

# Psychiatry By Videophone: A Trial Service In North West England

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**Abstract.** In this paper we report on the use of a video link between two general practices and a hospital based mental health team in North West England to provide a trial telepsychiatry service for individuals with depression and anxiety related disorders. Patients ( $n=16$ ) took part in an evaluation of the service by both structured questionnaire and semi-structured interview. The results of the evaluation study suggest that patients may be highly critical of telemedicine systems and that they do so not simply on the grounds of the technical quality of video links, but also because the remote link increases the difficulty that the patient faces in expressing deep seated emotional and existential problems. It is not, therefore, simply a matter of technical quality in the link, but also a question of the quality of interpersonal relations perceived by the patient.

## 1. Introduction

New technologies for telecommunications apparently offer clinicians an enormous range of opportunities for developing remote doctor-patient interaction [1]. The use of interactive video, especially, seems to promise the possibility that geographical inequalities of service provision and access might be minimised. Certainly there is a growing technical and clinical literature that is founded on this kind of assumption. The promise that new technologies offer in this regard is not new: indeed, clinicians have been working on developing telecommunications-based medicine since the 1870s [2]. However, the tremendous advances made in video-conferencing and store-forward data transmission technology in the past two decades have made telemedicine a real and practical possibility.

In this paper we describe some results from an evaluation study of a telepsychiatry service in North West England. Interactive video seems to be uniquely suited to psychiatry, since the latter depends primarily on the doctor seeing and speaking with the patient rather than on an examination of vital signs. The problems that are encountered by medical or surgical specialties—in collecting and transmitting a range of data about the physical state of the patient while simultaneously engaging in verbal interaction are absent from such an encounter [3]. The existing literature on remote doctor-patient interaction in psychiatry is encouraging, since it seems to suggest a high degree of acceptability and efficacy of these consultations in the view of both clinicians and patients [4].

In normal circumstances people with minor mental health problems who need specialist help—for example, with anxiety or depression—are referred by their general practitioner to a mental health team based in a nearby hospital. This may involve the patient in a considerable waiting time, followed by a visit to an outpatient clinic that may be a source of considerable disturbance or anxiety to them. In the present study, patients presenting at two general practitioners' surgeries in North West England which referred to the same mental health team were offered an appointment with a psychiatrist by video link.

## 2. The Study

### 2.1 *Service and evaluation methodology*

The project reported provided a trial service by videophone for psychiatric consultations between two general practice surgeries in North West England and their local Mental Health Team. Patients ( $n=16$ ) suffering anxiety and depression related disorders ( $n=6$  males, mean age 47; and 10 females, mean age 32) were referred by general practitioners for remote assessment or management by a psychiatrist. One patient did not attend for an initial consult using the system. Subsequently, 10 of these patients used the system for follow up interviews with the psychiatrist. No patient waited more than 7 days to be seen via the videophone link, whereas the normal wait to see a community psychiatric nurse was 12 days, and to see a consultant psychiatrist 26 days. The videophone link was set up in a quiet room away from other public areas of the general practitioners surgery. On arrival the patient was shown to the room and then left alone to speak to the psychiatrist. No member of the surgery staff or evaluation team sat in with the patient. The psychiatrist's videophone link was set up in an office at the mental health team's building some miles away.

Evaluation was conducted using both structured questionnaires and semi-structured interviews. The latter were tape-recorded and transcribed and subsequently subjected to a conventional model of qualitative analysis of natural language data [6]. Appropriate research ethics committee approval was obtained and all patients provided properly informed consent: all patients ( $n=15$ ) agreed to take part in the evaluation and were interviewed after using the videophone link. All clinicians involved in the provision of psychiatric services to this population were also interviewed.

### 2.2 *Technical description of the videophone system*

The service reported in this paper was based on two British Telecom VS1 videophone units, connected by standard British Telecom ISDN2 lines. This unit was selected because it was by far the simplest videophone unit available to us, which could be used with a minimum of training by both clinicians and patients alike. It was also highly portable, and this meant it could be moved between sites without specialist technical support and assistance. In these respects, the VS1 was superior to existing PC based systems, which while much cheaper were less portable and more demanding of specialist technical support. It also had the advantage of being very obviously a telephone with a video screen, rather than a computer with a video-camera attached: this, we felt, had certain advantages when offering a service to people with mental health problems, who were already highly anxious. The videophone also has the advantage of being difficult to interfere with its configuration. There is no keyboard that might accidentally or deliberately be interfered with by users. Even so, the VS1 unit used in conjunction with ISDN2 poses a number of problems. It has a relatively slow and jumpy picture, and the picture quality itself is often poor. It emphasises both frame tension (uncertainty about who is outside the field of vision defined by the LCD display); and gaze disjunction (neither participant in the exchange actually makes eye contact because they are observing each other on screen, rather than looking directly at the video camera). These have been established as key problems in doctor-patient interaction by interactive video [5]. During the life of the trial service it was intended that the videophone service should be available for 75.5 hours. In fact, nine hours were lost because of user error or service withdrawal.

