

## Some methodological problems in studying consultations in general practice

ANN CARTWRIGHT, B.Sc., Ph.D.

SUSAN LUCAS, B.A., M.Sc.(Econ.)

MAUREEN O'BRIEN, B.Sc.

Institute for Social Studies in Medical Care, London

Every year in England and Wales there are about 200 million consultations between patients and general practitioners. Yet knowledge about these consultations is uneven and, in many aspects, scanty. There are statistics about the numbers, cost, and content of the prescriptions that are made up as a result of these consultations. The survey of the Royal College of General Practitioners, Office of Population Censuses and Surveys, and the Department of Health and Social Security selected practices and collected and published data on consultation rates by age and sex, episodes of illness, diagnosis, referrals, and home visits. Other studies have looked at appointment systems, practice organisation, the employment of ancillary staff, premises and equipment, the use of diagnostic facilities, transport, and the time spent on different tasks.

In addition to epidemiological studies and studies of management, research workers have looked at communications between doctors and patients. They have tended to concentrate on how much patients recall and follow the advice and treatment prescribed by the doctor.

There has been little intensive study of the nature of consultations and of patients' and doctors' perceptions of them. Two such recent studies have looked at the way in which doctors talk to patients (Long, 1974), and at the consultation process in general practice (Stimson and Webb, 1975). If the basic aim of general practice is to give primary personal care then one of the yardsticks for measuring its success is surely the extent to which doctors are aware of their patients' problems, and the degree to which patients communicate their needs to their doctors. One study by Williamson *et al.* (1964) suggested that many elderly patients had difficulties of which their doctors were unaware, although the problems might be relieved by medical intervention.

If we are to understand the reasons why doctors may remain ignorant of potentially treatable conditions in their patients, we need to look at consultations from the viewpoint of both patients and doctors to find out about the expectations, hopes and fears that are expressed, suppressed, or changed and about the ways in which these different outcomes arise.

### Aims of the study

This was a feasibility study. It aimed to develop techniques to describe and analyse communications at doctor-patient contacts. Specifically we were concerned to develop measures of how much:

- (1) Patients communicate their perceived needs to the doctor,
- (2) Patients are aware that doctors recognise or do not recognise their problems,
- (3) Patients recall, understand, and accept the information and advice given at consultations and how much they report carrying out the advice,

- (4) Doctors are aware of the limitation of their communications.

A further aim was to relate the success and failure of communication to techniques employed at the consultation, and to characteristics of the patient–doctor relationship.

### METHODS

The basis for this study was doctor–patient contacts in general practice in the consulting room. For each consultation studied we tried to:

(1) *Interview the patient beforehand* to find out about his hopes, fears, and expectations about the consultation, the reason he had come to see the doctor, and any other illness or problems.

(2) *Tape-record the consultation.* This was done only with the patient's permission.

(3) *Interview the patient afterwards* to get his account of the examination, information, treatment, and advice he was given and the discussions that took place. Also we asked whether he thought he would carry out the advice offered, whether he expected any difficulties or problems in doing so, and about his opinions of the consultation.

(4) *Interview the doctor at the end of the surgery session* at which the study consultation took place. We asked for his account of the examination, information, treatment, and advice given and the discussion that took place; his assessment of whether the patient understood, accepted and would act on the information and advice offered, and his perception of any difficulties involved. Also we asked for his views on the consultation and on his relationship with the patient and about his knowledge of the patient, his home, and family.

(5) *Interview the patient at his home about ten days after the consultation* to see how far the advice and information was recalled at this point in time, whether it had been carried out, whether he felt his various problems were better, worse, or about the same, and whether he attributed any change to the doctor's intervention. Other topics covered were whether he had trouble with a list of ten fairly common complaints, any prescribed medicines he had been taking, information about his home and family, any community services he received, and his opinions of his relationship with the doctor.

(6) *Extract information from the record* kept by the doctor to see what information was readily accessible about the patient and his family and what was recorded at previous consultations and at those being studied.

### The selection and response of doctors

This feasibility study was done in two stages. In the first part we approached ten doctors whom we knew or who someone had suggested would be interested and willing to participate. With each of these doctors we studied about five consultations, a total of 48 altogether. At the end of each series we had an informal discussion with the doctor and discussed the discrepancies we had observed and other points of interest.

