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Telephone consultation as a sustainable method of service delivery in occupational medicine: results of a qualitative study

Abigail O'Reilly[1,2], Conor Loftus[1], Hemal Thakore[1]

[1] Health Service Executive Ireland; [2] Royal College of Physicians Ireland

Abigail O'Reilly, MB BCh BAO, MRCPI, MFOM, Occupational Health Department, Health Service Executive, Dr Steeven's Hospital, Dublin 8, D08 W2A8, IRELAND. Email: oreillab@tcd.ie

Abstract

Since the pandemic, telephone consultation is still widely used in Occupational medicine practice, but with a seemingly huge variety depending on the different occupational medicine departments and companies. Telephone consultation could be considered a sustainable alternative to face-to-face consultation in the long term. The aim of this research project was to start an evidence base for the opinions of Occupational Health Physicians (OHPs) regarding telephone consultation. This study also sought to gather further information on the perceived benefits and limitations of telephone consultation as per its current users (OHPs) and identify ways to improve the practice of telephone consultation.

This research project involved interviewing Occupational Health Physicians and analysing the data collected (using thematic analysis) so that the utility of telephone consultation as a means of consultation could be reviewed [12-16]. Semi-structured interviews were carried out with eighteen specialist occupational medicine physicians in Ireland. Data was initially coded and then organised into themes.

The main findings from this research project identified five themes: Quality of Care, Professional Standards, Barriers to Telephone Consultation, Optimal Use of telephone Consultation, and Potential Improvements and Useful Change for Telephone Consultation. Some of these themes have previously been identified in research from other medical specialities.

Upon consideration of the themes and subthemes identified in this study, telephone consultation could be used by Occupational Health Physicians as an adjunct to face-to-face consultations and in some cases as a direct alternative. Further research into this area with pilot studies or comparative trials will provide definitive answers as to the role of telephone consultation in occupational medicine into the future. Telephone consultation would appear to be a sustainable method of service delivery in occupational medicine. Clinical governance for telephone consultation in Ireland is currently lacking with no clinical guidance available specific for occupational medicine. If telephone consultation is to be considered a sustainable method of service delivery in Occupational medicine, a solid foundation of clinical guidance and governance will be required.

Keywords: occupational medicine, telemedicine, telephone consultation, qualitative

Introduction

Telephone consultation was used in occupational medicine practice to a very limited degree prior to the covid-19 pandemic. The pandemic saw an expansion in the use of telephone consultation as a necessary means of complying with social distancing guidelines and facilitating the continued delivery of occupational medicine services. Since the pandemic telephone consultation is still widely used in Occupational medicine practice, but with a seemingly huge variety depending on the different occupational medicine departments and companies. Guidance around telephone consultation is very limited, with the Health Service Executive [1], the General Medical Council [2], the National Health Service (NHS) [3] and the Irish Medical Council [4] providing the main general information for OHPs, and this guidance is not specific to occupational medicine. As such in Ireland, there is no specific legislation governing telephone consultations in medical practice. This research is aimed at addressing this lack of focus on occupational medicine, by initiating an evidence base of practitioners' views of telephone consultation in Occupational medicine beyond the pandemic. Video consultations are also currently used by some OHPs in their clinical practice; however, this is limited to private practice and is not used in any publicly run occupational health departments. Telephone consultation alone was chosen as the focus of this research as it is used across all private and public occupational health services.

The main research questions of this study were:

1. What are the views of occupational medicine physicians regarding telephone consultation as a means of consultation?

2. What are the perceived benefits and limitations of telephone consultation as per its current users (OHPs) and are there ways to improve the practice of telephone consultations?

Methods

Semi- structured interview was chosen as the method of data collection for this research project as it was the most convenient for both the researcher and the participants. The open-ended nature of the research interview questions developed allowed for the broadest qualitative data collection.

Ethical considerations

Ethical approval was sought from the Royal College of Physicians Ireland (RCPI) Ethics Committee and following their comprehensive review, full approval was granted for this research.

Data collection

Participants (i.e., OHPs) in the interview stage of the project were recruited by sending an invitation email to OHPs listed on a national Occupational health service summary document [5], published by the HSE, and also to the OHPs running the major private centres in Ireland. A total of thirty-seven invitation emails were issued; it was expected that approximately one third would respond positively to this request for an interview. A snowball method was used to find further participants. In total, eighteen OHPs were interviewed.

