of device did you use for your video appointment?...
27. Which internet browser did you use for your video appointment?
    chrome, safari, other, not sure
28. COMMENTS: Which internet browser did you use for your video appointment...
29. What is your age?
    under 18 yrs, 19-30, 31-50, 51-71, 71 yrs +
30. COMMENTS: What is your age?...
31. COMMENTS: What specialty or service was your Video Appointment for?...
32. Has using this service helped to save you either time, money or other benefits? eg, travel
    fares, fuel, parking, lost earnings,
    Time, money, other
33. COMMENTS: Has using this service helped to save you either time, money...
34. COMMENTS: We are constantly looking at ways at improving our service...

Appendix B – Exploring age and device

| Age      | Laptop or other | Mobile phone | Tablet | Total |
|----------|-----------------|--------------|--------|-------|
| Under 31 | 106 (60.9%)     | 52 (65.8%)   | 28 (50.0%) | 186 (60.2%) |
| 31-50    | 116 (63.7%)     | 74 (85.1%)   | 50 (78.1%) | 240 (72.1%) |
| 51-70    | 92 (60.5%)      | 18 (90.0%)   | 58 (82.9%) | 168 (69.4%) |
| >71      | 31 (75.6%)      | 1 (100.0%)   | 14 (87.5%) | 46 (79.3%)  |
| Total    | 345 (62.8%)     | 145 (77.5%)  | 150 (72.8%) | 640 (67.9%) |

Positive about the technology by age and device. Colour coding: red less than 60% positive, orange 60-70% positive, green >70% positive.