


Patient Experiences With Telemedicine in a National Health Service Rheumatology Outpatient Department During Coronavirus Disease-19

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Abstract

The coronavirus disease-19 pandemic changed rheumatology practice with remote consultations being increasingly utilized where appropriate. We evaluated patient experiences with telephone consultations and report on patient attitudes toward current health care delivery and perspectives of telemedicine in a UK National Health Service rheumatology outpatient department. We analyzed 297 questionnaires from a postal survey conducted during the summer of 2020 after a telephone follow-up consultation. The mean age of respondents was 67 years and 68% were female. The 161 respondents (54%) reported it was their first telephone consultation and overall, 239 (84%) were satisfied with their health assessment. 60% would be happy to have future routine follow-up telephone consultations. Patients advised to shield shared similar satisfaction to the whole sample. However, with increasing age we identified a higher proportion were dissatisfied with telephone consultations and unlikely to have accessibility to video consultation or preferentially opt for this modality.

Keywords

COVID-19, Telemedicine, Patient satisfaction, Survey data, Rheumatology

Introduction

The novel coronavirus severe acute respiratory syndrome coronavirus 2, responsible for the coronavirus disease-19 (COVID-19) pandemic, has drastically changed how patients access health care and clinicians maintain their service provision due to social distancing measures. Within rheumatology the pandemic has caused significant challenges to the usual running of what is largely an outpatient based speciality with staff being redeployed to assist with the care of infected inpatients and government guidance advising individuals to minimize travel (1–3). Naturally, there was significant clinical concern for numerous immunosuppressed patients under the care of rheumatology, and in the UK early guidance specifically directed clinicians to utilize telemedicine where appropriate (4,5).

Telemedicine is the remote delivery of health care services using information technology (IT), including telephone and video facilities. Prior to the COVID-19 pandemic, a systematic review of telemedicine use in rheumatology identified good patient satisfaction with improved accessibility to clinical services (6). However, the utilization of telemedicine has

accelerated substantially during the COVID-19 pandemic. There is now emerging evidence detailing high patient satisfaction with the use of telephone and video consultations within rheumatology (7–10). Given the accessibility and economic advantages of remote consultations, it is likely these will be integrated into future service provision (11). However, to date most of the emerging evidence is supported by retrospective online questionnaire data, and selectively recruits a relatively young average age of respondent comparative to the general age of rheumatology patients routinely

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seen in secondary care (7–9). It is important the current evidence base supports a representative sample to establish patient experiences with telemedicine in rheumatology and avoids overestimating patient satisfaction due to age-related selection bias with older patients potentially excluded if they are unable to provide their feedback due to IT accessibility issues.

Our evaluation aims to address some of the current limitations in the evidence base, particularly by collating feedback from a representative population seen in rheumatology (inclusive of older age groups) and additional patient subsets including those advised to shield due to immunosuppression. Here we report an evaluation of patient's experience using telephone consultations within a UK National Health Service (NHS) hospital setting via a postal survey and report on patient attitudes toward current health care delivery and their perspectives of future telemedicine practice.

Methods

This evaluation was undertaken as part of a quality improvement assessment and registered as a clinical audit project within our hospital. The informed consent process involved questionnaires being posted to participants with an information letter providing details of the project and inviting volunteers to provide feedback by returning the anonymous questionnaires in the self-addressed stamped envelopes provided. The questionnaires returned had no patient identifiable information.

The postal survey was conducted in patients after a telephone follow-up consultation held with either a consultant rheumatologist or clinical nurse specialist during June–July 2020. The 30-item questionnaire consisted of single and Likert scale responses. Two consignments of 300 questionnaires were sent; the second including demographic questions on age and gender (see Figure 1).

An independent administrator randomly selected patients via their hospital identification number to ensure anonymity and proportionally matched them to the sample based on the first three digits. This enabled an even distribution of patients geographically across the region as hospital identification numbers were allocated based on address within our hospital trust. Duplicates were removed and the telephone consultation was checked to have been completed through the presence of a signed clinic letter.

Over the 2-month period, 2054 follow-up telephone consultations were held across two clinical sites, with selected new referrals only seen face to face. Of the 600 questionnaires posted, 302 were returned consisting of 167 and 135 from the two consignments, respectively. Five questionnaires were excluded from further evaluation as they were returned blank with only free text responses. Out of the five, four patients had not completed a telephone consultation and one had been seen face to face. The average response rate across all 30 questions was 95%. The full questionnaire is presented in the Supplementary Material.