Data was collected by asking a series of interview questions to each participant in the research project. These questions were developed for the purpose of this study and are not taken from the literature, as no previous studies in this particular area exist. The development of these research interview questions was guided by similar studies in other areas of medicine that looked at healthcare provider opinions and perceptions of telemedicine. These

similar studies included the perceptions of GPs [6,7] mixed healthcare providers [8,9], Nephrology clinicians [10], and physiotherapists [11]. The interview questions were also informed by reviews in the relevant literature [12-14]. See appendix A for the questions in the interview guide.

Information was collected using written notes, as the semi-structured interviews were carried out over the telephone and in person. Following receipt of a signed declaration of secrecy and consent from the participants, an interview guide, setting out the key research questions was sent to them. By sending the interview guide in advance, it afforded the research participants time to consider each question, helping to maximise the quality of the interview feedback.

Framework for data analysis

Data was analysed using thematic analysis as guided by the literature [15-19] and previous qualitative research given that this is a relatively flexible approach to qualitative data. Patterns and common themes were identified and considered in 'semantic' and 'latent' categories [18]. Thematic analysis was carried out using the six phased approach as outlined by Braun and Clarke [18]. Qualitative data from the interviews was initially coded, these codes were then grouped into different themes.

Braun and Clarke's six phased approach:

i. familiarisation with the data
ii. generation of initial codes
iii. searching for themes
iv. review of themes
v. defining and assigning names of themes
vi. production of a report.

Results

Participant response rate

At the outset of the project, thirty-seven OHPs were contacted about potentially participating in an interview. Of these, eighteen were interviewed. The response rate, therefore, - was 48.6%, which is high, and greater than what was initially expected. A report published by the RCPI in 2019 [20] estimated that there were approximately 65 specialists in Occupational Medicine in active practice in Ireland, thus this research project recruited 27.7% of the total number of specialists in this field. The proportion of weekly consultations as telephone consultations was taken from question 1 of Appendix A when further probed by the interviewer.

Table 1. Participant demographics.

Proportion of weekly consultations as telephone	Number of participants (%)
Less than 25% telephone consultations	4 (22.2%)
25-50% telephone consultations	6 (33.3%)
50-75% telephone consultations	6 (33.3%)
>75% telephone consultations	2 (11.1%)
Type of Clinical Practice	Number of participants (%)
Public	10 (55.6%)
Private	1 (5.6%)
Public and Private	7 (38.9%)

Categorisation of data into themes and subthemes

The data was coded and grouped into five major thematic categories. These categories were considered the most appropriate to arrange the data, however, there was still some overlap between these themes which is to be expected. The themes identified were:

A. Quality of care
B. Professional standards
C. Barriers to telephone consultation
D. Optimal use of telephone Consultation
E. Potential improvements and useful change for telephone consultation

Each of these five main themes was further subdivided into subthemes as outlined below.

Please see the tables below for some samples of the comments recorded regarding the five major themes and further subthemes identified.

Table 2. Commentary from participants for quality of care.

Quality of care - perceived benefits for OHPs	
Greater efficiency	'Cuts the time for consultations', 'much quicker than face-to-face',
Less interruptions	'Less likely to be interrupted during a phone call'.
Cost-effective	'Saves money', 'cost effective for service users'.
More timely appointments	'if there is limited availability in one office, the appointment can be offered in an office at a distant location'
More targeted and focused	'Get down to business more quickly', 'more focused and faster consultations'
Effective	'Very useful in certain circumstances'.
Similar rates of non-attendance	'The same rate of DNA (did not attend) for face-to-face and telephone consultations'.
Benefits for Service Users	
Greater Convenience	'So much more convenient for service users'
Easier Access from remote areas	'From geographical point of view, it's very convenient', 'easier for those otherwise travelling large distances'
For very unwell service users	'For people who really aren't well and find it difficult to travel'
Feedback from service users	'Mostly informal feedback but majority positive'
Ease of service users	'People can be much more relaxed during the consultation as they are in their own home environment'.
Issues for Referring Managers	
Preference for face-to-face	'Managers feel telephone is not as good as face-to-face', 'clients want face-to-face as they feel they are getting more value'.
Referral to occupational health as a punitive measure	'Referrals can be an almost punitive effort'
Manager queries more likely with telephone	'More likely to get questioned by management following the report being issues if it was a telephone consultation'.
Challenges to Quality of Care	
Tendency to chat more in person	'There is a tendency to chat more in person and thus develop a better rapport'
Consultation as an intervention	'face-to-face consultation can be a therapeutic intervention'.