## 3. Responses To The Video Link

Patients who used the videophone link seemed to express a degree of satisfaction with the service they received. The system was certainly acceptable to them. The advantage of

qualitative research techniques, in this context, however, is that it is possible to develop a picture of patients' experiences in some depth. In this context two kinds of technical objection to the videophone link emerged. The first of these related to the way in which the videophone itself affected the conduct of interactions.

"There was a time lapse I noticed, which I found disconcerting sometimes—because you both want to say something and then you both stop—you don't know who's going to carry on, so you wait for a time lapse, [but] I got used to that..."

In this context the delay that arises from a relatively low speed connection affected the conduct of *verbal* interaction. Both clinician and patient found themselves speaking at the same time and initially it was difficult for both to engage in a fluid conversation. The important implication of this for the psychiatrist was that it was difficult to develop a picture of how the patient verbalised their feelings and problems. But it also meant that the psychiatrist had to adjust his consultation style to fit the technology rather than the patient.

"Because of the gap and the pause, you have to be just a little bit ahead of the game. So if you want to interrupt somebody, you have to time it a little bit different."

The second kind of objection that patients offered to the videophone link was one which relates to the problems that are involved in using a relatively poor quality picture. Neither patient nor clinician could necessarily *see* the other with the degree of detail that they regarded as necessary.

"The thing that came over to me was that you don't sort of interact in a face to face way because it's difficult to pick up expression, facial expressions—as to whether he [the psychiatrist] was pleased with what he was saying, or whether he understood what I meant."

But these objections came together in a more fundamental way. Indeed, we might see them more usefully not as criticisms of the technology itself, but rather as indicators of a troubling interactional problem for the patient using such a system. The patients who used the videophone link had to find a way to convey some deeper aspect of their *self* through it to the doctor. It was apparent that their difficulties in doing this were the source of their dissatisfaction.

"It was very difficult to show emotion, hear or see emotion, obviously, on the screen. So you tended to hold back a little bit that way...."

Or, in another case:

"You feel stupid. You feel like you're talking to yourself really. I felt just like I was talking to the telly."

Patients who used this system were not, of course, simply trying to convey a set of neutral facts about their condition to the psychiatrist. They were also trying to convey some sense of the character of their lives, and the *emotional reality* of their circumstances to him. In this sense, they were following a wider pattern of learned behaviours that circulate in our society about how to convey the experience of illness to the doctor [7]. Anxiety and depression are, at one level, experiences of highly extended and abnormal emotion. In therapeutic terms, the psychiatrist then faced the problem of how to deal with these extended emotions in a context in which he was both physically, and emotionally, remote. For example:

"I think, what has been difficult for those people who have found it difficult is that they [did so] because they seemed to be aroused and anxious. When you are with someone face to face for an hour, most people settle by the end of the hour, they would feel more relaxed—I would be able to help them feel more relaxed. But on occasion it has been difficult in these conditions."

This was not simply a matter of helping the patient to 'relax' into a technological 'fix'. It had important therapeutic implications because much of the verbal doctor-patient interaction in psychiatry is not simply about establishing the nature of the patient's disorder, but developing interactional strategies to ameliorate and mitigate this.

"But I think.... What has been clear to me is that when, in a case of addressing people's problems using say, for example, behavioural techniques for anxiety problems, I would normally run through with them the principles of behavioural techniques and demonstrate some techniques to them, that's actually quite difficult when you are not face to face."

The critical points that both patients and clinicians made about the videophone system are important in understanding the limitations of such a system in clinical practice at a time when proponents of telemedicine are pressing for greater investment in remote service provision [8]. However, it is important to also note that for some patients, this system seemed to pose relatively greater perceived benefits. Some patients found it 'far easier to tell him things I wanted to say'—in one case precisely *because* the patient could not see the doctor's facial expression clearly. One patient in particular, who was dealing with a crisis of sexual identity amongst other things, was glad of the distance that was inherent in the system.

#### 4. Conclusion

Much debate about telemedicine has assumed that once the question of the technical standard of data transmission is resolved, then consultations will follow in a form that replicates that of the normative face-to-face consultation [9]. In part, this may be because evaluation studies have employed one-dimensional measures of acceptability and utility. This study suggests that patients' and clinicians' perceptions of the acceptability of telemedicine systems are the product of a range of factors that are not necessarily amenable to such measures. In particular, we have noted that criticisms of the technological quality of telemedicine systems may mask a more fundamental problem: that the quality of human interaction that is maintained through a video link may not be sufficient to achieve a genuinely therapeutic result.

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