Self-medication in a small community

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SUMMARY. (1) Simultaneous recording of doctor/patient contacts and chemists' sales were made during a period of two weeks in a small self-contained community.

(2) The conclusion of previous studies, using different methods, that non-prescribed medicines are taken twice as often as those prescribed by doctors, is confirmed.

(3) The possibility that self-medication may conceal the onset of serious disease is discussed.

Introduction

The assessment of the amount and outcome of self-medication poses various problems. Previous studies, notably those of Wadsworth *et al.* (1971) and Dunnell and Cartwright (1972) have shown that most people who suffer from symptoms do not go to a doctor. An analysis by Elliot-Binns (1973) into the sources and soundness of advice given by laymen concluded that " . . . home medical care . . . is still responsible for the majority of advice and treatment."

These studies have relied on information given retrospectively, either by random sampling of the population or by patients who eventually came to a doctor for advice.

Whitfield (1968) analysed the details of customers requesting medical advice from 20 retail chemists during a period of two days. There were no comparable figures for doctors' consultations over the same period.

A simultaneous study by doctors and chemists in a defined community would be expected to produce an estimate of self-medication which would eliminate many of the uncertainties of a retrospective survey, and would enable direct comparison to be made between the services which patients received from different sources.

In Seaton, Devon, the population is served by two chemists, and doctors from only two practices. The area is well-defined geographically and the community is close-knit. Patients from practices outside the area are served by chemists' shops in their own communities, and preliminary studies showed that, at a ' quiet ' time of year with no holiday visitors, the ' practice areas ' of the doctors and chemists are co-terminous. In this unusual setting I thought that an estimate of the amount of self-medication could be made if records were made simultaneously by the doctors and chemists.

Method

For the first week of December 1975, and the third week of January 1976, a record was kept by the chemists of their ' total sales ' and ' medical sales '. For the same two weeks the doctors recorded the number of their contacts with patients. More detailed figures were kept of patients with three groups of symptoms: coughs and colds, indigestion, and diarrhoea and sickness. For identification by the chemists of customers with these three groups of symptoms it was agreed that only a customer buying a product recommended by the manufacturer, and understood by the chemist to be appropriate to the symptom, should be recorded. Customers buying analgesics or products where the chemist had any doubt were excluded. For these groups of customers the chemists recorded:

(1) The number of patients who asked their advice about their symptoms,

(2) The number of patients who bought remedies for these symptoms without asking advice.

At the same time the doctors recorded the number of patients attending with these symptoms, the number who had been to the chemist before coming to the doctor, and the number of prescriptions issued for these symptoms without advice from the doctor (i.e. requests for prescriptions through the receptionist).

Results

The total numbers of patients/customers involved in the two weeks of the survey are shown in table 1.

TABLE 1
TOTAL NUMBER OF PATIENTS SEEN IN TWO WEEKS

Doctors				Chemists
Total number of patients on list	6,200	6,200	Total number of potential customers
Total doctor/patient contacts	1,723	3,281	Total medical sales
Contacts for coughs/ colds	205	441	Sales for coughs/ colds
Contacts for indigestion	95	166	Sales for indigestion
Contacts for diarrhoea/ sickness	59	35	Sales for diarrhoea/ sickness
Contacts for coughs/ colds, indigestion, diarrhoea/sickness	359	642	Sales for coughs/ colds, indigestion, diarrhoea/sickness
Contacts for coughs/ colds, indigestion, diarrhoea/sickness as per cent total contacts	20·8%	19·7%	Sales for coughs/ colds, indigestion, diarrhoea/sickness as per cent medical sales

One point of immediate interest is that the sales/contacts for the three special groups studied in more detail are 19·7 per cent of the total medical sales at the chemist and 20·8 per cent of total doctor/patient contacts. Another point is that both for total

TABLE 2
ANALYSIS OF CONTACTS BY PATIENTS IN SPECIAL GROUPS

	Doctor			Chemist			Totals treated
	Without advice	With advice	Total	Without advice	With advice	Total	
Coughs/ cold	53	152	205	354	87	441	646
Indigestion	53	42	95	140	26	166	261
Diarrhoea/ sickness	9	50	59	21	14	35	94
	115	244	359	515	127	642	1,001

medical sales and for sales in the three special groups, about twice as many people go to the chemist as go to the doctor. There are differences within the three groups.