Results

Demographics

Out of the returned 302 questionnaires, 297 were included for analysis. The mean age of respondents was 67 years and the significant majority were female ($n=91$, 68%). The demographical distribution of respondents is shown in Table 1.

Within the total sample, 161 respondents (54%) reported it was their first telephone consultation with either a doctor or nurse. Of those who had previously experienced a telephone consultation the majority had been reviewed via secondary care with either a hospital specialist (35%) or specialist nurse (26%). The remainder had held a telephone consultation with their general practitioner (38%) and 1% indicated another health care professional.

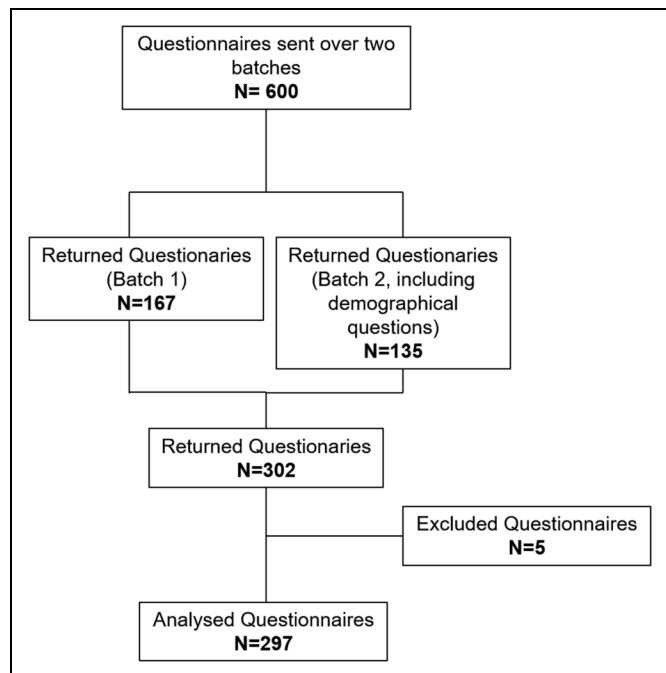


Figure 1. Questionnaire flowchart.

Table 1. Demographical Data From the Sample.

| Sample demographics | n (%) |
|---------------------|-----------|
| Gender | |
| Male | 39 (29.3) |
| Female | 94 (70.7) |
| Age (years) | |
| 18-34 | 4 (3.0) |
| 35-49 | 10 (7.6) |
| 50-64 | 32 (24.2) |
| 65-79 | 66 (50.0) |
| 80> | 20 (15.2) |

Overall, 239 of the sample (84%) agreed their rheumatological health issues were satisfactorily addressed via the telephone consultation and 222 (78%) felt an adequate assessment was completed remotely (see Figure 2).

Telephone consultations pose new clinical challenges to conventional practice and amongst our sample only 60 patients (21%) required a further face-to-face appointment to complete their assessment. Likewise, new treatments were commenced in 62 patients (22%) and most patients found this easily accessible (93%).

Perceptions of Consultations During the COVID-19 Pandemic

The survey explored patients' perceptions of consultations during the COVID-19 pandemic. Overall, 220 respondents (77%) felt safer experiencing the consultation from their own home and 108 (37%) reported anxiety about coming to hospital for an outpatient appointment. Given the nature of treating rheumatological disease, 106 of respondents (37%) had been advised to shield by either primary or secondary care. Although, a similar proportion of the sample (36%) would have preferred to visit the hospital for a face-to-face consultation during this phase of the pandemic (see Figure 3).

Overall, 169 of the questionnaire responders (60%) indicated they would be happy to have telephone consultations routinely in their future care. However, the overwhelming majority ($n=260$, 89%) would prefer to have the option of deciding between a face-to-face or telephone consultation.

Only 130 (45%) respondents indicated they have access to make video calls.

Patients Attitudes Toward Telemedicine

Our survey explored patients attitudes toward telemedicine by indicating how strongly they agreed or disagreed with a particular statement. The 224 patients positively responded to the convenience of a telephone consultations and the majority felt communication was satisfactory (146 agreeing and 72 strongly agreeing). Overall, 150 (52%) and 69 (24%) responses indicated satisfaction with the telephone consultation by either agreeing or strongly agreeing, respectively (see Figure 4).

