# Patients' expectations and intention to self-medicate

JILL RAPOPORT, B.MED.SCI, BM BS
General Practitioner Trainee, Nottingham Vocational Training Scheme

SUMMARY. I studied patients' expectations of receiving a prescription after a consultation with their general practitioner and their intention to buy a remedy from the chemist after leaving the surgery.

Of a group of 368 patients, 56 per cent expected to receive a prescription and 24 per cent intended to self-medicate. A striking variation was found among patients attending each of the five doctors participating in the study. Patient expectation closely agreed with the prescribing rate per partner. No consistent relationship was found between a low prescribing rate and high self-medication rates. I suggest that by reducing prescribing and encouraging patients to be self-reliant in the management of minor ailments, it might be possible to reduce a general practitioner's workload and the amount of money spent on prescribing in general practice.

## Introduction

DURING my first six-month period as a trainee in general practice, I had much informal discussion with my trainer about prescribing for minor ailments and how patients' expectations about prescribing might affect workload. Marsh (1977) showed that as a result of formulating a firm practice policy on management of minor illnesses in which prescribing played only a small part, not only did prescribing rates fall but there was a fall also in the total number of consultations. My trainer and I agreed that we were offering poor care if we prescribed when medication would not affect the course and outcome of a minor self-limiting illness and that explanation to the patient was more important. A report of a seminar dealing with anxieties in prescribing in general practice (Julian and Herxheimer, 1977) pointed out the problem of making a decision whether or not to treat minor ailments such as catarrh in an infant. In our discussion we postulated that if the patient left the surgery dissatisfied because he had not been given the expected prescription despite explanation as to why medication was not indicated, this could probably be labelled 'poor care'.

© *Journal of the Royal College of General Practitioners*, 1979, **29**, 468-472.

## Aims

My aim was to attempt to assess patient satisfaction with doctors' prescribing habits. The hypothesis was that most patients would attend the surgery expecting a prescription and that those who did not receive one would be likely to go direct from the surgery to the chemist to buy a remedy. I postulated that older patients and those in the lower socio-economic groups might have greater expectations of receiving medication and that there might be a difference in the expectations of patients attending the different doctors in the practice.

## Method

The survey took place in the week beginning 5 December 1977. A questionnaire was designed and given to patients by their doctor at the end of the consultation. They completed it unaided and placed it in a box before leaving the premises. A consecutive series of 500 patients was studied. There are four partners and one trainee in this practice. Each partner has his own list of patients who are encouraged to consult the doctor they are registered with during normal working hours; thus one could anticipate that doctor-specific expectations might develop. A substantial proportion of patients I was seeing at that time were 'overflow' patients when the partners' surgeries were fully booked. The five doctors were given 100 questionnaires each and asked to give a questionnaire to the first 100 patients they saw in the specified week. Ideally each patient would have been given a questionnaire before consultation to elicit their expectations, and then a further questionnaire after they had seen their doctor. In the event they were given one questionnaire at the end of the consultation so there might have been some bias in the answers in favour of the actual outcome of the con-

sultation. Accompanying parents were asked to fill in the forms for children under 14. The questionnaires were coded for each doctor and the doctor marked the form as 'old' or 'new', depending on whether it was a new consultation (patient-initiated contact) or a follow-up visit (doctor-initiated). The patient was told that this was a study to find out what kind of remedies people bought from the chemist to help when they felt unwell.

In the event, although 100 questionnaires were handed out by the doctor, they were not always given to the first 100 consecutive patients. This was partly due to the difficulty in remembering at the end of each consultation, partly due to reluctance to give one to some patients with psychiatric problems who might have difficulties with it, and partly due to refusal by people who had 'forgotten their glasses' (the elderly or illiterate).

