



Patient experience of virtual urogynaecology services during Covid-19 pandemic

Victoria Kershaw¹ · Zarnigar Khan² · Stephen Radley¹

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Abstract

Introduction and hypothesis Due to increasing burden on outpatient services, there is a drive from NHS policy makers to utilise virtual clinics to help curb unsustainable demand. During the COVID-19 pandemic, urogynaecology clinics were converted to telephone consultation (TC). We used this opportunity to evaluate patient perspective and identify which patients may be best suited to TC.

Methods Postal questionnaires were sent to patients following urogynaecology TCs in May to June 2020. Clinical outcome data were obtained from electronic records. The survey combined three validated tools: QQ-10, Patient Enablement Index (PEI) and NHS Friends and Family Test (NHS-FFT). Qualitative and quantitative data were analysed.

Results Of the 308 patients contacted, 165 responded (54%). Eighty-six percent of patients described their experience of TC as “very good” or “good” (NHS-FFT). Positive themes included convenience, thoroughness and feeling at ease in terms of communicating intimate symptoms. QQ-10 results demonstrated a mean value score of 77 and a mean burden score of 17 (range 0–100); 72% of patients “strongly” or “mostly” agreed to repeat TC. Following TC, 22% of patients were discharged, 72% required follow-up and 37% needed face-to-face (F2F) consultation. Post-operative patients and those with lower urinary tract symptoms benefited most, whereas many prolapse patients required F2F consultation.

Conclusions We report the largest qualitative and quantitative study of patient experience of TC in urogynaecology. TC is a convenient, acceptable and effective medium for conducting patient care. TC can support patients in communicating intimate symptoms with health professionals.

Keywords Virtual healthcare · Telemedicine · Urogynaecology · Patient experience · QQ-10 · PEI

Abbreviations

TC	Telephone consultation
VC	Virtual clinic
F2F	Face-to-face
PEI	Patient Enablement Index
NHS-FFT	NHS Friends and Family Test

Background

On 23 March 2020, the Government of the United Kingdom (UK) announced a national lockdown in response to the Covid-19 pandemic. The majority of face-to-face (F2F)

elective healthcare was cancelled with immediate effect. All outpatient appointments in a specialist tertiary urogynaecology unit were converted to telephone consultation (TC). With extraordinary volumes of remote consultation, an opportunity arose to evaluate patient experience of TC.

Prior to the Covid-19 outbreak, virtual healthcare, particularly in secondary care, has been limited [1–4]. However, since the pandemic, evidence has emerged from specialities including psychiatry, plastic surgery and urology, which describe benefits of virtual consultation, including minimal travel and waiting times, improved convenience and increased patient satisfaction [5–9]. Recent data have also been reported regarding the use of TC in abortion services during Covid-19 restrictions, finding this to be efficient and preferred by patients for service delivery [10, 11]. In the field of urogynaecology, an evaluation of a virtual clinic (VC) reported improved communication and reduced personal costs to patients, although evidence is otherwise limited in this subspecialty [3].

TCs are set to become increasingly mainstream [12]. The Covid-19 pandemic has accelerated the development and

✉ Victoria Kershaw
victoria.kershaw@nhs.net

¹ Sheffield Teaching Hospitals, Jessop Wing, Tree Root Walk, Broomhall, Sheffield S10 2SF, UK

² Medical School, University of Sheffield, Beech Hill Road, Broomhall, Sheffield S10 2RX, UK

implementation of technological advances including telehealth and e-consultation, and though some aspects of healthcare may revert to F2F consultation once the pandemic recedes, it is likely that other areas will continue to practice remotely. Nearly half of healthcare consumers in the USA now use telehealth and in 2020; six in ten general practice appointments in the UK were conducted by telephone [13]. Robust assessment of patient experience, clinical outcome, efficiency and cost-effectiveness are required as well as further evaluation of where virtual technologies are best placed in service delivery. It is likely that virtual healthcare will retain a position in the provision of frontline services, not least as it has been cited by NHS policy-makers as one of the measures needed to curb outpatient demand to more sustainable levels [14]. There is also high-level evidence that telemedicine reduces the carbon footprint of healthcare [15].