In table 2 those patients who asked for a prescription without seeing the doctor are classified as seeing the doctor ' without advice ' and are comparable to the chemists' customers who bought without advice. It will be seen that patients with diarrhoea and sickness are most likely to seek advice from the doctor while for coughs and colds or indigestion the reverse is true. This difference is clearly brought out in table 3 which shows the first choice for treatment (in percentages) of a patient with one of the three groups of symptoms.

TABLE 3
FIRST CHOICE FOR TREATMENT (IN PERCENTAGES)

	Doctor	Chemist
Coughs/colds	26	74
Indigestion	34	66
Diarrhoea/sickness	57	43
Totals	31	69

Finally, in an attempt to measure the outcome of self-medication table 4 shows the number of people who went to the chemist first before going to the doctor. This figure is compared with the number of sales the chemist made for these three groups, and could be regarded as a crude measure of the failure rate of self-medication for these symptoms.

TABLE 4
FAILURE RATE OF SELF-MEDICATION

	Total chemists' sales	Number asking doctor's advice having been to chemist first	Patients progressing to the doctor %
Coughs/colds	441	50	8·8
Indigestion	166	11	6·6
Diarrhoea/sickness	35	12	34·0
Totals	642	73	11·3

Discussion

Previous studies of self-medication, using random sampling, symptom recall and retrospective recording have concluded that " non-prescribed medicines were taken twice as often as those prescribed by doctors " (*Self-care*, 1973). It is interesting that this study, using a different method, shows that during the two weeks under review twice as many people went to the chemist to buy their own medicines as consulted the doctor (tables 1 and 2). This ratio was also true when three specific groups were studied, although within the three groups it is clear that people are more content to treat their own symptoms of coughs, colds, and indigestion, than they are to treat diarrhoea and sickness. Moreover they are more successful (table 4).

An estimate of total self-medication in the community would have to include consumption of medicines kept in the house. However, unless the two weeks chosen

for this study were unusual in that the population was either stocking up or running down their home medicine cupboards, it is probable that the recorded medical sales at the chemists do reflect total self-medication. The fact that the two weeks involved were six weeks apart and that there was a remarkable agreement between the figures for each week reinforces this view.

The number of people asking the chemist's advice before buying for the three special groups during the two weeks was 127, whereas the number asking the doctor's advice was 244 (table 2). This is a considerably higher proportion than the one to 11 reported in Southwark by Wadsworth *et al.* (1971). Perhaps it reflects the esteem in which the chemists are held in this small community, the low esteem for the doctors, the traditional independence of the Devonian, or a wealthier community.

The estimation of the outcome of self-medication is full of difficulty. The use of the percentage of people who went to the doctor having already been to the chemist to give an indication of the failure rate of self-medication is crude. It implies a successful outcome of self-medication in those who did not go to a doctor. It ignores self-care at home and those people who did not go to a chemist. As a definition of successful outcome it leaves much to be desired. But, bearing these criticisms in mind, a " success-rate " of nearly 90 per cent for self-medication for coughs and colds, indigestion, and diarrhoea and sickness emphasises the large and valuable part that self-medication plays in the day-to-day management of illness.

There is, however, one disturbing question: of those people indulging in self-medication, how many have diseases which need medical attention? If the results of endoscopy and radiology reported by Barnes *et al.* (1974) are generally applicable, then 60 per cent of those patients presenting to their doctors with dyspepsia have a specific lesion causing their symptoms. In a larger series Barnes (1976) found that 25 per cent had a lesion which he considered needed surgical treatment.

The question is, how many of the 155 people who bought remedies for indigestion from the chemist and did not go to a doctor, needed further investigation and treatment?

The Journal of the Royal College of General Practitioners (1973) posed the question " When is it right to go to the doctor and when is it right to treat oneself at home " ? It asked " . . . If the Government and profession can unite to support an advertising campaign encouraging people with influenza to treat themselves without calling a doctor, why is this policy not right for other conditions? "

But, in view of the figures from this survey and the findings of Barnes and his colleagues, would it not be preferable to suggest guidance for patients for those conditions *not* suitable for self-medication? Health education resources could be concentrated on those danger signals in common conditions which the medical profession recognises. This advice to patients should be designed to alert the population to symptoms which require medical rather than self-treatment, and might result in earlier diagnosis of serious disease.

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