Rapport not as complete	'Telephone is not as good for building rapport or trust', 'rapport is built up better at face-to-face appointments'
Telephone not as comprehensive	'Telephone consultation can be considered as less than a face-to-face consultation- just a telephone consultation'.

Table 3. Commentary from participants for professional standards.

Professional standards	
Consent by telephone	'More care taken around consent over the phone', 'verbal consent can be questioned more than written consent'.
Medicolegal implications for services offered abroad	'Telephone opens up the ability to deliver services abroad which requires insurance and regulation consideration'.
Need for policy	'a local policy would be helpful'.

Table 4. Commentary regarding the barriers to effective telephone consultation.

Barriers for telephone consultation	
Technical issues	'coverage can sometimes be bad and alternative landline numbers are needed although not always available'.
General Barriers	'easier for a misunderstanding to happen on the phone', 'with sensitive disclosures, you can't offer a tissue or shake a hand over the phone', 'face-to-face is better to allow service users to show engagement'-'need to make the effort to come in', 'silence can be misinterpreted on the phone'
OHP-related barriers	'MSK cases need to be examined', 'Interaction with people is a big part of the satisfaction of the job', 'much more tired after carrying out a day of telephone consultations compared to face-to-face appointments', 'mismatch between impression over the phone and in person', 'difficult to triage referrals for suitability as underlying issues not always mentioned on referrals'
Referral Specific barriers	'Skin issues need face-to-face appointment', 'reported performance issues need a face-to-face appointment', 'difficult for those with English as a second language', 'not suitable for those with hearing or speech impairments to be done by telephone'.

Table 5. Optimal use of telephone consultation.

Where and how telephone works best	
Depending on case suitability	'Success of telephone depends on the case', 'review appointments are good for telephone', 'good for reviewing those on long term sickness absence', 'helps with timing future face-to-face appointment if needed' 'some psych cases work well and some don't work well', 'interval management for cases awaiting tests'
Ingredients needed for success with telephone	'Need to use a headset for telephone', 'once rapport is built, telephone has a role', 'having additional correspondence or evidence to hand at time of consultation'
Factors for OHPs	'Recommendations often mostly based on history and tolerance so conducive to telephone in Occupational medicine', 'can multi-task better on the phone- difficult to do this in person as can sometimes seem like you're not focusing on the person'.
Factors for Service users	'Definite environmental positives with telephone', 'is a way of getting things moving for someone when they don't have to travel'.
Skills needed for OHPs	'skills improve with experience', 'good communication skills are even more important for telephone', 'the art of listening' 'harder for less experienced OHPs', 'clarifying and confirming by summarising is very important to ensure you understand the service user'.

Table 6. Potential improvements and useful change for telephone consultation.

Potential Improvements and Useful Change for Telephone Consultation	
Training for OHPs	'There should be formal training' 'mandatory training for trainees', 'training should be built into HST' 'peer-learning by talking to OHPs experienced in it' 'should be formal teaching with guidance form the faculty'
Proforma for telephone consultation	'a strict proforma would help' 'standardising the approach'
Information leaflet for service users	'Having an information leaflet for service users prior to their telephone regarding privacy, the order of things if the call drops etc'
Guidance document for OHPs	'There should be a policy or SOP' 'guidelines and an algorithm would help' 'information on what cases are appropriate and how to categorise them'

Discussion and conclusion

Response rate and participant demographics

The response rate of 48.6% was significantly better than what was originally anticipated and represents a sizeable portion (27.7%) of the total number of specialists in occupational medicine. Recruiting such a high percentage of the total population should mean that most of the pressing issues relating to telephone consultation in occupational medicine are covered in this research.

The participant demographics indicate a relatively balanced group of participants, with just over half working in the public sector alone and just under half working in the private, or private and public sectors. Additional demographic information for the participants, for example, regarding their sex or age, was not collected as it might potentially affect their anonymity given that occupational medicine is a relatively small specialty in Ireland.