At the second stage we approached a more random selection of general practitioners. To do this we chose a number of local authority areas in different parts of the country where we had experienced interviewers. In these areas we selected doctors at random from lists obtained from the National Health Service Executive Councils (now family practitioner committees). We then wrote to these doctors telling them about the study and explaining that if they were prepared to take part in the study we would like to study two of their consultations. The letter said:

“ I am writing to ask for your help with a study we are doing about the process of communication in general practice. The aim is to see how patients interpret the advice and information they are given and to identify some of the skills and difficulties involved in effective communication. Many doctors

have expressed concern about this problem and are anxious to develop ways of training younger doctors in the skills of communication.

If you are prepared to take part in the study we would like to study two of your consultations with patients aged 65 or more. We would like to interview the two patients—if they are willing—before and after they see you and again, in their homes, about ten days later. We would also like to talk to you about the consultations at the end of the surgery sessions in which you saw the patients. In addition, if both you and the patient agree, we would like to tape-record the consultations and to collect some information from the patient's records (such as the frequency of consultation and how long the patient has been registered).

We have done a pilot survey covering about 50 consultations and have found it possible to do the interviews without disrupting the surgery sessions, but I appreciate that it will take up some of your time. The discussion with you at the end of the session is likely to take about 20 minutes. We would be very grateful if you would help us.

Any information we collect will be treated with the strictest confidence. This means that none of our records will be passed on to anyone outside the Institute. (All the people who work for the Institute have signed an agreement about confidentiality.) When we write about the study no names of any patients will be mentioned, and no names of doctors will be mentioned without their permission. A copy of the report will be sent to all the doctors who take part.

If you are willing to help us we would like to do the study in September. Please would you let us know whether you are prepared to do so or not. We would, of course, be pleased to answer any questions you may have. I am sending a brief note about the Institute."

Altogether we wrote to 170 doctors of whom 147 (86 per cent) replied, but only 30 (18 per cent) were prepared to 'consider taking part in the study', and 26 (16 per cent) eventually did so. Response rates in our other studies of general practitioners have been much greater: 86 per cent in *Human relations and hospital care* (Cartwright, 1964), 76 per cent in *Patients and their doctors* (Cartwright, 1967), 76 per cent in *Parents and family planning services* (Cartwright, 1970), 56 per cent in *Medicine takers, prescribers and hoarders* (Dunnell and Cartwright, 1972), and 79 per cent in *Life before death* (Cartwright *et al.*, 1973). In these studies doctors were asked to complete a questionnaire or answer questions about their practice and their views. In none of the earlier surveys did we ask to interview their patients, nor did we ask them for information about individual patients. The low response rate on the present study may be partly because they felt it encroached on the confidential nature of the patient-doctor relationship. It may also have been that this study was seen as being more threatening than the others and possibly as causing more disruption to the practice work.

As the response rate was so abysmally low we wrote to another eight doctors in one of the areas. These were doctors who had co-operated on earlier studies. Two of them agreed to help and one put us in touch with a partner who was willing. In addition, one doctor whom we had approached during the first part of the study, but had been unable to include at that stage, participated in this second series. So altogether 30 doctors took part in the second stage of the study.

Obviously the general practitioners who participated in both stages are far from being a representative or random group. The first group were selected because of their interest and concern in research, the second group were highly self-selected, but probably for the same reasons. A comparison of a number of their characteristics with those of national samples of general practitioners is shown in table 1.

A relatively high proportion of the study doctors were in partnerships and received a group practice allowance. (In general we draw attention to differences which statistical tests suggest are unlikely to have occurred by chance, and we have taken this as likely to occur less than five times in 100.) Few of them were in rural practices and they were comparatively young. The numbers of patients they looked after were similar to a national sample of general practitioners.