**Table 1.** Basic demographic information about respondents. (Percentages are given in brackets.)

| | Respondent population (1977) | Urban practice East Midlands (1971) | Population of England and Wales (1975) |
|---|---|---|---|
| *Sex* | | | |
| Male (over 14) | 154 *(42)* | *(50)* | *(48)* |
| Female (over 14) | 135 *(36)* | *(50)* | *(52)* |
| Parents | 79 *(22)* | — | — |
| Total | 368 *(100)* | *(100)* | *(100)* |
| *Age* | | | |
| 14 and under | 83 *(22)* | *(31)* | *(23)* |
| 15 to 64 | 275 *(75)* | *(60)* | *(63)* |
| 65 and over | 10 *(3)* | *(9)* | *(14)* |
| Total | 368 *(100)* | *(100)* | *(100)* |

| | Respondent Population (1977) | Trent Region (1971 |
|---|---|---|
| *Social class* | | |
| 1 and 2 | 81 *(22)* | *(19)* |
| 3 Manual and 3 Non-manual | 177 *(48)* | *(55)* |
| 4 and 5 | 84 *(23)* | *(26)* |
| Unspecified | 26 *(7)* | |
| Total | 368 *(100)* | *(100)* |

| | Respondent population (1977) |
|---|---|
| *Type of consultation* | |
| New/patient initiated | 244 *(66)* |
| Follow-up/doctor initiated | 124 *(34)* |
| Total | 368 *(100)* |

Sources: Office of Population Censuses and Surveys, Royal College of General Practitioners, and Department of Health and Social Security (1974). *Morbidity Statistics from General Practice. Second National Study 1970-71.* London: HMSO.

Department of Health and Social Security (1977). *Health and Personal Social Services Statistics for England.* London: HMSO.

The first section dealt with demographic details of age, sex, social class; the second section dealt with the patients' expectations of receiving a prescription and whether or not expectations were met; and the final section asked whether the patients intended to buy a remedy from the chemist to help their complaint, and if so, what kind.

No attempt was made to score the attitude of the patient as to whether he was satisfied with that particular consultation, since it was felt that this might bias the response, as the patient might feel that his doctor would be informed of the patient's attitude. However, it was assumed that if the patient intended to buy a remedy having not received the expected prescription, he was 'dissatisfied' with that aspect of the consultation.

## Results

### *Demographic details*

A total of 368 questionnaires were filled in accurately enough to be analysed. A further 73 were returned only partially completed, and the remaining 59 were not returned at all. Thus the response rate of fully completed questionnaires was 74 per cent of the 500 administered. The return rate of the 100 questionnaires handed out by each doctor varied from 69 per cent to 78

**Table 2.** Analysis of demographic information about incomplete questionnaires. (Percentages are given in brackets.)

| | Incomplete questionnaires | Fully completed questionnaires |
|---|---|---|
| *Sex* | | |
| Male | 25 *(41)* | 154 *(42)* |
| Female | 33 *(54)* | 135 *(36)* |
| Parent | 3 *(5)* | 79 *(22)* |
| Total | 61 *(100)* | 368 *(100)* |
| *Age* | | |
| 14 and under | 5 *(8)* | 83 *(22)* |
| 15 to 64 | 49 *(76)* | 275 *(75)* |
| 65 and over | 10 *(16)* | 10 *(3)* |
| Total | 64 *(100)* | 368 *(100)* |
| *Type of consultation* | | |
| New/patient initiated | 42 *(58)* | 244 *(66)* |
| Follow-up/doctor initiated | 31 *(42)* | 124 *(34)* |
| Total | 73 *(100)* | 368 *(100)* |
| *Doctor consulted* | | |
| Dr 1 | 13 *(18)* | 69 *(19)* |
| Dr 2 | 18 *(25)* | 71 *(19)* |
| Dr 3 | 16 *(22)* | 76 *(21)* |
| Dr 4 | 15 *(20)* | 74 *(20)* |
| Dr 5 | 11 *(15)* | 78 *(21)* |
| Total | 73 *(100)* | 368 *(100)* |