Further discussion of the five main themes

A: Quality of care

The subthemes identified in this category address the core research questions of this study. Some comments from the OHPs who participated in this project reflect issues which have been mirrored in the literature from the likes of GP practice [21-24]. Randhawa et al [6], in their pre-pandemic study, noted the utility and practicality of video consultation. Similar benefits were noted in this research project also, albeit for telephone consultation rather than video consultation. Some of the more unique issues for occupational medicine, such as the mixed responses from referring managers to telephone consultation, and the idea of the occupational medicine consultation as a therapeutic measure itself has not been previously discussed in the literature. Certainly, the reports from the OHPs in this study that feedback (while mostly informal) from service users is largely positive towards telephone consultation, has been highlighted in the literature already [25-30].

B: Professional standards

The topic of consent was certainly a strong subtheme in this category and the data serves to highlight the complexity of consent for telephone consultation. Consent in occupational medicine is an essential requirement that must be addressed before any kind of consultation is carried out (be that telephone or otherwise). The question of whether verbal consent is fully sufficient remains- perhaps verbal consent can indeed be questioned more than written consent as would be the case for a face-to-face consultation. The issues around consent have not been very well explored in the medical literature to date and represents another gap. OHPs who participated in this study, also noted the need for a policy to underpin telephone consultation, as it is currently lacking. This highlights a deficit in the clinical guidance and governance of telephone consultation in Occupational medicine in Ireland, which appears to be consistent with other European countries, and needs to be addressed. The National health service (NHS) in the UK has a document guiding primary care centres on how to introduce online consultations into their service delivery but does not go into detail regarding case selection and does not cover occupational medicine consultations [31].

C: Barriers to effective telephone consultation

The data collected from this research project shows that there are few technical issues for telephone consultation, with mobile phone coverage being the sole barrier in this respect. One of the stronger themes identified was the difficulty around

establishing a good rapport with the patient by telephone. The comments noted by participants in this study and their concern about how telephone consultation can negatively affect the doctor patient relationship has been mirrored in other studies. Randhawa et al [6] noted similar themes in their research regarding General Practitioners in the UK in 2018, prior to the pandemic. Halcomb et al [32] also touched on this in their pandemic research relating to Primary Care in Australia but did not go into great depth on the topic. Shafi et al [33] revealed similar conclusions in their eight-country study relating to primary care at the height of the pandemic. While there is no other research specific to occupational medicine, the concerns for the quality of the doctor-patient relationship appear to span medical specialties.

Other barriers such as the referral specific barriers added to this theme in a dominant way. Certain referrals to OHPs will require a clinical examination which simply cannot be substituted by a telephone consultation. Again, Halcomb et al [32] found similar results in their study of Primary Care, as did Wanat et al [34].

A sub-theme which has not been very well explored previously in the literature, is the difficulty for patients/service users with hearing impairment, or speech deficits while using telephone consultation. Another cohort identified by this research that might have increased difficulty using telephone consultation, were patients who did not speak English as their first language. Scott Kruse et al [12] also identified language as a potential barrier in their systematic review of telemedicine prior to the pandemic.

D: Optimal Use of telephone consultation

The participants in this study also identified types of cases which are particularly suited to telephone consultation. These types of referrals included follow up or review appointments, pregnancy referrals, or long term sickness absence cases. Divergent opinions were identified regarding mental health cases; some OHPs felt that non-verbal cues and body language were essential for these cases, while others felt telephone consultation was an acceptable method of reviewing stress referrals. The varying opinions on mental health cases have not been recognised in the literature to date as these issues pertain directly to occupational medicine, and as has been mentioned previously, there is a gap in the evidence. While general practice would commonly see mental health or stress cases in their daily cohort of patients, GPs are coming from a treatment approach. Conversely in occupational medicine, the OHP is more focused on the effect of the medical issue on the patient's fitness for work and their ability to carry out their role.

Other factors identified by the participants which aided with successful telephone consultations included having all relevant correspondence for the case to hand at the time of consultation and the establishment of the doctor patient relationship and rapport at a face-to-face consultation prior to the telephone consultation. Again, this has not been previously well described in the literature.