This study aimed to evaluate patient experience of TC and investigate which urogynaecological conditions are best suited to virtual care based on clinical outcome data and need for subsequent F2F appointment.

Materials and methods

This project was registered and approved by the Trust Research and Development department as a service evaluation of TC across all gynaecological sub-specialities (CEU Project reference 9919). Postal surveys were sent to all gynaecology patients who had TC in May–June 2020 (appendix). The survey was sent along with a personalised cover letter and a stamped addressed envelope. A text message reminder was sent 2 weeks following survey distribution if a response had not been received. Patients received surveys 3 to 9 weeks post-consultation, depending upon whether their appointment was at the start or the end of the sample time frame. Data from urogynaecology TCs were extracted from the responses to the service evaluation investigating experience of TC across all gynaecological sub-specialities [16]. Clinical outcome data were obtained from electronic patient records for all urogynaecology patients who attended TCs May to June 2020. The sample size for this study was based on a power calculation and the resultant number of participants needed in a VC randomised control trial conducted in this unit (number needed 121) [3].

The survey comprised three validated instruments: QQ-10, Patient Enablement Index (PEI) and the NHS Friends and Family Test (NHS-FFT) [17–19]. QQ-10 is a modified version of a questionnaire developed and validated to measure the value and burden of patient experience using questionnaires in healthcare [17]. It employs Likert scales of agreement with ten statements relating to: (1) communication, (2) relevance, (3) ease of use, (4) duration, (5) embarrassment, (6) complexity, (7) comprehensiveness, (8) upsetting, (9) future use and (10) enjoyment. Patient enablement is the measure of a patient's understanding and ability to manage their condition following a consultation. PEI is a tool used to quantify

patient enablement using questions which assess patients' understanding, ability to cope, ability to help themselves and their confidence regarding their health [18]. The NHS-FFT is a patient feedback tool used by service providers across the NHS and asks patients to rate their experience on a scale from "very good" to "very poor". It also captures free text answers to the open-ended questions: "Please explain why you gave your answer" and "Anything we could have done better?" [19].

Data analysis was undertaken using Microsoft Excel. Value and burden scores were derived using the QQ-10 scoring algorithm for the six "value" items, e.g., "TC helped me communicate", and four burden items, e.g., "TC was too long". These scores were transformed onto a scale of 0–100, with 100 representing the best possible value score and 0 being the best possible burden score [17]. Free text responses were separated into positive and negative and grouped according to themes [20]. The chi-squared test was used to calculate *p*-values for NHS-FFT responses according to condition.

Results

Three hundred eight women were contacted, and 165 responses were received (54%). The mean age of respondents was 68 years. The mean time interval from consultation to receiving the survey was 46 (range 22–63) days. The mean response time was 13 days.

QQ-10

The mean value score attributed to TC was 77 (SD 22.9), and the mean burden score was 17 (SD 13.4). Figure 1 shows scores for the individual items of the QQ-10. The highest scoring value items were "relevant", "straightforward process" and "helped me communicate". The lowest scoring burden items (i.e., least burdensome) were "upsetting" and "embarrassing". In answer to the item "Happy to repeat TC", 72% patients responded "strongly" or "mostly agree".

PEI

Table 1 presents the results of the PEI in relation to TC. No patients felt that their enablement had worsened following TC. Thirty to 37% patients felt better enabled as a result of the consultation. The majority of patients rated their enablement as "the same or less".

NHS friends and family test

Eighty-six per cent of patients described their experience of TC as "very good" or "good". In analysis of the free text responses, there were 241 positive comments (mean of 1.5 per patient) and

65 negative comments (mean of 0.4 per patient). Figures 2 and 3 illustrate word cloud depictions of positive and negative themes contained in the free text responses. In these figures, the sizes of the words are proportionate to the number of comments within that theme. The leading positive theme was “convenience” and the leading negative theme was “prefer F2F”.