TABLE 1 CHARACTERISTICS OF THE DOCTORS WHO PARTICIPATED IN THE STUDY

	First series	Second series	Total— study doctors	Estimates from national surveys
	Numbers	Percentages	Percentages	Percentages
<i>Age</i>		%	%	%
Under 35	2	21	21	8*
35-44	1	36	29	31
45-54	6	25	34	34
55 and over	1	18	16	27
<i>Sex</i>		%	%	%**
Male	9	96	95	89
Female	1	4	5	11
<i>Practice</i>		%	%	%***
Single-handed	—	4	3	23
Partnership	10	96	97	77
<i>Size of personal list</i>		%	%	%***
Under 1,500	1	21	18	17
1,500 < 2,500	4	29	32	31
2,500 < 3,500	4	36	37	37
3,500 or more	1	14	13	16
Receiving group practice allowance	9	89	89	45****
Receiving payment for rural practice	—	11	8	27*
Has no private patients	6	25	34	31*****
Has an appointment system	10	82	87	66****
<i>Main practice premises contain:</i>				
Microscope	9	54	63	34****
Laryngoscope	4	32	34	26****
Haemoglobinometer	7	39	47	35****
Refrigerator	10	89	92	69****
<i>Supporting staff working either in or from main premises:</i>				
Nurse (surgery)	7	61	63	41****
Nurse (domiciliary)	10	79	84	32****
Health visitor	10	93	95	35****
Midwife	6	75	71	26****
Social worker	1	36	29	3****
Has honorary or paid hospital appointment	6	39	45	33****
Has undertaken or participated in some medical or practice organisation research in last three years	7	21	34	33****
Has published a paper in recognised medical journal in the last three years	6	7	21	4****
Is a fellow of the Royal Society of Medicine	6	4	18	
Is a fellow, member or associate member of the Royal College of General Practitioners	10	21	42	36*****
Has attended a series of Balint or Balint- type seminars	5	—	13	
Saw five or more drug firms' representa- tives in previous four weeks	1	32	26	45*

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TABLE 1 CHARACTERISTICS OF THE DOCTORS WHO PARTICIPATED IN THE STUDY—*continued*

	<i>First series</i>	<i>Second series</i>	<i>Total—study doctors</i>	<i>Estimates from national surveys</i>
<i>Supporting staff working either in or from main premises—cont.</i>	<i>Numbers</i>	<i>Percentages</i>	<i>Percentages</i>	<i>Percentages</i>
Estimate that a quarter or more of their consultations are for ailments people could treat or cope with themselves	—	36	26	50
Been in present practice:		%	%	
Less than 5 years	—	29	21	
5 < 10 years	2	18	18	
10 < 20 years	5	35	40	
20 years or longer	3	18	21	
Total	10	***** 28 = 100	38 = 100	See footnotes

\* Dunnell and Cartwright (1972). Sample size 326 completed, 583 approached.

\*\* D.H.S.S. Annual Report for 1971. Based on 19,099 unrestricted principals.

\*\*\* Irvine and Jefferys (1971). Sample size 576 responded, 776 approached.

\*\*\*\* Cartwright (1967). Sample size 422 responded, 552 approached.

\*\*\*\*\* Two doctors did not return questionnaires.

\*\*\*\*\* Estimate from the Royal College of General Practitioners.

The doctors who participated worked in rather better equipped premises and were more likely to have supporting staff than a general sample of doctors surveyed in 1969 (Irvine and Jefferys, 1971). They were also more likely to have an appointment system. But it is likely that the numbers of health visitors and nurses working from general practitioners' surgeries have increased during this time.

Not surprisingly, several of the doctors who took part in the study took an active part in research, in that a fifth of them had published a paper in a medical journal in the last three years. Three fifths of those who took part in the first series had published a paper; and this group was more likely than those taking part in the second series to belong to the Royal Society of Medicine, the Royal College of General Practitioners, and to have attended a series of Balint or Balint-type seminars. Finally the study doctors saw fewer drug firm representatives and were less likely to feel that patients consulted them for ailments they could treat or cope with themselves than most general practitioners.

#### The selection, interviewing, and response of patients

Both phases of the study have been confined to patients aged 65 or more. This was partly because we wanted to restrict the study in some way so that it did not cover such varied situations as the feeding problems of infants, infectious diseases among school children, accidents to adolescents, pregnancy and short-term respiratory infections for which sickness certificates are needed. A reason for choosing people of 65 or more was because they often have more than one thing wrong with them at a time, so the problems of selection, presentation, and communication are more complex. We were therefore concentrating on consultations that were likely to be relatively complicated, but this seemed appropriate at the feasibility stage.