The idea that telephone consultation can bring more people into the workforce through remote working, as well as improve work-life balance, was also a subtheme in this category. This is a topic well worth further discussion, as the issue of burnout is still very much to the fore of healthcare in Ireland after the pandemic [35]; any potential antidote to this crisis is deserving of consideration. Telephone consultation can also bring more people into the workforce by enabling more timely appointments to be offered and thus those service users who are

fit to return to work may do so in a more efficient manner.

Participants in this study also highlighted the potential positive environmental impact telephone consultation can have as opposed to face-to-face consultations which has been similarly noted by Purohit et al [36] in a recent systematic review.

Opposing views were seen relating to the skills required for telephone consultation (communication and listening skills), with some OHPs reporting that the skills needed for OHPs are the same for telephone and face-to-face consultations. However, other participants felt that different skills were required for telephone consultation versus face-to-face encounters but may found it difficult to further describe what these skills were. Halcomb et al [32] identified the need to develop skills in practitioners in the art of telemedicine but this was not specific to telephone consultation as it also included video consultations.

E: How telephone consultation might be improved

OHPs remarked that training should be made available to those carrying out telephone consultation (and could be introduced as part of Occupational Medicine Higher Specialist training). Murphy et al [37] came to similar conclusions that support and training is required for GPs carrying out telephone consultation in Primary Care.

The creation of a proforma for telephone consultation for OHPs to follow was also suggested from participants. Such a proforma could consist of an itemised list which could be ticked off by the OHP as the consultation was carried out. The list might include consent, checking the ID of the service user to ensure the correct identity, topics to be covered etc. Many participants also proposed that a guidance document, policy, algorithm or SOP (standard operating procedure) should be designed so case suitability, for telephone consultations, is better defined for OHPs. As far as this author is aware, a guidance document regarding case suitability has not been produced by any overseas colleagues in Europe or further afield. OHPs also suggested that the addition of an information leaflet to service users prior to their telephone consultation would be useful.

Strengths and limitations

A strength of this study is that it addresses a gap in the literature regarding the effectiveness, benefits and limitations of telephone consultation which are unique to Occupational Medicine.

A limitation of this study is the lack of detailed demographic data collection, which prevents one from ascertaining whether the data collected might be potentially biased or skewed due to these demographic factors. Another limitation of this research is that the coding and thematic analysis was carried out by the author alone, and thus, may have introduced a level of bias which could have been addressed with other researchers present.

Another limitation of this study was the bias introduced by asking OHPs their opinions on what feedback they had received from service users about telephone consultation. This could have been addressed by seeking the opinions of service users directly, however, this was beyond the scope of this research project.

Recommendations

The issues regarding telephone consultation as identified by the participants in this study certainly give a good argument towards additional research in this area. A pilot study looking at face-to-face consultations followed by telephone reviews, as appropriate, might be useful. Another area that would

be useful to examine further, would be the development and testing of a criteria or guidance algorithm for case suitability and selection for telephone consultation.

The participants in this study also highlighted the current lack of national or local clinical governance for telephone consultation. It would appear to be currently used on an almost ad hoc basis by OHPs in Ireland, as such there is no recognised standardised approach for it. A policy, standard operating procedure and guidance document regarding telephone consultation and occupational medicine would give a necessary framework for OHPs.

Another useful idea noted from participants in this research project, was the creation of an information leaflet for service users regarding telephone consultation. This would serve to manage service users' expectations about their upcoming appointment and allow them to properly prepare for it. Certain occupational health services in the UK have addressed this by providing further information for service users about telephone consultation on their websites [38], these could provide a helpful basis for further development.

Telephone consultation is an old method of communication, it has the power to enhance our occupational health services if used appropriately, with the correct guidance and clinical governance.

Conflict of interest

The authors declare no conflict of interest.

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Appendix A

Structured interview questions.

1. How many telephone consultations do you carry out on a weekly basis - as a percentage of total consultations?

2. Do you work in a public or private setting or both?

3. Generally, what do you think of telephone consultation as a tool?

4. What do you think works well with telephone consultation?

5. What do you think doesn't work well with telephone consultation?

6. If required, what changes need to happen to improve telephone consultations?

7. What skills do you think are needed to perform telephone consultations that differ from face-to-face consultations? What efforts should be made, if any, to develop these skills in practitioners?

8. What feedback have you received (if any) from service users about telephone consultation?

9. Do you have any questions for me or anything else you would like to add?