However, with regards to the role of telephone consultations in future routine reviews most patients neither agreed nor disagreed with the statement ($n=81$, 29%) but 87 (30%) did feel negatively toward this. A greater proportion of respondents would prefer a face-to face consultation for future routine reviews with 87 (31%) agreeing and 54 (19%) strongly agreeing with the statement. Although, most respondents felt neutral regarding this statement ($n=99$, 36%).

Interestingly, 41% ($n=60$ strongly disagree, $n=53$ disagree) of responses indicated that they did not think video consultations would be useful and effective. Only 92 (33%) responded positively to the statement and 74 (27%) neither agreed nor disagreed with it. Furthermore, in response to a preference in video consultations rather than telephone consultations, only 43 responded by either agreeing ($n=24$, 9%) or strongly agreeing ($n=19$, 7%). In contrast, the

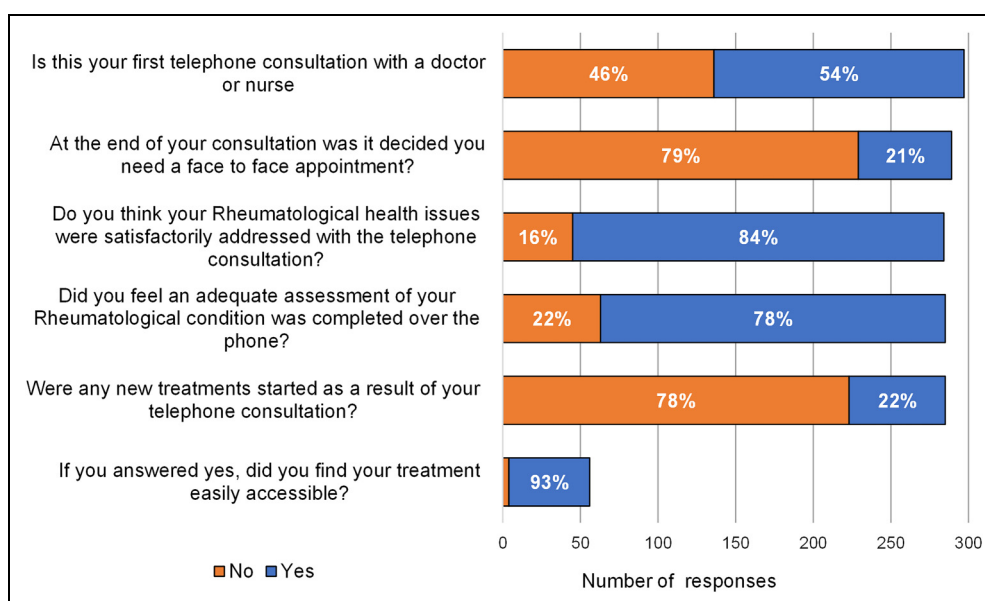


Figure 2. Patient experience of a rheumatology telephone consultation.

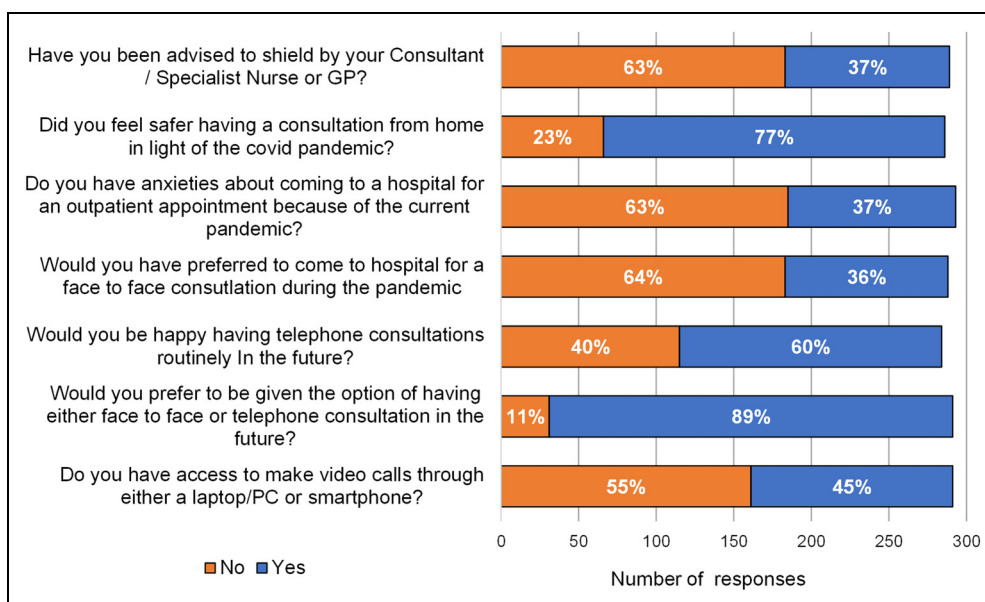


Figure 3. Patient perceptions of rheumatology consultations during the COVID-19 pandemic.