After a doctor had agreed to take part in the study, an interviewer arranged to attend a surgery session that was convenient for both the doctor and the interviewer. If the doctor had an appointment system the interviewer checked beforehand that a patient of that age was coming. If there was no appointment system an interviewer sometimes went to the session, but no eligible patient attended.

The first patient aged 65 or more who came to the selected sessions was chosen for the study. This introduces a possible bias, but meant that both interviews with the patient were usually completed by the end of the session so that the interviewer was then free to interview the doctor.

As patients were chosen on the basis of consultations at the surgery, our sample is biased towards those who consult their doctor relatively often; it is therefore more related to the doctor's workload than to his practice population. An earlier study of one practice showed that although the aged were rather fewer than ten per cent of all on the doctors' lists, they represented almost a fifth of the total work, about a quarter of the home visits, a third of all 'serious' work, and half of the doctors' work with chronic disease (Morris, 1957).

The first series of interviews was carried out by one of us (S.L.). For most of these patients the doctors first asked them if they would be prepared to help and then introduced them to the interviewer. For the second series the interviewers usually introduced themselves to the patient and explained:

"I am from a research organisation called the Institute for Social Studies in Medical Care. We hope that you will help us by answering some questions about why you have come to see the doctor, but if you don't want to, just say so. Doctor \_\_\_\_\_ has agreed to help us with the study. We are doing this study with patients who are 65 or over. I would like to talk to you before you see the doctor and afterwards as well."

At the end of the interview before the consultation, the interviewer asked the patient if he was willing for the consultation to be recorded. If he was not she informed the doctor, who otherwise turned on the tape recorder. The interviewer also explained:

"I don't expect to talk to Dr \_\_\_\_\_ about what you said, and I certainly won't see him before you do, but he might ask me some questions later. If he does ask, is there anything you've told me that you don't want me to say to him? "\*"

A similar question about whether there was anything they did not want us to tell the doctor about was asked at the end of each of the three interviews with patients. Altogether four patients (four per cent) asked us not to repeat something they had said.

At the end of the interview after the consultation, the interviewer made an appointment to see the patients in their home and gave them a leaflet about the study. It was on our headed paper.

"Thank you for helping us by answering our questions. We are doing this study with your doctor, and we are trying to find out what happens when people consult their doctors and what sort of advice and information doctors give their patients. We are also interested in whether patients would like to know more about their illnesses or not.

All the information which you give us will be treated confidentially. This means that what you tell us will not be passed to anyone outside the Institute, and when we write about it, no names of any patients will be mentioned. But as we are working with your doctor, we may talk to him about this unless you ask us not to.

We also want to find out about what happens to people after they have seen the doctor, and so we would like to come and see you at home on \_\_\_\_\_ the \_\_\_\_\_ of \_\_\_\_\_ 1973, at \_\_\_\_\_ am/pm. If you find this is inconvenient, could you let us know at the address above (telephone 01-980 4596) and arrange another date.

You may like to know that the Institute for Social Studies in Medical Care is a small non-profit making research organisation which has published several books on health services and the way that people use them.

Thank you for your help."

Most of the interviews before and after the consultation took place in a room at the surgery, but if there was no spare room available the interviewer's car was used.

\*This was worded rather differently for the first series of patients, as the interviewer wanted to talk to the doctors about the consultation. She said "... I'd like to talk to the doctor about some of the things you've told me. Is there anything you've told me you'd rather I did not tell him? "

The response from the patients is shown in table 2. In the first series all but one of the patients approached agreed to be interviewed. The one who did not was deaf and the interviewer did not try to persuade her to change her mind.

