

## **Teleconsultations in Orthopaedics – The Patient Perspective**

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### **Abstract**

#### ***Aim***

COVID-19 presents challenges in ensuring gold standard patient care in hospital settings. This study aimed to assess the effectiveness of telephone consultations as a modality for delivery of orthopaedic outpatient clinics, as measured by levels of patient satisfaction.

#### ***Methods***

N = 100 orthopaedic trauma patients who received a teleconsultation were retrospectively surveyed. The survey included specific questions related to patient satisfaction scored with a Likert scale, as well as free-form questions facilitating expansion of patient opinion. The responses were quantitatively and qualitatively assessed.

#### ***Results***

In 98% (n=95) of cases respondents were either satisfied or very satisfied with telephone consultations irrespective of age group, condition or length of time since commencement of symptoms. Nearly half of all respondents (47%, n=45) would choose teleconsultation again. The provision of clear information and the convenience of teleconsultation were noted as drivers of satisfaction.

#### ***Discussion***

Teleconsultation was associated with a high satisfaction rate and may prove an effective tool in delivering remote patient care particularly in less complex cases not requiring physical examination or updated imaging. Further work addressing patient beliefs and expectations regarding telemedicine will be beneficial.

## Introduction

The Midland Regional Hospital Tullamore is a regional service for orthopaedics providing care to a population of approximately 400,000. The emergence of Covid 19 in early 2020 challenged the service with the cancellation of all elective outpatient clinics on safety grounds. A skeleton trauma outpatient service continued to operate for patients deemed in urgent need of face to face intervention. To address the needs of the remaining orthopaedic outpatients, virtual clinics were set up with patient care being managed by telephone. A virtual fracture clinic in MRHT has already found to be acceptable to patients <sup>1,2</sup> Patients in receipt of the virtual fracture clinic present with simple stable fracture patterns. In contrast, patients who normally attend outpatient clinics have more complex fractures, are postoperative, or present with chronic musculoskeletal conditions. There is limited evidence regarding patient satisfaction with telephone review among this cohort. As patient satisfaction is recognised as key in the successful delivery of healthcare <sup>3,4</sup>, analysis of patient satisfaction with these virtual clinics was sought.

## Methods

All patients due to attend orthopaedic outpatient clinics on a return visit from 25th March 2020 onwards were screened for suitability for phone call review. Exclusion criteria included patients who required intervention such as X-ray, removal/change of cast, change of dressings or those who may have difficulty communicating over the phone. Telephone clinics were conducted by non consultant hospital doctors and clinical specialist physiotherapists assigned to the orthopaedic team. Digital imaging was available to the clinician as well as access to clinical notes pertaining to previous consultations in the orthopaedic clinic. As a convenience sample, the first 100 patients who received a telephone consultation from the orthopaedic team were contacted by a researcher 7-14 days later. This researcher was not involved in any of the original phone consultations. A patient satisfaction questionnaire was administered over the phone. A number of questionnaires were considered for use but were deemed not suitable either due to complicated language or not meeting the specific needs of our service<sup>3,5-10</sup>.

Following a review of the literature on determinants of patient satisfaction, a questionnaire was designed to capture feedback regarding the recent telephone consultation. Patients were asked to respond- using a Likert scale - to questions regarding the interpersonal skills of the clinician, time given to the consultation and overall satisfaction with the telephone review. Patients were also asked to indicate whether all their concerns were addressed and whether they would opt for phone review in the future. Finally, they were given an opportunity to further expand or explain their responses around satisfaction.

