

# Computers in the consultation: the patient's view

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## SUMMARY

**Background.** *The use of computers in general practice consultations is becoming widespread.*

**Aim.** *A qualitative study was undertaken to determine how patients in one practice responded to the use of computers, and the issues which particularly concerned them when doctors used computers in the consultation.*

**Method.** *Thirty patients whose age-sex characteristics were proportional to the age-sex distribution of one practice were selected to be interviewed within two weeks of a consultation. The interviews were taped, transcribed and analysed.*

**Results.** *Patients had seen or used computers in many other places and accepted their role in data management. Patients with more experience of computers were more aware of their limitations, particularly with regard to the possibility of loss of confidentiality. Patients did not think the use of a computer led to a loss of the personal touch in the consultation as long as verbal skills and eye contact were maintained. However, they did expect doctors using computers to have acquired computer skills. All but one patient said they wanted to see what was on the screen, although 11 did not know they had the right to read their notes on the screen.*

**Conclusion.** *Patients regarded the use of computers by their doctors as normal and indicative of the doctors being up to date. Most respondents were concerned about possible loss of confidentiality. This concern, and their expressed preference for computer details to be visible and shared, pose challenges to doctors' technical and communication skills.*

**Keywords:** *computer assisted consultation; consultation process; patient attitude.*

## Introduction

**D**URING the 1980s and 1990s general practices have increasingly become computerized. Doctors have to integrate the use of desktop computers with their other interviewing and consulting skills. Early assessment of patients' view of computers alerted doctors to some concerns: a third of patients in two studies believed their confidentiality or the 'personal touch' would be reduced.<sup>1,2</sup> Over a half of patients in another study expressed the fear that 'the personal touch' in the doctor-patient relationship would be lost.<sup>3</sup> One study compared patients who reported negative or favourable attitudes towards computers and found that those with negative attitudes had higher stress levels after consultations in which computers had been used.<sup>4</sup>

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Patients with more experience of computers in the consultation room or elsewhere generally have more positive views of the use of computers.<sup>5</sup> One study found doctors who tried to minimize using the computer in the consultation were rated more adversely than a doctor who used it 'conversationally' during the interview.<sup>5</sup> Another study compared patients' responses when the computer was placed near or far from them, and found patients tended to prefer the near position.<sup>6</sup>

What do patients perceive as being the advantages and disadvantages to doctors of the use of computers in the consultation? Which aspects of computer use particularly concern patients? What do patients want to see about themselves on a computer screen? Does the way in which two doctors use a computer in the consultation affect patients' perceptions? To answer these questions, open-ended interviews with a sample of patients were undertaken in one general practice.

## Method

The study was undertaken in a suburban practice south of London, where those patients who work outside the home are mostly employed in non-manual, or skilled manual occupations. Desk top computers were introduced into the consultation in the study practice in 1989. In the first year the two doctors changed their consultation techniques as they learned how to integrate data inputting with communication with the patient. The doctors decided to use the computer differently: one partner's patients sat on the other side of the desk from the doctor, with the computer placed midway and the screen visible with difficulty by the patient. The other partner's patients sat beside her, with the computer screen in full view of both doctor and patients. By 1991 computers were an established part of the consultation.

In the pilot phase a research psychologist who was unknown to the patients interviewed 10 patients. The interviews were recorded, transcribed and analysed, and the key questions were revised for the main study.

Questions focused on patients' previous experience of computers, their knowledge of their rights of access to medical records, their preference for viewing or not viewing the computer screen during the consultation, what they wanted to see on the screen, what they thought of their doctor typing during the consultation, and confidentiality. The interviews were recorded, transcribed and analysed.

Patients were consecutively selected from the appointments book during April-June 1992. Patients aged 18 years or older were chosen sequentially according to their sex and decade of birth so as to reflect the age-sex distribution of the practice, and so that each partner had seen half of the patients. The first person of the age and sex required was contacted by telephone within two weeks of an appointment with the doctor. Patients were interviewed in their own homes by a psychologist (S H) who was unknown to the patients.

## Results

Of the 39 patients contacted, 30 (77%) agreed to be interviewed, 16 women and 14 men. Their mean age was 47 years, range 18-89 years. Ten described their occupation as housewives. Of those who were employed outside the home all but one had occupations classifiable as 1-3M on the registrar general's classification. Two respondents were students.

### Previous experience of computers

With the exception of two older women all the subjects were aware of the use of computers by banks, hospitals, shops, schools or colleges (Table 1). The majority of subjects had experience of using computers or had seen them used at work.