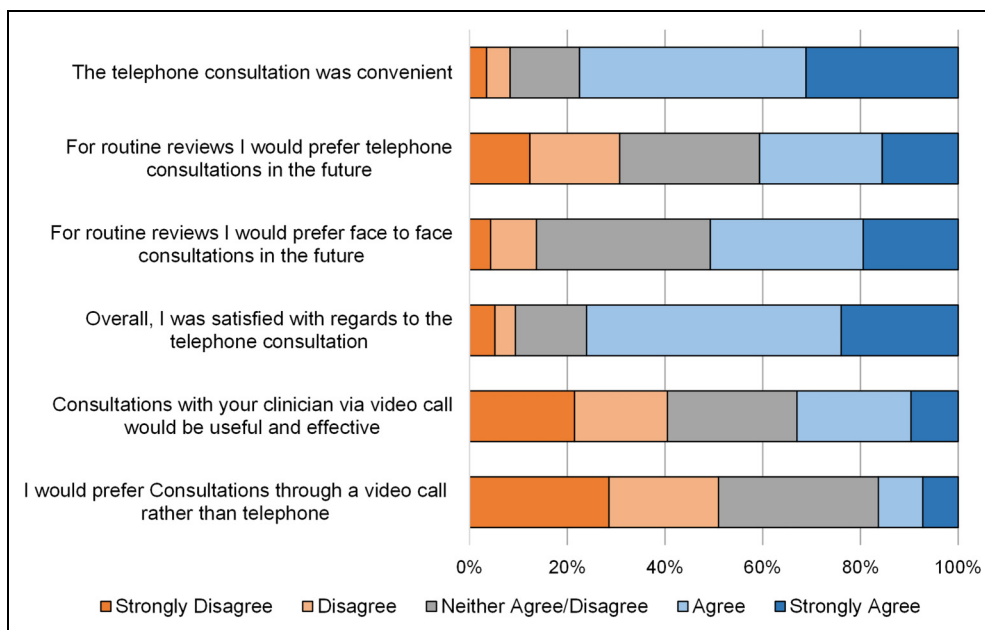


Figure 4. Patients attitudes toward telemedicine in rheumatology.

majority collectively either disagreed ($n = 59$, 22%) or strongly disagreed ($n = 75$, 29%) with the statement but most respondents ($n = 86$, 33%) did not report a particular preference (see Figure 4).

Shielding Sub-Population

Within the 106 respondents who indicated they had been advised to shield, 88% ($n = 91$) felt their rheumatological health was satisfactorily addressed over the phone and 70%

($n = 72$) reported they would be happy having telephone consultation routinely in the future. Predictably, a greater proportion felt safer having a telephone consultation from home ($n = 88$, 85%) and 48% ($n = 51$) held anxieties about attending the outpatient department. Similarly, 40% ($n = 42$) had access to make video calls and more respondents disagreed ($n = 34$, 36%) than collectively agreed ($n = 30$, 32%) that this would be useful and effective means of consultation. However, 34 of respondents (34%) did not report a preference. Furthermore, only nine respondents agreed (10%) and

seven strongly agreed (7%) that they would prefer consultations by video rather than telephone.

Age and Patient Preferences for Telemedicine

The accessibility for patients to make video calls decreased with age and less than half of over 65 years olds had the means to conduct consultations this way. Our data suggested that as the patient's age group increased, a higher proportion had disagreed with having a preference through video consultations rather than telephone consultations for routine reviews, and overall, the older patients still preferred face-to-face appointments. Only a minority of patients over 65 years old agreed that video consultations would be useful and effective and therefore would not prefer this modality of consultation over telephone consultation (see Figure 5).