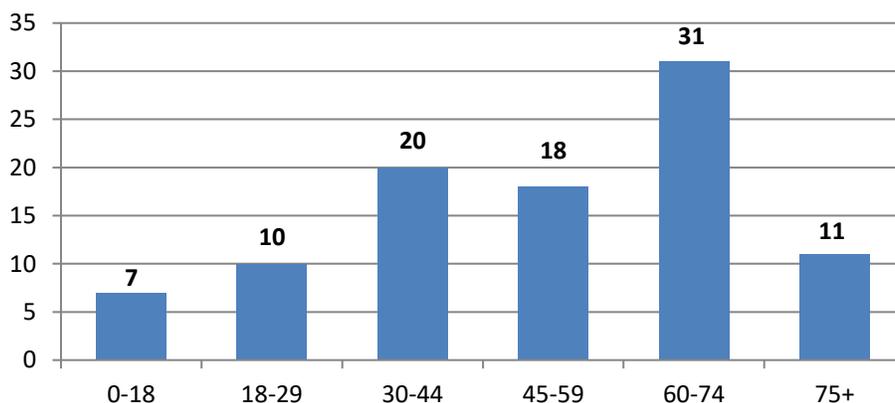
## Results

The first 100 patients who received a telephone consultation week commencing March 25th 2020 were assigned to the study. Three patients were excluded -1 patient had suffered a bereavement and wasn't in a position to partake, 1 patient was unwell and 1 patient had moved away from home with no means to contact. The resulting convenience sample was 97.

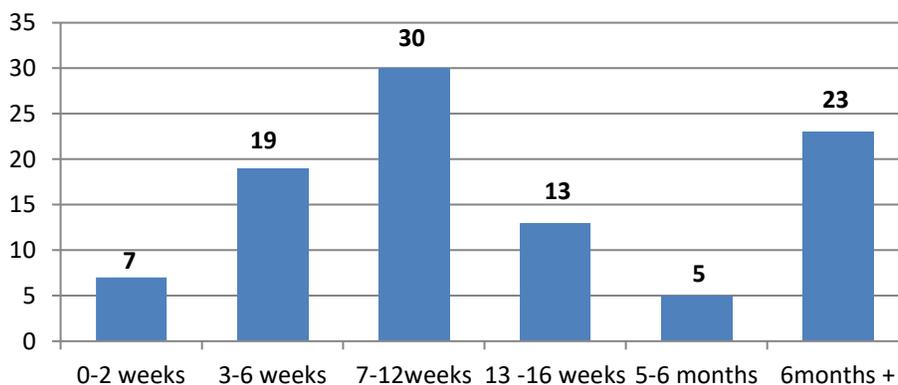
### *Demographic Data*

The age range of the 97 patients who participated in the satisfaction survey is shown in Fig. 1. English was the first language of 96% (n=97). Fifty five percent (n=53) had initially presented with an upper limb problem, 39% (n=38) had a lower limb problem and 6% (n=6) reported spinal symptoms. Thirty three percent (n=32) had had surgery for their condition which included fracture fixation and joint replacement. Sixty seven percent (n=65) had symptoms that were being managed conservatively. The time since onset of symptoms or injury is presented in Fig 2.

**Fig 1. Age Range (n=97)**



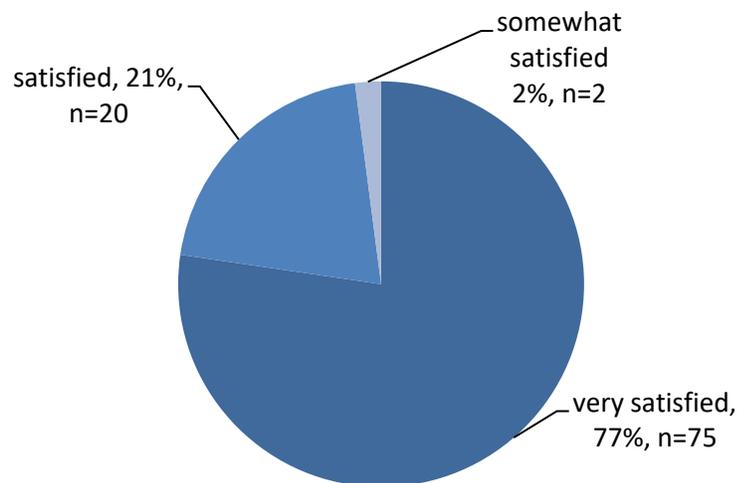
**Fig 2. Time Since Injury (n=97)**



### *Outcome of calls*

Sixty six percent of patients (n=64) were discharged after phone review. Thirty four percent (n=33) required a follow up appointment in orthopaedic trauma clinic. No patients required further phone call reviews or video calls. Most respondents were either satisfied (21%, n=20) or very satisfied (77%, n=75) with their overall consultation by telephone. Two percent (n=2) were somewhat satisfied. This was independent of any demographic factors including age. See Fig 3.