**Table 3.** Demographic characteristics related to expectation of receiving a prescription.

| | Number who expected prescription | Percentage who expected prescription |
|---|---|---|
| All respondents | 206 | 56 |
| *Sex* | | |
| Male | 82 | 53 |
| Female | 75 | 55 |
| Parents | 49 | 62 |
| *Age* | | |
| 14 and under | 52 | 63 |
| 15 to 64 | 146 | 53 |
| 65 and over | 8 | 80 |
| *Social class** | | |
| 1 and 2 | 42 | 52 |
| 3 Manual and 3 Non-manual | 95 | 54 |
| 4 and 5 | 47 | 56 |
| *Type of consultation* | | |
| New/patient initiated | 139 | 57 |
| Follow-up/doctor initiated | 67 | 54 |

*Unspecified category not included.

per cent. Distribution according to age, sex, and social class is shown in Table 1. There was under-representation of the age group 65 and over. Analysis as to whether the consultation was doctor or patient initiated showed a higher proportion of patients attending for patient-initiated consultation. This contrasts with a study by Morrell and Nicholson (1974) who found that approximately 60 per cent of consultations were doctor initiated. On comparing demographic characteristics of patients returning fully completed questionnaires with those who returned incomplete questionnaires (Table 2), there was an over-representation of females and of patients aged 65 and over in the group returning incomplete questionnaires. Parents were under-represented in the latter group. No analysis of social class was made as this section was rarely filled in in the incomplete questionnaires.

An analysis was made of demographic features of respondents attending each doctor as compared with the total 368 respondents. Doctors 1 and 5 (trainee) had a higher proportion of parents and correspondingly of children under 14 among their respondents ($p < 0{\cdot}02$; $\chi^2$ test). I had the highest proportion of 'new' (patient-initiated) consultations, and doctors 1 and 2 had significantly more follow-up (doctor-initiated) consultations than their partners ($p < 0{\cdot}01$; $\chi^2$ test). There were no significant social class differences between respondents for the different doctors.

### *Patients' expectations about prescriptions*

The percentage of respondents who had expected to obtain a prescription was 56 per cent. This varied little according to demographic characteristics although there was some variation with age (Table 3). The relation between expectation and outcome is shown in Table 4.

### *Self-medication*

In reply to the question "Is there anything you intend to buy from the chemist to help?", 24 per cent of respondents said they would buy a remedy. On analysing this intention according to expectation of receiving a prescription and outcome of the expectation, 50 per cent of those who expected a prescription but did not obtain one intended to self-medicate, whereas only 19 per cent of those who received the expected prescription intended to buy a remedy (Table 5). Demographic factors relating to differences in intention to self-medicate showed a higher intention in the lower social classes. Males were more likely to buy remedies than females, as were patients attending for patient-initiated consultations as compared with doctor-initiated consultations ($p < 0{\cdot}01$; $\chi^2$ test). Analysis by age showed that elderly patients were least likely to self-medicate but these differences according to age were not statistically significant. Of the remedies that patients intended to buy (Table 6), half were aspirin or similar simple analgesics.

**Table 4.** Respondents' expectations of obtaining a prescription and outcome according to type of consultation and age. (Percentages are given in brackets.)

| | Expected and obtained prescription* | Expected and did not obtain prescription | Did not expect and obtained prescription | Did not expect and did not obtain prescription |
|---|---|---|---|---|
| All respondents | 183 *(50)* | 23 *(6)* | 33 *(9)* | 123 *(33)* |
| *Type of consultation* | | | | |
| New/patient initiated | 119 *(49)* | 20 *(2)* | 22 *(9)* | 79 *(32)* |
| Follow-up/doctor initiated | 64 *(52)* | 3 *(2)* | 11 *(9)* | 44 *(35)* |
| *Age* | | | | |
| Under 14 | 46 *(55)* | 6 *(7)* | 7 *(8)* | 23 *(28)* |
| 15 to 64 | 130 *(47)* | 16 *(6)* | 26 *(9)* | 98 *(36)* |
| 65 and over | 7 *(70)* | 1 *(10)* | 0 *(0)* | 2 *(20)* |

*Category with response "don't know" not included.