A number of patients made comments regarding the convenience of TC: “I didn’t have to wait around”, “Didn’t have

to travel” and “Felt more at ease”. Another patient stated: “It was an easy process and took much less of my time. I didn’t need to take time off work and travel across town.” Others remarked on feeling more at ease; “It was nice to talk in my own home.” Several patients noted that their experience had been equivalent to a F2F appointment: “Although it wasn’t a face to face consultation I still had the same outcome. Excellent.” Many patients also suggested they felt remote consultations should form a key

Fig. 1 QQ-10 item scores

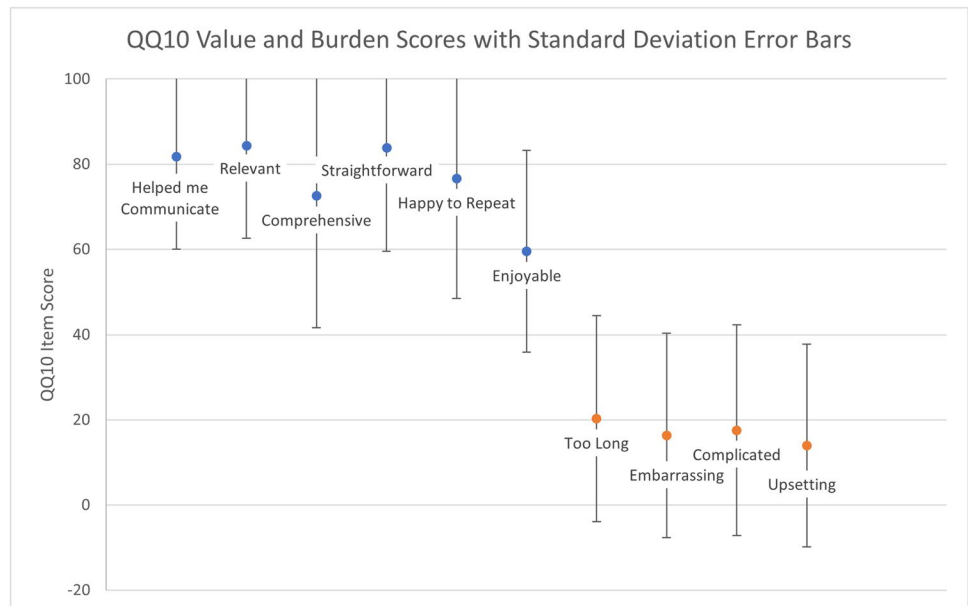


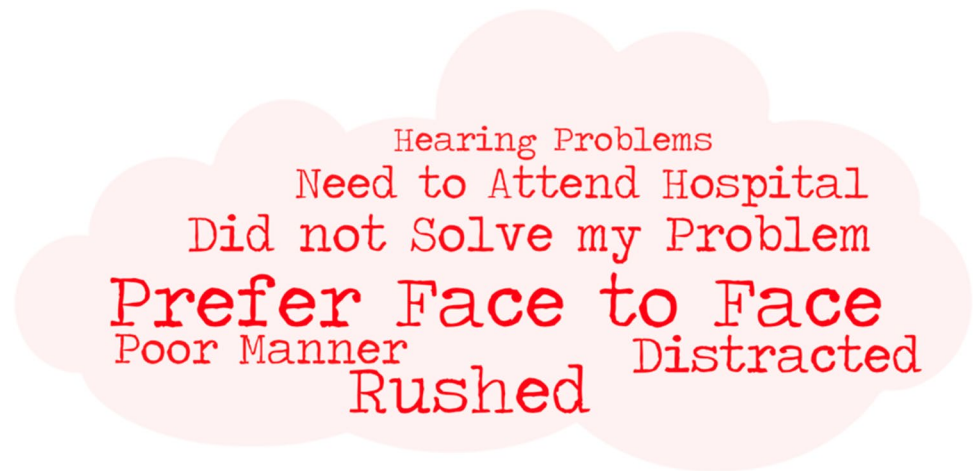
Table 1. Patient enablement index responses (n = 165)

	Much worse	Worse	Same or less	Better	Much better
Able to cope with life	0%	0%	68% (112)	21% (35)	11% (18)
Able to understand your condition	0%	0%	63% (104)	20% (33)	17% (28)
Able to cope with your condition	0%	0%	63% (104)	23% (38)	14% (23)
Able to keep yourself healthy	0%	0%	69% (114)	21% (35)	10% (16)
Confident about your health	0%	0%	70% (115)	24% (40)	6% (10)
Able to help yourself	0%	0%	68% (112)	23% (38)	9% (15)

Fig. 2 Word cloud of positive themes



Fig. 3 Word cloud of negative themes



component of healthcare delivery in future: “Think all check-ups should be done this way unless you feel you need to be examined in some way” and “Telemedicine has to be the way forward currently. There is less risk to patients and staff working this way. The face to face consults can then be kept for those who need them. Much less hassle than travelling in for an appointment. It does help that I have met the person I spoke to though.”