TABLE 2 RESPONSE OF PATIENTS

	<i>First series</i>		<i>Second series</i>		<i>Total</i>	
	<i>Number</i>	<i>%</i>	<i>Number</i>	<i>%</i>	<i>Number</i>	<i>%</i>
Agreed to first interview	48	98	55	86	103	91
second interview	46	94	55	86	101	89
third interview	40	82	50	78	90	80
tape recording	44	90	48	75	92	81
Successful tape recording*	38	78	40	63	78	69
Complete set	34	69	38	59	72	64
Total approached	49 = 100%		64** = 100%		113 = 100%	

\*In 13 instances there was a mechanical failure or the doctor forgot to switch the tape recorder on, in another the patient spoke a mixture of French and Portugese which we were unable to translate.

\*\*If a patient refused, the interviewer tried to see another patient of the same doctor.

In the second series nine of the patients initially selected were not interviewed at all; eight because they refused, one because the doctor did not feel he was suitable as he might be *non compos mentis*. The most common reason given for refusing was that the person selected had no time to spare. (This included three people on their way to work, a man on his way to visit his wife in hospital, and a man who had to get home to look after his disabled wife.) Another patient felt too ill and one was a patient from another practice whose own doctor was ill. The fact that the doctor usually introduced the interviewer to the patients in the first series did not seem to explain the higher initial response rate. In the second series the doctor made the introduction for a third of the patients selected, but this proportion was similar for those who agreed to take part at all stages of the study and for those who refused any part of it.

Altogether 11 patients said they did not want the consultation to be tape recorded, for another 13 there was a mechanical failure or the doctor forgot to switch it on, and for one we were unable to translate the recording. So we have a complete set of data for only 64 per cent of those initially approached. Once a doctor tape recorded a consultation although the patient had said he did not want this to happen. This recording was immediately erased without anyone listening to it.

#### Analysing the consultations

Our aim was to examine the contents and techniques of the consultation. We hoped to be able to relate some of the techniques used and the characteristics of the consultations to our measures of success or failure of communication. But we also wanted to identify the advice that was given and the problems that were discussed at the consultation to see whether they were recalled at all and recalled correctly by patients and doctors afterwards.

Some of the characteristics of the consultation analysed were: the total time it took and the time spent in conversation. We also counted the number of words spoken by the doctor and by the patient and measured the time during which they spoke. We categorised verbal contributions by the doctor into advice, information, and questions, and divided their questions into open, specific, and clarifying. Contributions by the patients were divided into information and questions.

This was a time-consuming process as the consultations had to be transcribed and

analysed, and the analysis involved listening to the tapes four times. Two coders analysed each consultation and there were several differences in interpretation which had to be resolved. Another difficulty was that the tape recordings of the consultation gave us only the oral aspects of communication, and the meanings of some statements are ambiguous without a clarifying gesture or expression.

Another problem was that of understanding a single consultation that was one in a series. When patient and doctor have a continuing relationship, some things may be taken for granted and not openly expressed. This makes it harder for an outsider to understand what is happening. This is illustrated by the transcript of one of the shortest consultations which is given in full:

Doctor: Sit down.

Patient: It's a bit blowy.

Doctor: Blowy. Now then.

Patient: The tonic.

Doctor: The tonic.

Patient: Yes, it's fine.

Doctor: The tonic was alright was it?

Patient: Yes, it made me feel a lot better, a lot better.

Doctor: What do you need today?

Patient: Well, I think I'll have some more tablets. They're running a bit low, save me coming back again.

Doctor: 'Serpassil' and 'Lasix'?

Patient: That's them.

Doctor: Did you ever discover what it was that was upsetting you?

Patient: No, no. As you say, it might have been just one of those things, felt a bit run down or something. No I feel fine. Took all the tonic. Probably that was what I needed, something to settle me down, that's it.

Doctor: You'll see me again if you're concerned, will you?

Patient: Oh yes. I definitely will. Oh yes I will. O.K.

Doctor: Right.

Patient: That's it. Thank you very much. Goodbye.

Doctor: Goodbye.

The patient told us beforehand she wanted to see the doctor to get tablets for her blood pressure. The doctor said afterwards that the main reason why she came was her anxiety which was no longer a problem—she wanted to report the tonic had worked. In discussion later he said she came to give him a present of the fact that she was better.