**Table 5.** Intention to self-medicate according to expectation of receiving prescription. (Percentages are given in brackets.)

| | Expected and obtained prescription | Expected and did not obtain prescription | Did not expect but obtained prescription | Did not expect and did not obtain prescription |
|---|---|---|---|---|
| All respondents | 183 *(100)* | 23 *(100)* | 33 *(100)* | 123 *(100)* |
| Respondents who intended to buy a remedy | 35 *(19)* | 12 *(52)* | 7 *(21)* | 33 *(27)* |
| Respondents who did not intend to buy a remedy | 148 *(81)* | 11 *(48)* | 26 *(79)* | 90 *(73)* |

### *Doctor-specific expectations*

There was a striking variation in expectations among patients attending the various doctors (Table 7). The patients of doctor 1 were most likely to expect a prescription, as were the patients who attended me ($p < 0{\cdot}05$; $\chi^2$ test). Almost half the patients who attended me were registered with doctor 1, and the rest were an even spread of patients on the lists of the other three partners. In the main, expectations were satisfied and were most likely to be satisfied in the case of doctor 4's patients, whose expectations of receiving a prescription were lowest (43 per cent). However, doctor 4's patients had the highest percentage of patients who intended to self-medicate—30 per cent compared with 18 per cent in doctor 2's patients (Table 8).

In an internal work study carried out by the partners in November and December 1976, the prescribing rates per partner were calculated and these agreed closely with patient expectations found in the present study (Table 9).

Similar expectations were shown by patients attending doctor 1 and doctor 5 (myself) who saw a high proportion of doctor 1's patients. Thus the most important factor shown to affect the patient's expectations of receiving a prescription is the doctor whom he attends. Although a higher percentage of doctor 4's patients intended to self-medicate, patients with greatest expectations of receiving a prescription (doctor 1's patients) did not have the lowest self-medication rate. Therefore, a low prescribing rate does not necessarily imply a high self-medication rate.

**Table 6.** Intended remedies.

| | |
|---|---|
| Aspirin and other remedies | 46 |
| Cough medicines | 10 |
| Throat lozenges | 12 |
| Skin treatment | 17 |
| Tonic or vitamin preparation | 4 |
| Laxative | 2 |
| Anti-diarrhoeal | 2 |
| Total | 93 |

## Discussion

The results show that from a group of 368 patients completing a written questionnaire, 56 per cent expected to receive a prescription. This was irrespective of social class, sex, and whether the consultation was patient or doctor initiated, but expectations were higher in patients aged 65 and over and among parents bringing children to the surgery. In the elderly group this presumably reflects medication for chronic illness. The figure of 56 per cent is similar to that of between 43 per cent and 52 per cent quoted by Stimson (1976).

It could be said that as the questionnaire was filled in after seeing the doctor the response might be biased in favour of the actual outcome of the consultation. However, in a similar study by Wrathall (1978) consistency of response before and after consultations was measured and a consistency of 87·2 per cent was found.

In the majority of patients, expectations concerning prescribing were met. Overall, 24 per cent of patients intended to buy remedies following the consultation. Almost half the remedies to be bought were simple analgesics, of which it could be said most people should keep a supply in their own homes for treatment of minor ailments.

There is a wide variation in prescribing rates between the doctors in the practice and a corresponding variation was found in patients' expectations of receiving a prescription. There was, however, no consistent relationship between low prescribing rates and high self-medication rates. It appears that patients expect from their doctors much the same as what the doctor prescribes. A state of equilibrium seems to be reached between the way the doctor practises and what the patient expects. In this study the patients of the doctor with the lowest prescribing rate, and correspondingly patients with the lowest expectations of receiving prescriptions, indicated that they were more likely to self-medicate than patients of doctors with higher prescribing rates. However, since simple analgesics were the commonest remedy cited, this might indicate a self-sufficient attitude towards management of minor ailments.