Several patients remarked that the TC had not adequately addressed their problems as they required physical examination: “With my condition, I needed to attend the hospital. A conversation via telephone could not resolve anything.” A number of patients also noted that the telephone appointment felt rushed: “Was a little fast paced to keep up with. Not sure if I took everything in that was said.” Other patients stated their preference for F2F: “The opportunity to have face to face consultation is far better. Phone consultations are okay for emergency but conversation about the condition is better face to face.” One patient commented that TC is most appropriate if an initial consultation has previously been conducted F2F and a rapport established: “I think it would have worked less well if I hadn’t known her, i.e., a first consultation.”

Clinical outcomes

Of the 165 patients who received TC, 155 were patients undergoing follow-up following a previous consultation (93.9%) and the remaining 10 were new patients referred to the clinic (6.1%). Table 2 compares the outcomes of the TCs with F2F appointments conducted the year previously. The follow-up rate was higher in the telephone group (72% vs 64%). Follow-up in this context refers to a combination of F2F and repeat TC appointments.

Clinical outcome data were extracted from patient records for all 308 TCs conducted May–June 2020. Table 3 presents consultation outcomes according to condition for 270 patients. Conditions in which there were more than ten patients were

analysed separately. Eight patients did not attend the appointment. Thirty patients (18%) were currently on a waiting list for a procedure and in this scenario the purpose of the TC was to discuss interim management whilst elective operating was on hold, for example, anticholinergic medication in patients awaiting intravesical Botox® injection. Excluding pessary patients ($n = 74$), 32 of the remaining 196 patients (16%) required F2F consultation (37% including pessary patients).

The patient groups with the lowest requirement for F2F appointments were those presenting with lower urinary tract symptoms (2.7%–13%) and post-operative follow-up (19%). The prolapse group had the highest proportion of patients requiring F2F assessment (81%); 89% of post-operative patients and 83% of patients with lower urinary tract symptoms rated their experience of TC as “very good” or “good”, in contrast to 76% of prolapse patients ($p = 0.05$).

Discussion

Main findings

QQ10

In general, urogynaecology patients attributed high value and low burden to the TC service with a mean value score of 77% and a mean burden score of 17%. Furthermore, the majority (72%) responded positively to the prospect of repeat TC.

Table 2. Clinic outcomes (TC vs F2F)

Outcome	2020 (TC)	2019 (F2F)
Discharged	22%	16%
Follow-up scheduled	72%	64%
Add to waiting list	5%	16%

Table 3. Consultation outcomes according to condition

Condition	No. of patients	Conservative or medical treatment	Add to waiting list	Refer to another department	Patient information leaflet	Investigation and MDT**	Did not attend (DNA)	Discharge	Needs F2F***
Prolapse	111 (including 74 pessaries)	4	2	1	2	0	1	12	90 81%
Post-op	42	5	6	2	0	3	2	19	8 19%
Overactive bladder	36	15	0	0	9	2	3	13	1 2.7%
Stress urinary incontinence	15	7	0	1	3	1	0	1	2 13%
Mixed urinary incontinence	16	8	0	0	3	2	0	1	2 12.5%
Dyspareunia	10	5	0	1	0	0	0	3	1 10%
Other*	40	14	1	8	0	4	2	11	5 12.5%

*Recurrent urinary tract infections, obstetric anal sphincter injury, voiding dysfunction, mesh complications, genitourinary syndrome of the menopause, heavy menstrual bleeding, pelvic pain, paediatric gynaecology and female genital mutilation

**Multidisciplinary team

***Face to face

PEI

Whilst 30–37% patients reported feeling better enabled by the TC, the majority of patients rated enablement as “the same or less” post consultation. Further investigation is required to establish whether TC is considered less enabling than F2F by patients or whether these results are comparable.