### Perceived advantages of computers in the consultation

Twenty six respondents regarded computers as useful in one or more of the following ways: as an efficient tool providing quick access to information, as a useful cross-reference for up to date medication, and in saving the doctor's time. One third of patients reported that they enjoyed discussing and sharing in what was to be entered about themselves on their medical records.

The advantage of computers was sometimes expressed in terms of the perceived disadvantages of traditional handwritten notes. For example, one patient said:

'I have seen them sometimes when I have gone down with something and they have had to rummage back through all the bloody notes and it has taken forever... and she is trying to read through other people's writing which is never easy... and it has taken forever and surely it has got to be so much quicker if you have got immediate... if you punch into the computer what it is that you want to look at and you have immediate clear access...'

Doctors who used computers were perceived to be up to date with modern methods of treating illness and disease. For example, one patient said:

'If they are backwards, if you like, in the way that they deal with their customers then I kind of question whether they are up to date in their own fields... At the end of the day you have to have confidence in the doctor or not, but to help build that confidence I think seeing the right technology around makes one feel more comfortable as a starter...'

### Perceived disadvantages of computers in the consultation

Of patients interviewed 21 expressed some degree of concern regarding the issue of loss of confidentiality (Table 2). They were worried about the possibility of the next patient viewing their records on the screen. Two patients had seen another patient's notes in this way. Another fear expressed was that if a family member shared the same initial, the wrong records could be called up in error. One patient said:

'No I wouldn't like my notes to be flashed around, I mean if you didn't know the person it wouldn't matter tuppence but if they knew you, like a neighbour or anything, you wouldn't want them reading your notes.'

Two thirds of patients thought medical records were vulnerable to gossip, blackmail, insurance companies, and future employers. Patients considered the vulnerability of access to

**Table 1.** Patients' reported experience of seeing computers used.

| Experience of computers   | No. of patients |
|---------------------------|-----------------|
| Work                      | 22              |
| Shop/bank/hospital        | 12              |
| Everywhere                | 10              |
| School/college/university | 5               |
| Computer game             | 3               |
| None                      | 2               |

**Table 2.** Perceived disadvantages of using computers in the consultation.

| Perceived disadvantage                                       | No. of patients |
|--|-----------------|
| Loss of confidentiality                                      | 21              |
| Breakdown/error/theft of computer                            | 9               |
| Daunting/alien/unfriendly                                    | 5               |
| Take over doctor's job/analytical skills                     | 5               |
| If GP's computer skills inadequate, confidence in GP reduced | 5               |
| Viewing last/wrong patient's notes                           | 4               |

medical records might create a particular problem if information on their records referred to mental illness or a disease such as human immunodeficiency virus (HIV) infection. Eleven of the patients interviewed believed that if a lack of confidentiality occurred this could result in a breakdown in the doctor-patient relationship.

Patients with experience of using computers were more concerned about the potential for loss of confidentiality. One patient said:

'I should think the only thing I could think of actually is the security risk... that someone breaks into a surgery and you know, they can't steal all the patients' cards, unless they had a big truck, but in this situation they need one floppy disc, six inches square and that is it.'

As computers were considered to be accessible, patients expressed the hope that doctors use imaginative passwords. Patients hoped that different levels of access were available for administrative staff. Although those with most experience of computers knew most about the threat to confidentiality, this did not necessarily put them off.

Five patients perceived computers to be daunting, alien, and unfriendly. Five patients considered the computer could eventually take over the doctor's role. An unwanted prediction of the future included the possibility that people would eventually get diagnoses and prescriptions from a 'hole in the wall', like getting money from the bank. Another five patients mentioned that if the doctor lacked sufficient confidence and skill when using the computer then they felt the patient's confidence in the doctor would be reduced.

### Personal touch and the doctor's skill

Twenty six patients considered there to be no difference between the doctor typing during the consultation or writing up notes in their presence. Patients qualified this statement by adding they did not consider the computer to be intrusive as long as the doctor looked up when they entered the room, spoke to them maintaining eye contact, and did not appear to be too preoccupied with the computer. For example, one patient said:

'Things are explained to me while it is being entered... our doctors do not bang in stuff and say bye-bye.'

and another patient said:

'It is easier to interrupt when the doctor is typing than when she is writing...'

Patients stated they might not hold this opinion if their doctor appeared to be too preoccupied with the computer. Four subjects stated that the computer might reduce the personal touch if it was used too often. Men were more likely than women to perceive the use of the computer in the consultation as 'business like', using this term with approbation. Younger patients, especially

those with young children, said they did not particularly notice the computer during the consultation.