Discussion

Overall, our patients were satisfied with their follow-up rheumatology telephone consultation and found it to be a convenient and safe means of accessing health care during the COVID-19 pandemic. Our findings are consistent with the emerging evidence base that patients are satisfied with telephone consultations to manage their rheumatological health (7–10). The patient experience and willingness to engage with remote consultation is likely influenced by concerns of viral transmission associated with attending a hospital. Recently, in a US cohort, 35% of 359 patients cited this as their reason for preferring a rheumatological telemedicine consultation (12). However, a key limitation of telephone consultation is the inability to perform physical examinations and pick up on nonverbal cues in a patient's body language or facial expressions. This has been frequently identified as a key factor in telephone consultation as patients do view physical examination by a doctor as integral to their experience (7,12). Interestingly, only 87 respondents in our evaluation expressed a preference against having telephone consultations as part of their future routine reviews. However, review of the free text feedback comments made by the respondents suggests patients would prefer to be seen at least once annually face to face in addition to any remote consultation. However, our evaluation reflects patient experiences during the early phases of the COVID-19 pandemic, and it is possible that patient attitudes could change during later stages.

The average age of our sample was 67 years, which is significantly older than previous reports and better reflects the population of patients being followed up in rheumatology (7–9,12). Our postal methodology removed a selection bias from online surveys to more youthful patients familiar with and having access to IT. The use of telemedicine in patients over 60 years has previously reported positive outcomes (13). However, our findings during the pandemic suggest that patients over 65 years would still prefer face-to-face

rheumatology consultations over telephone or video calls and are unlikely to have access to the later. However, there were also a large proportion of respondents who did not express a particular viewpoint relating to this, which may reflect inexperience of telemedicine or broader accessibility issues to engage with such facilities.

In contrast, our findings differ from those in a recent multivariate analysis of 151 Italian patients, exploring their attitudes toward telemedicine, identifying age not to be significant in an individual's preference (8). This difference could be associated with the demographical variation in our data, as our sample population covered a wide rural and urban catchment area of Worcestershire (with an approximate population of 500 000). Our analysis is limited in socio-demographic data, particularly in relation to educational attainment. A large Spanish investigation suggested that higher educational qualifications positively correlated with a preference for telemedicine (8,14). In addition, predictably, patients residing >50 km from the hospital also preferentially favored telemedicine consultations (8). Evaluating sociodemographic data would be helpful to further understand our patient experiences and further optimize their future health care.

Interestingly, we were able to distinguish the experience of telephone consultations within a unique rheumatological patient population advised to shield. Previous investigations have not explored the perceptions of those extremely clinically vulnerable in rheumatology and their attitudes toward telemedicine. We identified this group experienced greater anxiety about attending the hospital, feeling safer at home for their consultations but generally did share similar perceptions toward telemedicine as those advised not to shield.

Our questionnaire data, formed from a large cross-sectional sample within a period of 2 months following the telephone consultation, is less likely subject to recall bias and more likely to represent the perceptions felt during the pandemic. Within our department we were able to offer face-to-face appointments to all appropriately selected new referrals. As a result, our evaluation has not compared these patients experience to those remotely consulted for a follow-up appointment.

Our findings identified a low proportion of the follow-up patients (21%) needed a subsequent face-to-face secondary care appointment to complete their clinical evaluation. Furthermore, 224 (75%) of respondents reported their telephone consultation was convenient to access our rheumatology services. Patient centered metrics such as travel distance, cost, and parking were not explored in our evaluation to further characterize the convenience of our telephone consultations. However, in a small-scale longitudinal evaluation prior to the COVID-19 pandemic, travel distance, and cost were identified as key determinants in patient satisfaction in addition to disease control (15). At this stage further work is required to truly evaluate the resource and economic impact of remote consultation within rheumatology as a