**Fig 3. Overall satisfaction with telephone consultation (n=97)**



### *Interpersonal skills of the clinician*

Ninety nine percent of patients (n=96) contacted rated the politeness and friendliness of the clinicians as being excellent (84%, n=81) or good (15%, n=15). One respondent rated politeness and friendliness of the clinician as 'fair'. All respondents reported the clinicians as being excellent (82%, n=80) or good (18%, n=17) at giving the patient enough time to describe their problem in their own words.

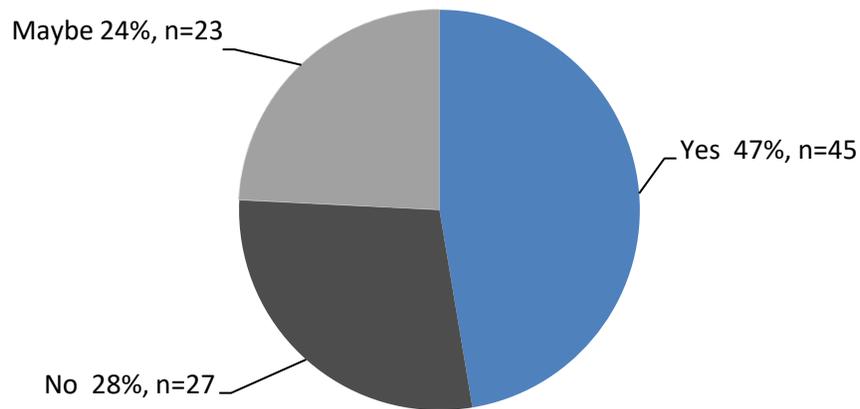
### *Patient understanding*

The majority of respondents (94%, n=91) reported understanding their treatment plan following telephone review. Two patients (2%) did not understand the treatment plan, while three (3%) were unsure. Data was omitted from one questionnaire. The majority of patients (93%, n=90) did not have any concerns that were not addressed during the telephone consultation.

### *Preference for future consultations*

When patients were asked whether they would choose telephone consultation in the future, the largest cohort of respondents (47%, n=45) would choose telephone consultation again, 29% (n=27) would not choose telephone review in the future and 24% (n=23) were unsure. Data was omitted from two questionnaires. See Fig 4.

**Fig 4. Would you choose Telephone review in the future? (n=95)**



### *Qualitative data*

Patients were invited to add further comments at the end of the telephone interview. Eighty five patients (88%) chose to respond. Responses were recorded verbatim. A number of themes emerged.

### *Drivers of patient satisfaction*

Study participants reported that giving and receiving information was paramount to satisfaction with consultations. It was important to patients that questions were answered. Patients also valued 'being listened to', 'being given time' and 'being understood'.

### *Advantages of telephone consultations*

The theme of convenience was dominant when patients expanded on advantages of telephone consultation. The lack of waiting time compared to outpatient appointments was valued. Study participants appreciated not having to drive and not having to take time off work. Three expressed the belief that they had a greater opportunity to ask questions during a telephone call than at an outpatient clinic. They felt they were given more time and felt relaxed due to being at home.

### *Advantages of Outpatient clinic consultations*

The theme of reassurance was universal among patients who preferred outpatient clinic consultations over telephone consultations. Patients who expanded on the theme of reassurance mentioned X ray or physical examination as being important to them. One patient would have been reassured by consultant review. The value of 'face to face' interaction was frequently mentioned. Some study participants reported that they found it easier to discuss issues and recall questions in person, rather than over the phone. One patient reported technical issues with the quality of the phone line as being a reason why they would choose an outpatient clinic appointment over telephone in the future. One patient reported hearing difficulties, and one patient reported language difficulties as a reason for choosing clinic appointments in the future. Five patients reported that while they were happy to receive a telephone consultation during a pandemic, that they would prefer an outpatient clinic visit in different circumstances.