#### Following up advice

We tried to assess whether advice was accepted, followed, forgotten, or rejected in a number of ways, but none of them was particularly successful. One way was for interviewers to listen to the tape recording of the consultation, identify and record different items of advice, and then if the patient did not mention the advice spontaneously at the follow-up interview, ask him about it to find out whether it had been forgotten or not mentioned for some other reason.

In practice we found that interviewers often failed to identify some items of advice, partly because they were working from the recording rather than a transcript, but also

partly because of inadequate briefing or clear definition of what constituted advice. If we were doing the study again we would want to identify more precisely from the tape recordings the advice that was given and ask patients about it directly, so that we could find out more about their reasons for not reporting or following the advice.

Our questions about the problems patients foresaw and encountered in carrying out advice seemed rather more successful. But if patients did not report advice we were uncertain whether this was because they had forgotten, ignored, or rejected it.

### **Identification of problems**

One of the aims of the study was to identify how much doctors were aware of problems which the patients wanted to discuss and of other problems which patients had and which the doctors might be able to alleviate although the patients, for one reason or another, had not necessarily raised them with the doctors. Another aim was to look at the different ways in which patients and doctors perceived patients' problems and see how these different perceptions affected communications. These two aims are clearly inter-related. Differing perceptions of problems affect their identification. Some of the difficulties we encountered were:

- (1) Past problems which might be referred to at the consultation but were no longer seen as problems by the patient,
- (2) Conditions with several symptoms which might be perceived as a single problem or as several separate ones,
- (3) Difficulties associated with the treatment of conditions,
- (4) Symptoms controlled by drugs.

In any further study we would plan to tighten our definition of problems and the procedures by which they were identified—asking about the symptoms and problems both doctors and patients felt were related and about their perception of the cause (Cartwright, 1959).

### **Limitations of the study**

The methods we used and the response obtained have several implications for the study.

One obvious limitation is that we have clearly not studied a random sample of doctors. The doctors in our study were relatively active professionally. They were also somewhat younger and had more equipment and professional support than general practitioners in the country as a whole (table 1). In addition they were unusual in that they agreed to take part in the study. They probably did this because of their interest and concern with the problems of communication. They may have felt more confident and less likely to be threatened by the study than other doctors.

Because of all these differences it seems probable that we have studied a group of doctors who are relatively good at communicating with their patients. This means that we are likely to have fewer failures of communication than we would have done if we had been able to cover a random sample of doctors. It is not possible to tell whether the nature of the failures that we observed is typical or not. But if we can identify any characteristics of the consultation as aiding or hindering communication, these patterns would probably hold more generally. In other words, our estimates of the frequency of failure are probably low, but patterns revealed by cross-analysis are less likely to be affected by this bias.

A study of consultations in general practice involves a snapshot at a point in time of a continuing relationship. This problem is accentuated in the present study partly because it is restricted to people aged 65 or more and partly because of the way in which the consultations were chosen, which means it is biased towards those who consult their

doctor often, and it omits those who cannot get to the practice and those whom the doctor visits at home. One possible effect of the patients having more contact with their doctor is that they may feel more identified with him and more protective towards him. At only one interview did a patient ask the doctor to turn the tape recorder off for a while. The doctor told us later that when it was off the patient told him that he had not written the number of tablets on his prescription last time. The tape was then switched on again.

Another effect of confining the study to elderly patients is that the amount of verbal interaction between patients and doctors might be less. In an earlier study (Cartwright, 1964), we found that older patients were less likely than younger ones to ask questions while they were in hospital. On the other hand in another study (Cartwright, 1967), we showed that more of the older than the younger people said if they were worried about a personal problem that was not strictly a medical one they thought they might discuss it with the doctor.

Another major limitation of the study is the possible effect that the study itself had on the consultation. The interview with the patients before the consultation may have helped them to organise and think through their problems and to have a clearer idea about what they wanted to get out of the consultation. To some extent it may have acted as a form of rehearsal. Sometimes it seemed the rehearsal was confused with the actual event. One patient said at the first interview that she intended to talk to the doctor about spots before her eyes, but at the second interview it became apparent that she had not done so. When asked why, she said she had forgotten because she knew she had described it to someone. The study may have led her to discuss fewer problems with the doctor than she would otherwise have done.