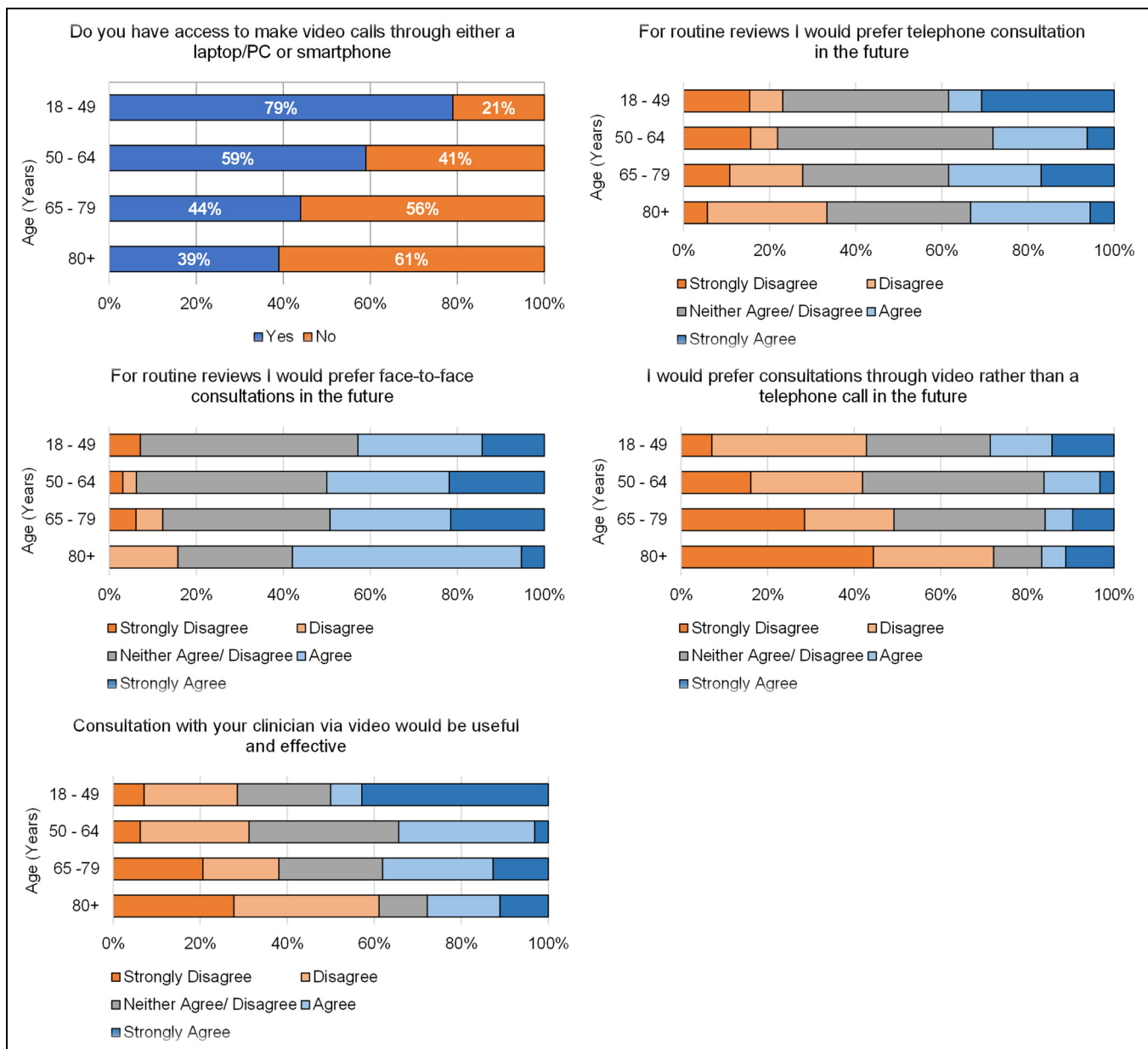


Figure 5. Patients attitudes toward telemedicine in rheumatology by age.

viable option for future service provision in the NHS from both the patient and clinician perspective.

Conclusion

The COVID-19 pandemic continues to challenge the delivery of health care, and our findings support the evolving evidence base that patients are satisfied with the use of telephone consultations in rheumatology practice. It is also interesting to note that our data suggests only a minority of patients had anxieties about coming to a hospital for an out-patient appointment during the pandemic. Anxiety was slightly higher amongst patients advised to shield. However, the step to video consultation requires further evaluation in

various specialties as further practical and acceptability issues are likely to arise from both the patient and clinician perspective. Our evaluation suggests that the views and preferences of older rheumatology patients' need to be further characterized and reflected in the delivery of health care during and after the pandemic. Older patients are less likely to have access to video consultation facilities and less likely to prefer video consultations. Health care providers must therefore ensure the needs of this patient group are recognized.

Authors' Note

MTJ collated, analyzed, and synthesized the data and wrote the attached report. RA was involved in conceptual design and

questionnaire design. AR was involved in conceptual design and project supervisor.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Ethical Approval

Approval from our hospital's ethics committee was not required for this evaluation.

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Supplemental Material

Supplemental material for this article is available online.

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