### *Using a combination of OPD appointments and telephone consultation in the future*

Twenty patients (24%) who chose to add a comment at the end of the survey expressed the opinion that a combination of telephone review and attendance in the outpatient department would be preferable going forward. They felt that the first appointment should be an outpatient appointment with subsequent appointments being suitable for phone review. In addition they believed that more complex conditions should be seen in the outpatient department with less complex cases being suitable for telephone review.

## **Discussion**

The main finding of this study is that 98% (n=95) patients were either satisfied or very satisfied with telephone consultation. This high satisfaction rate is in line with previous studies of telephone consultation in the orthopaedic setting<sup>1,2,11</sup>. Earlier research on patient satisfaction indicates that the patient-clinician relationship is an important contributor to patient satisfaction<sup>4,8,12-17</sup> and so it was in this study. Participants reported that being given an opportunity to ask questions and receive clear information was extremely important. Themes that emerged as being drivers of satisfaction were; 'being listened to', 'being given time' and 'being understood'. Satisfaction was high across all age groups and contrary to previous studies of patient satisfaction<sup>18,19</sup>, we did not find a positive relationship between increasing age and satisfaction. Consistent with earlier studies on telemedicine<sup>7,12</sup> the 47% (n=45) of our study who would definitely choose a telephone consultation in the future cited reasons such as 'efficiency', 'lack of waiting time' and 'not having to take time off work'.

Interestingly, despite the high satisfaction ratings, a significant percentage of those surveyed (28%, n=27) would prefer face to face appointments rather than telephone consultation in the future and 24% (n=23) were unsure. This is consistent with a previous survey of virtual fracture patients in MRHT<sup>1</sup> where 28% (n=9) would prefer face to face follow up. In contrast, a recent study of a similar cohort of patients in the UK <sup>11</sup> found that 94% of patients would opt for phone review again. Previous experience, trust and patient expectation have been recognised as drivers of patient satisfaction<sup>4,13,15,16,20,21</sup>. The role of these factors in patient satisfaction is demonstrated in this study. The predominant theme among our cohort of patients who would prefer an outpatient clinic appointment in the future was reassurance; with physical exam, examination by a consultant and X-Rays cited as important. Patients felt that face to face appointments were suitable for initial appointment and complex injuries with telephone review being more suitable for follow up and more minor injuries.

There are a number of strengths and limitations attached to this study. Telephone review has the advantage of excellent response rates and is more widely accessible to patients who may have difficulty with the written word. It is more anonymous than a face to face interview. Despite this, there may be some risk of the patient saying what is socially acceptable rather than what they really feel. In line with recommendations by Blozik et al 2014<sup>3</sup> ; review of the teleconsultation occurred within 2 weeks of initial consultation so that the findings were not altered by memory issues or the course of the medical condition. One weakness identified in earlier studies is that while patients were asked about their satisfaction, no attempt was made to get to the root of their satisfaction which was at least partially addressed in this study by the open question<sup>22</sup>. The lack of a suitable, recognised and validated questionnaire is a well recognised limitation in studies of patient satisfaction. Extensive literature review around drivers of patient satisfaction in the clinical setting<sup>4,13-17,20,21</sup>, close study of previous satisfaction questionnaires<sup>3,5-10</sup> and team review of this questionnaire tried to address this weakness. Finally we acknowledge that these telephone clinics were conducted at a height of a pandemic which has an effect on the external validity of satisfaction ratings. Further research in non pandemic times would clarify this.

In conclusion, telephone consultation has proved itself to be a useful tool in the follow up of a general cohort of orthopaedic patients in the Irish setting. Levels of satisfaction were high irrespective of age group, condition or length of time since commencement of symptoms. Communication skills of the clinician including good listening skills and a solid knowledge to facilitate clear answers to questions is identified as paramount to successful consultation and this should be considered in the rollout of further clinics.

This study indicated areas for further research. In particular the finding that despite high satisfaction ratings, a significant cohort of the study population would prefer face to face consultation in the future should be further explored. Clear information for patients at the start of their care journey regarding appropriate follow up may increase the percentage of patients who wish to avail of telephone consultation in the future.

**Declaration of Conflicts of Interest:**

The authors declare no conflicts of interest.

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