Others may have been prompted to ask him about more problems. On being asked about any other illnesses or problems one patient said: "Don't send me in with too many complaints. He's got too many patients to see already. He'll think I'm a hypochondriac". A doctor thought the study interview had stopped one patient "from being ill". This was a patient he felt tended to play-act. "If I meet him shopping or walking he's well, but when he comes to see me he's full of complaints."

The doctors as well as the patients may have been influenced by the study. They knew which consultations were being studied and that the basic emphasis of the study was communications. They may well have paid particular attention to that at the study consultations. With the first series of doctors there was the additional problem that we interviewed the doctor on five or six separate occasions: each time about a different patient but asking the same questions. With the second series we studied only two consultations so the effect of knowing what questions we were likely to ask was probably smaller. We found some evidence that this was the case. A number of our questions related to the doctor's knowledge of the patient's home conditions. In the first or second consultation with the first series of doctors, an average of 19 seconds was spent discussing the patient's family or social life or living conditions. The average time spent on this was 84 seconds for later consultations with these doctors. For doctors in the second series the average did not differ between first and second consultations.

We made some other attempts to assess the effect of the study on various aspects of the study. We compared the notes the doctor made at the study consultation with those he made at the previous consultation with the study patients. We found no difference in the average number of words or problems recorded and no difference in the proportion of consultations at which a prescription was recorded.

We asked the patients whether they thought the study consultation was longer than usual, about the same, or shorter than usual. Most of them, 70 per cent, thought it was about the same, 24 per cent that it was longer, and six per cent shorter.

One of the doctors thought that the study greatly influenced the way patients behaved, half thought it did so a little, the rest not at all. None of the doctors thought it had much effect on the way they themselves behaved at the consultation, but two thirds thought it had influenced them a little. Some of their comments about their own reactions were:

"I think I learnt yet again that some of what the patient says and requests is suppressed and ignored by me—often because I do not think it appropriate. Further discussion with the patient in such instances might be more fruitful. In short—poor listening."

"It increased my understanding, I hope. It certainly provoked anxiety and interest. I enjoyed it."

"It taught me a lot about what I didn't know of my patients' home conditions—that I thought I knew."

"I have spent a good bit of time since in a certain amount of introspection."

All these comments were from the first series of doctors. Only one of these ten doctors thought the study had no effect on him. In the second series half said it had no effect. Some had been anxious.

"I was rather worried about the attempted encroachment on a very personal affair." One was sceptical:

"Confirmed my opinion that, by and large, it is a useless exercise."

Finally we studied one consultation with seven of the first series of doctors, omitting the interview with the patient beforehand to try and see the effect of this first interview. Unfortunately at three of these seven consultations a relative or friend accompanied the patient and took a more active part in the consultation. This happened at only two of the other 48 on the first series. The average length of the consultation was 9.4 minutes for the controls, without an interview beforehand, against 8.7 minutes for the others in the first series. There was no difference between the two groups in the proportion of the consultation time that was taken up by the patient talking, but rather less of the time in the control series, without an interview first, was concerned with the patients' family, living conditions or social conditions: two per cent against 11 per cent.

Other limitations of the study are our concentration on verbal communication and omission of non-verbal methods, and our reliance, apart from the tape recording of the consultation, on what patients and doctors said to us in an interview. Occasionally we gained some information about non-verbal communication. One patient expected information about her blood pressure. "If it's going down he'll say good. If it's gone up I don't know. He might pull his bottom lip. He doesn't like to tell you too much if there's anything wrong." Afterwards she said, "He took my blood pressure but I don't know what it was. He didn't tell me if it was high or low."

In some ways the whole conception of the study may appear arrogant. We have tried in relatively short, structured interviews to understand and throw some light on a process of communication and on relationships which have often extended over a long period of time and which have a large professional component which is quite outside our professional skill. But we feel that doctors must often wonder how their patients feel about and react to the things that happen at a consultation and they must also want to know whether there were other problems which were not discussed. Of course our data cannot give a complete answer to these questions, but we feel they do provide some information which will be of interest and concern to doctors who do not have the amount of time and resources to devote to each consultation as we had. The length of the various interviews is shown in table 3.