NHS friends and family test

The leading positive theme was “convenience”, specifically alluding to avoiding waiting, travel, hospital parking and taking time off work. Other positive themes included “thoroughness” and “effectiveness” with many patients remarking they felt they had received equivalent treatment to a F2F consultation. The leading negative theme was “prefer F2F” with a number of patients specifically commenting that the consultation had not solved their problem and they still required a F2F consultation to complete the clinical assessment. This may be due to the fact that this was an unscreened cohort, as this sample included a number of patients with prolapse who required physical examination and would not ordinarily be offered a telephone appointment outside of Covid-19 restrictions.

Another negative theme was patients “felt rushed”, highlighting an issue that telephone discussion may be associated with greater immediacy and brevity compared with F2F, which some patients may feel is a

disadvantage. This is in part due to the absence of non-verbal communication such as natural pauses in conversation, gestures and facial expressions, which would generally be acknowledged and responded to in a F2F setting, potentially lengthening consultation compared to TC. This may in part be addressed by staff training in conducting virtual consultations effectively, giving more time and specifically asking about issues they wish to discuss or enquire about, on commencing and completing TC, as well as offering patients the option to book F2F appointments if they prefer.

It is notable that one of the lowest scoring Burden items was “embarrassment” as this was also highlighted in the free text comments. Patients reported discussion of intimate problems *less* embarrassing and *easier* over the telephone than F2F. For some patients, virtual healthcare can revolutionise their experience in terms of convenience and accessibility, whereas others may be concerned about long-term shifts in healthcare and express anxiety about the loss of F2F appointments. Consideration should be given to patients requiring translation services and patients with learning difficulties, for whom TC may not be appropriate [13].

Clinical outcomes

Our findings suggest that the patient groups most suited to TC are those undergoing follow-up for lower urinary tract

symptoms and post-operative patients, in terms of service efficiency. Prolapse patients were less suitable for TC as the majority require physical examination or pessary.

These findings suggest that with appropriate triage to reduce the number of subsequent F2F appointments, cost and efficiency savings may be made as TC is less expensive in terms of resources (clinic room, administrative and nursing staff) when compared with a F2F appointment [3].

Context within existing literature

These results are consistent with the Scottish Video consultations during Covid report, which stated that most patients and professionals perceived video consulting as beneficial, both during the Covid-19 pandemic and longer term, with patient surveys demonstrating positive outcomes in terms of patient satisfaction and enablement.

In this study, the follow-up rate (a combination of F2F and TC) was higher in the telephone group compared with F2F consultations (72% vs 64%). This may reflect the unfiltered nature of this group, as it included a number of patients with prolapse who required F2F assessment and would not be offered TC under normal circumstances. It may be anticipated that with pre-screening for suitability, the discharge rate may be higher. A randomised control trial in urogynaecology showed TC to be 50% less expensive than F2F pro rata, but this potential benefit can only be realised if subsequent clinic attendance is reduced, highlighting the importance of triaging patients according to their clinical condition and requirements [3]. This is consistent with a systematic review relating to TC in general practice, which demonstrated that the telephone arm had 0.2 more follow-up consultations than the F2F arm, although telephone was on average 1.5 min quicker [21].

In line with our study, Jones et al. found benefits in terms of communications, emotions and barriers in the TC group, with patients finding it less embarrassing and easier to describe intimate problems over the telephone [3]. Similarly, existing evidence relating to use of web-based assessments suggests the disclosure of intimate issues and thus the understanding of urogynaecological symptoms and their impact on quality of life is enhanced [22].

Several randomised trials have been reported on the use of video consultations for patients with chronic conditions outside of gynaecology. These have generally reported that video consultations led to high patient and clinician satisfaction and no difference in disease progression or service use, although little evidence is available regarding cost comparison with F2F. Our study is in line with these findings although arguably is not directly comparable given the medium was telephone rather than video [23].