Wide-ranging implications can be drawn from this

**Table 7.** Respondents' expectations of obtaining a prescription and outcome according to doctor consulted. (Percentages are given in brackets.)

| | Expected and obtained prescription* | Expected and did not obtain prescription | Did not expect but obtained prescription | Did not expect and did not obtain prescription |
|---|---|---|---|---|
| All respondents | 183 *(50)* | 23 *(6)* | 33 *(9)* | 123 *(33)* |
| Dr 1 | 45 *(65)* | 2 *(3)* | 5 *(7)* | 17 *(25)* |
| Dr 2 | 31 *(44)* | 4 *(5)* | 8 *(11)* | 27 *(38)* |
| Dr 3 | 32 *(42)* | 8 *(11)* | 6 *(8)* | 29 *(38)* |
| Dr 4 | 30 *(40)* | 2 *(3)* | 6 *(8)* | 15 *(45)* |
| Dr 5 (Trainee) | 45 *(58)* | 7 *(9)* | 8 *(10)* | 17 *(22)* |

*Category with response "don't know" not included.

study with regard to the NHS drug bill and general practitioners' workloads. As Marsh (1977) shows, encouraging patients to be self-reliant and educating them in the management of minor ailments reduces workload and saves money in NHS prescriptions.

If one could explain to the patient that cough medicines and antibiotics do little to help minor coughs and colds and sore throats, not only might the NHS drug bill be reduced but patients might feel confident enough to treat their ailments at home until symptoms regressed spontaneously. A small number of patients might attend for certification nonetheless.

This study has shown a wide variation in prescribing habits between partners. If all partners prescribed at the rate of the partner who prescribed least, it is possible that patients would adapt to this new approach, form a new equilibrium with their doctor, and ultimately the doctor's workload might be reduced.

**Table 8.** Intention to self-medicate according to doctor consulted. (Percentages are given in brackets.)

| | Intended to buy remedy | Did not intend to buy remedy | Total |
|---|---|---|---|
| All respondents | 87 *(24)* | 281 *(76)* | 368 *(100)* |
| Dr 1 | 16 *(23)* | 53 *(77)* | 69 *(100)* |
| Dr 2 | 13 *(18)* | 57 *(82)* | 70 *(100)* |
| Dr 3 | 15 *(20)* | 60 *(80)* | 75 *(100)* |
| Dr 4 | 22 *(30)* | 49 *(70)* | 71 *(100)* |
| Dr 5 | 21 *(27)* | 56 *(73)* | 77 *(100)* |

**Table 9.** Expectation of obtaining a prescription according to doctor consulted compared with doctor's prescribing rate. (Percentages are given in brackets.)

| | Expected prescription | Prescribing rate* |
|---|---|---|
| Dr 1 | 47 *(68)* | *(65)* |
| Dr 2 | 35 *(49)* | *(53)* |
| Dr 3 | 40 *(53)* | *(48)* |
| Dr 4 | 32 *(43)* | *(40)* |
| Dr 5 (Trainee) | 52 *(67)* | — |

*Finding from internal work study (1976).
Prescribing rate defined as the percentage of consultations at which a prescription was issued.

## References


Julian, P. & Herxheimer, A. (1977). Doctors' anxieties in prescribing. *Journal of the Royal College of General Practitioners,* **27**, 662-665.

Marsh, G. N. (1977). 'Curing' minor illness in general practice. *British Medical Journal,* **2**, 1267-1269.

Morrell, D. C. & Nicholson, S. (1974). Measuring the results of changes in the method of delivering primary medical care—a cautionary tale. *Journal of the Royal College of General Practitioners,* **24**, 111-118.

Stimson, G. V. (1976). Doctor-patient interaction and some problems for prescribing. In *Prescribing in General Practice. Journal of the Royal College of General Practitioners,* **26**, Suppl. No. 1, 88-96.

Wrathall, H. (1978). Personal communication.



**Acknowledgements**

I wish to thank Professor D. H. H. Metcalfe, Department of General Practice, University of Manchester, for his help and advice in formulating this study and in preparing the results. I also wish to thank Dr E. F. Riley and the medical and secretarial staff of the Surgery, Calverton, Nottinghamshire, for their encouragement and assistance in the collection of the data.


# Child deaths from accidents

Among pre-school children by far the largest number of deaths in the years 1968 to 1974 occurred at home, in contrast with under a quarter of fatal accidents to boys and half the fatal accidents to girls of school age.

**Reference**


Macfarlane, A. (1979). Child deaths from accidents: place of accident. *Population Trends 15.* London: HMSO.