TABLE 3 LENGTH OF INTERVIEWS AND CONSULTATIONS

	<i>Interviews</i>				<i>Consultations</i>
	<i>Patient before consultation</i>	<i>Patient after consultation</i>	<i>Patient follow-up</i>	<i>Doctor after surgery</i>	
	%	%	%	%	
Less than 15 minutes	45	17	} 18	5	91
15 mins < 30 mins	52	76		67	9
30 mins < 45 mins	3	7	46	27	—
45 mins < 1 hour	—	—	23	—	—
1 hour or more	—	—	13	1	—
Number of interviews (= 100%)*	102	97	89	97	78

\*In a few instances this was not recorded so these interviews have been omitted when the percentages were calculated. This has happened for other questions too.

Most of the interviews with the patient before the consultation took about 15 minutes, those afterwards between 15 and 30. The follow-up in the patients' homes took longer, four fifths of them lasted half an hour or more. The interviews with the doctor generally took between a quarter and half an hour, but over a quarter took longer than that. So altogether we usually spent between an hour and an hour and a half talking to the patients or the doctors about consultations that averaged just under nine minutes. About a fifth lasted less than five minutes, and half between five and ten minutes.

A further limitation is the small number included in this feasibility study. This disadvantage has been intensified because we modified the questionnaires at different stages. Regarding the study as a feasibility exercise we sacrificed the advantages of complete comparability throughout the whole series to the need to modify and add to our questions as we became aware of the limitations of earlier drafts. This means that for a number of analyses we have less than our total 'sample'.

#### Potential of the method

So far we have published two papers on the results of our feasibility study. One, Cartwright (1974), was concerned with prescribing and the relationship between patients and doctors and illustrated the ways in which the relationship influenced the choice of illness, the amount of illness discussed, the choice of treatment and drugs, repeat prescribing and taking the medicine. The other, Cartwright and O'Brien (1976), was about social class variations in health care and in the nature of general-practitioner consultations and showed that general practitioners knew more about the domestic situation of their middle-class patients although working-class patients had been with them for longer. Middle-class patients discussed more problems and spent longer in conversation with the doctor. Extracts from the tape recordings illustrated ways in which doctors cut short some patients and encouraged others.

In terms of further research it is clear from the response we obtained from a random sample of general practitioners that we are unlikely to obtain the co-operation of a representative sample of general practitioners in a study of this nature. How useful would a larger inquiry be if it too were carried out on a similar sort of self-selected basis? It could demonstrate in a more detailed and convincing way than our small study the successes and failures of communication in good general practice. And with larger numbers cross-analyses could explore some of the hypotheses that we were unable to test.

But apart from the possibility of a similar inquiry with larger numbers there are other possible applications of the techniques we have developed.

One is in education and training. As we indicated earlier, most of the doctors in the first series said they found the study a useful and stimulating exercise which had given them insight into their work. To expose their work in this way to people from another discipline takes courage and time. But doctors who accept such a challenge may find it rewarding.

Another possible application is in the evaluation of change. It would be feasible to study a series of comparable consultations before and after doctors attended a course of further education or introduced some change into their practice method such as a system of record-keeping or screening or a change in the time allocated to appointments. In these situations the study could be focused on aspects of the consultation most likely to be affected by the change.

A further possibility would be an experimental study—comparing the interview techniques of social scientists with the consultation techniques of doctors and looking at their relative success in identifying relevant problems. During this study we felt that some of the techniques and disciplines of social science might on occasion be employed usefully in the consulting room. We would welcome an opportunity to explore this. It would be as much of a challenge to us as to the doctors.

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### CARDIOTOXICITY OF AMITRIPTYLINE

A hospital-based drug-information system has been used to extend preliminary work on the incidence of sudden unexpected death in patients with a diagnosis of cardiac disease who had been prescribed amitriptyline. The finding that there were 13 sudden unexpected deaths in a group of 119 amitriptyline patients compared with only three in a carefully-matched control group confirms the suspicion linking unexpected death with the administration of this tricyclic antidepressant. There were four such deaths in a group of 87 patients receiving imipramine compared with two in the control group.

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