Strengths and weaknesses

This postal survey had a relatively high response rate of 54% and the evaluation was comprehensive, involving three validated assessment instruments. A response rate of 35–40% would generally be anticipated for a survey of this nature [24]. This may be due in part to the methods employed including a personalised cover letter, providing a self-addressed envelope and issuing a text message reminder, which are recognised to increase response rate. It is also possible that the influence of the pandemic and the positive perception of NHS care during the study period played a role in increasing response rate [25]. Although the response rate was high, we cannot be certain if the responders are representative of all patients. This cohort was not pre-screened for suitability for TC because of the sudden and absolute Covid-19 restrictions, and thus results may potentially be less favourable towards TC than if pre-screening was employed. The time interval from consultation to survey varied from 22–63 days, which may introduce recall bias as more recent feedback is often more favourable [26]. Furthermore, there were fewer new patients in this cohort than typical as the referral rate was very low during lockdown; therefore, our findings are only generalisable to follow-up patients. In addition, due to the cancellation of elective procedures during the pandemic, there is likely to be an artificially low number of patients added to the waiting list from the TC group.

Conclusion

TC is a convenient, acceptable and effective medium for conducting patient care in urogynaecology and may be valuable in tackling the current unsustainable demand in outpatient care. Pre-selection of patients for suitability is key to successful implementation. TC has the potential for efficiency, cost-saving and environmental benefits; however, pre-screening and selection of patients is required for these gains to be realised. As evidence for the use of virtual health-care in urogynaecology emerges, a more nuanced conversation about where telemedicine is best placed to streamline the process will be required [13]. Our findings suggest that post-operative patients and those undergoing follow-up for lower urinary tract symptoms are best suited to TC and we recommend further evaluation of TC in these groups prior to widespread adoption. In view of the feedback received, we advocate that as virtual clinics are increasingly utilised in the future, patients should be provided with the option of F2F consultation and guidance to support them with the TC process. With such rapid expansion there is also a question of regulation and standardisation to ensure consistency and quality of experience as well as privacy and security [13].

Appendix

Patient questionnaire

We are undertaking a survey of patients who have had experience of a telephone consultation as part of the gynaecology

service during the current Covid-19 crisis. This may have been in place of a face-to-face visit, or to provide contact, care or advice. We would very much welcome your views.

Please tick the answer below that best fits your feelings about your recent telephone consultation

	Strongly agree	Mostly agree	Neither agree or disagree	Mostly disagree	Strongly disagree
It helped me to communicate about my condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It was relevant to my condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It was straightforward	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It was too long	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It was too embarrassing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The process was too complicated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It included all the aspects of my condition that I am concerned about	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It upset me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would be happy to have a telephone consultation again in the future as part of my routine care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It was enjoyable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

As a result of your recent telephone consultation do you feel you are:

	Much better	Better	Same or less	Not applicable
Able to cope with life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Able to understand your condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Able to cope with your condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Able to keep yourself healthy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

As a result of your telephone consultation do you feel you are:

	Much more	More	Same or less	Not applicable
Confident about your health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Able to help yourself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How did having a telephone consultation compare with attending a hospital appointment in terms of convenience?

Much better	Better	About the same	Worse	Much worse	Don't know
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thinking about your recent telephone consultation, overall how was your experience of this service:					
Very good	Good	Neither good nor poor	Poor	Very poor	Don't know
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please tell us why you gave your answer
Please tell us about anything that we could have done better
Do you have any additional comments or suggestions to make about the telephone consultation? Were any important issues missed out or overlooked?

We are considering setting up more flexible appointments for some patients with certain conditions, using a computerised on-line questionnaire, to assess symptoms as well as requesting follow-up. Please tick the box below that best fits your feelings about future clinical consultations

	Str ong ly agr ee	Mo stl y ag re e	Nei the r agr ee or dis agr ee	Mo stly dis agr ee	Str ong ly dis agr ee
I would be happy to use an on-line questionnaire about my condition and request an appointment when needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

We are always trying to improve the services we provide for our patients, and it is important to involve patients in this

Would you be happy to be contacted in the future to consider helping with evaluation of Jessop Wing services, for example, by commenting on proposals, developments, information or being invited to attend meetings?

Yes No

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Contribution of each author VF Kershaw: data analysis and manuscript writing.

ZM Khan: data collection and manuscript writing.

SC Radley: project concept and design, manuscript editing.

Declarations

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Conflicts of interest None.

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