### Viewing the screen

All but one patient interviewed stated they preferred to view the screen. Ten of the 15 patients of the partner who had the computer turned slightly away from the patient admitted they occasionally tried to look at the screen. For example, one patient said:

'Well, besides the novel skill of trying to read upside down, you have then got the business of trying to read upside down on a keyboard, if you can't see the screen.'

The preference of seeing the screen was stated, whether patients were or were not given direct access to it during the consultation. A patient who had been given access to the screen commented:

'It was quite interesting to have a discussion and then see what the doctor put on the screen, about logging it as a query, which is quite honest I thought. We actually reached an agreement about what I was actually saying, what she was saying, and it went on the screen. It was quite good... I would much prefer that done than lots of secret scribbling.'

Eleven patients displayed uncertainty about whether they had legitimate access to their medical notes via a computer screen. Some of these patients sat facing the screen during the consultation. Six patients reported they could not read the print on the screen through poor eyesight. Only one patient, who was 89 years old, said she definitely would not like to view the screen.

### What patients wanted to see on the screen

A difference between patients' responses to the two doctors' style of consultation emerged: where the screen was visible with difficulty, patients stated they wanted to see details of past illnesses; where the screen was fully visible, patients stated they wanted to see more details of blood pressure, allergies, early warning signals of illness and ratings of health, in addition to the details of past illnesses which were normally displayed.

## Discussion

This qualitative study was intended to be informative rather than representative, and to provide depth rather than breadth of views. More information is needed from other areas with different characteristics before inferences can be made more widely. The results suggest that in this practice in the early 1990s patients accepted computers in the consultation. Computers were viewed by most patients as an efficient tool providing quick access to medical histories and saving the doctors' time. The doctors' use of a computer was equated with progress and modern methods of treating illness and disease.

Studies undertaken in the 1980s found one third of patients were concerned about reduced confidentiality with their records held on computer.<sup>1,2</sup> Over two thirds of the patients interviewed in this study expressed concerns about loss of confidentiality when doctors used computer systems. Subjects with experience of computers were more aware of the limitations of computers in terms of error, breakdown and potential loss of confidentiality but despite more knowledge of these problems, they still favoured use of computers in the consultation.

Studies of patients with little exposure to computers found that between a third and a half of patients believed that the introduction of computers would lead to a loss of the personal touch.<sup>1,3</sup>

The majority of patients in this study reported experiencing no difference between the doctor using the computer and writing notes. Patients qualified this statement by stating that computers were not impersonal as long as doctors continued to use verbal skills and maintained eye contact with them as much as possible during the consultation. This supports the findings of Rethans and colleagues that it is the communication skills of the doctor that makes him or her seem more or less accessible to patients; the computer being viewed merely as another tool.<sup>2</sup>

A qualification to this is the report by some patients that if the doctor is not proficient in using the computer then the patient may lose confidence in the doctor's overall abilities. It is likely that in the future doctors will be trained to be proficient with computers before they enter medicine. But it is more difficult for doctors in current practice to acquire the necessary skills without experiencing a temporary de-skilling effect. This process may impair their own confidence and the confidence of some of their patients too.

The data protection act 1984 gave individuals the right of access to their computer records yet 11 of the 30 patients interviewed in 1992 were not sure whether they should read their medical details. This lack of awareness by patients of their right to access to their personal data is surprising. All but one of the patients interviewed stated they would prefer to view the computer screen.

More research is needed now to help doctors to understand and apply methods of integrating computers in the consultation, so that information sharing is perceived as satisfactory to patients.

## References

1. Pringle M, Robins S, Brown G. Computers in the surgery: the patient's view. *BMJ* 1984; **288**: 289-291.
2. Rethans JJ, Hoppener P, Wolfs G, Diederiks J. Do personal computers make doctors less personal? *BMJ* 1988; **296**: 1446-1448.
3. Cruickshank PJ. Computers in medicine: patients' attitudes. *J R Coll Gen Pract* 1984; **34**: 77-80.
4. Brownbridge G, Herzmark GA, Wall TD. Patients' reactions to doctors' computer use in general practice consultations. *Soc Sci Med* 1985; **20**: 47-52.
5. Cruickshank PJ. Patient rating of doctors using computers. *Soc Sci Med* 1985; **21**: 615-622.
6. Bright S. Nearest and dearest. *Br J Healthcare Computing* 1991; **8**: 58-59.

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