Repeat prescribing — a study in one practice

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SUMMARY. A survey of the prescribing habits of a group practice of 10,500 patients was conducted during a three-month period to compare the pattern of repeat prescribing with that practised during consultations. Further analysis into therapeutic groups and categories depending on the length of treatment prescribed was performed. The results obtained were compared with annual prescribing rates and it was found that monthly figures could not be accurately extrapolated.

Introduction

REPEAT prescribing accounts for a substantial proportion of a general practitioner's therapeutic activity. A short survey in the practice revealed that almost six hours of doctor time were spent on this task each week. Despite this, there has been little published research on the subject. Comparative studies are rendered more difficult because of variation in definition, classification, and research methods.

Aims

Our main objectives were to establish a profile of our prescribing habits and to reveal any differences between prescriptions issued during a consultation and those issued without the patient being seen. We also aimed to set out our rates of prescribing for the two groups, and as far as possible compare our findings with those of others. Furthermore, we wanted to compare the results given by a short (one- or three-month) analysis with those of an annual survey to see if the shorter period would give a sufficiently accurate figure.

Method

The practice is located in a Worcestershire market town with, at the time of the study, a list of 10,547 patients. There are five partners, and assistants contribute an additional six sessions per week. Requests for repeat prescriptions come via our receptionists, who pass the request to the doctor with a blank FP 10 form marked RP in the bottom righthand corner, and the patient's notes. All prescriptions issued during the months of May, June and July 1978 were subsequently obtained from the Pricing Bureau, and the marked forms were identified and separated. All the doctors' prescriptions were considered together.

After dividing the prescriptions by month of issue and into those written during a consultation ('seen') and those given without direct patient contact ('unseen'), each item was then classified into one of 15 therapeutic sub-groups and then a further sub-division was made into three categories depending on the length of treatment prescribed.

The therapeutic sub-groups used were as follows:

Night sedation
Psychotropic
Analgesic
Other central nervous system drugs (CNS)
Cardiovascular (CVS)
Gastro-intestinal
Respiratory system (RS)
Skin
Endocrine
Musculoskeletal
Infections
Nutrition and haematinic
Eye and ENT
Allergy
Others

This is based on the classification used in *MIMS* with the following differences:

1. CNS drugs were divided into four groups, the section 'Other CNS' consisting largely of anticonvulsants.
2. Diuretics were included in the cardiovascular group.
3. All anti-infective agents, regardless of target organ, were classified together under 'infections'.

4. Drugs used for eyes and ENT were combined.

5. 'Others' includes diagnostic agents, dressings, appliances and the 'surgical' group of *MIMS*.

6. Endocrine comprises all oral and parenteral hormonal drugs including oral contraceptives, but not topical applications.

The length of treatment categories were:

1. Long-term maintenance therapy.

2. Sporadically used drugs—'for use p.r.n.'

3. Drugs issued for a short (one-off) course of treatment.

All category 1 items issued during the study period were prescribed in a 50-day supply.

Thus, a repeat prescription request for digoxin would be classified as 'unseen', therapeutic group 'CVS', length of treatment 'Category 1—long-term maintenance therapy' and a prescription of penicillin V to a patient who attended the surgery with tonsillitis would be 'seen', 'infections', 'Category 3—one off'.

Results

During the three-month period, 9,469 consultations took place (an annual rate of 3.59 per patient on the list) and a total of 9,731 prescriptions were issued, bearing 16,136 items, of which 4,420 (27.4 per cent) were 'unseen'. These figures give annual prescribing rates of 4.59 and 1.26 per patient for 'seen' and 'unseen' prescriptions respectively.

The numbers of prescriptions and items issued each month are shown in Table 1.

The ratio of seen to unseen prescriptions shows marked variation between the three months and thus cannot be extrapolated to give an annual rate. The annual pricing exercise (using a sample month) for our practice prescriptions, conducted by the Bureau for the years 1971 to 1978, has been plotted graphically in Figure 1. As can be seen, the annual results for unseen items derived by multiplying the sample month figure by 12 differs from the true figure of which we have records. This study is restricted to a comparison of prescribing habits during a three-month period, and any calculations of annual rates derived from this (and perhaps from the annual pricing exercise) must be seen in this light.

Table 1. Number of prescriptions issued each month.

	Seen			Unseen		
	FP10s	Items	Items/ FP10	FP10s	Items	Items/ FP10
May	2,380	4,151	1.74	869	1,312	1.52
June	2,411	4,238	1.76	1,095	1,671	1.53
July	1,985	3,327	1.68	991	1,437	1.45
Total	6,776	11,716	1.73	2,955	4,420	1.50

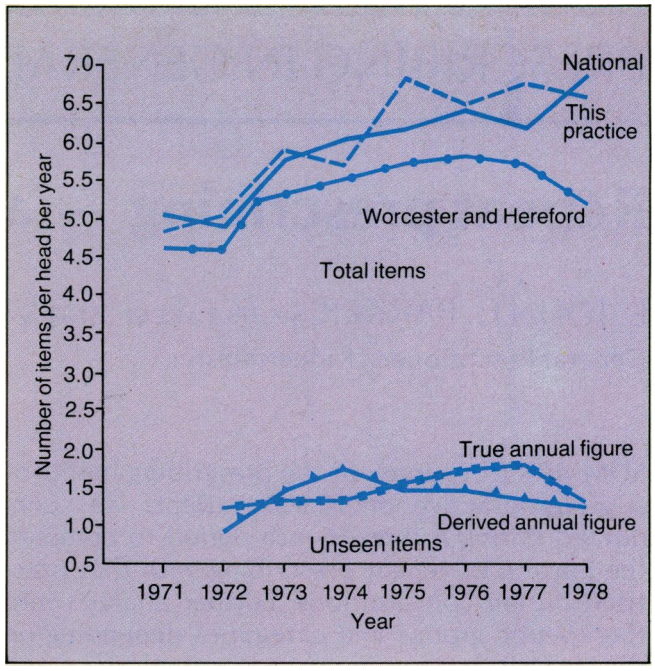


Figure 1. *Number of items prescribed per head per year compared with the national and local rates and the true and derived annual rates for unseen items.*

The results of the further analyses into therapeutic and length of treatment groups are shown in Figure 2. This compares the average number of items per month (one third of the three-month totals) for seen and unseen prescriptions and shows that the overall distribution is broadly similar, with the following exceptions:

1. Some drug groups were far more likely to have been issued during a consultation. These groups were, as expected, 'infections' where the ratio of seen to unseen items was 10:1 and the 'CVS' and 'RS', both 2.5:1.

2. No group was more likely to be prescribed unseen, although 40 per cent of 'night sedation' items were issued in this way.

3. The unseen items, group 3 prescriptions—the 'one-offs'—represented only a small proportion in most therapeutic subgroups. Only three subgroups, 'infections' (89 per cent), 'ENT/eyes' (35 per cent) and 'respiratory system' (23 per cent) had more than one fifth of their unseen items classified into group 3. Although the figure for 'infections' seems high, it accounts for only 8.9 per cent of the total (seen plus unseen). Thus few patients were given 'one-off' courses of treatment without being seen.

Discussion

The image of repeat prescribing has had a bad press, but there are few published statistics to determine its prevalence or the incidence of adverse effects. The subject is confused by variation in the use of the term; although a repeat prescription usually means one issued without a direct consultation between a doctor and a patient,

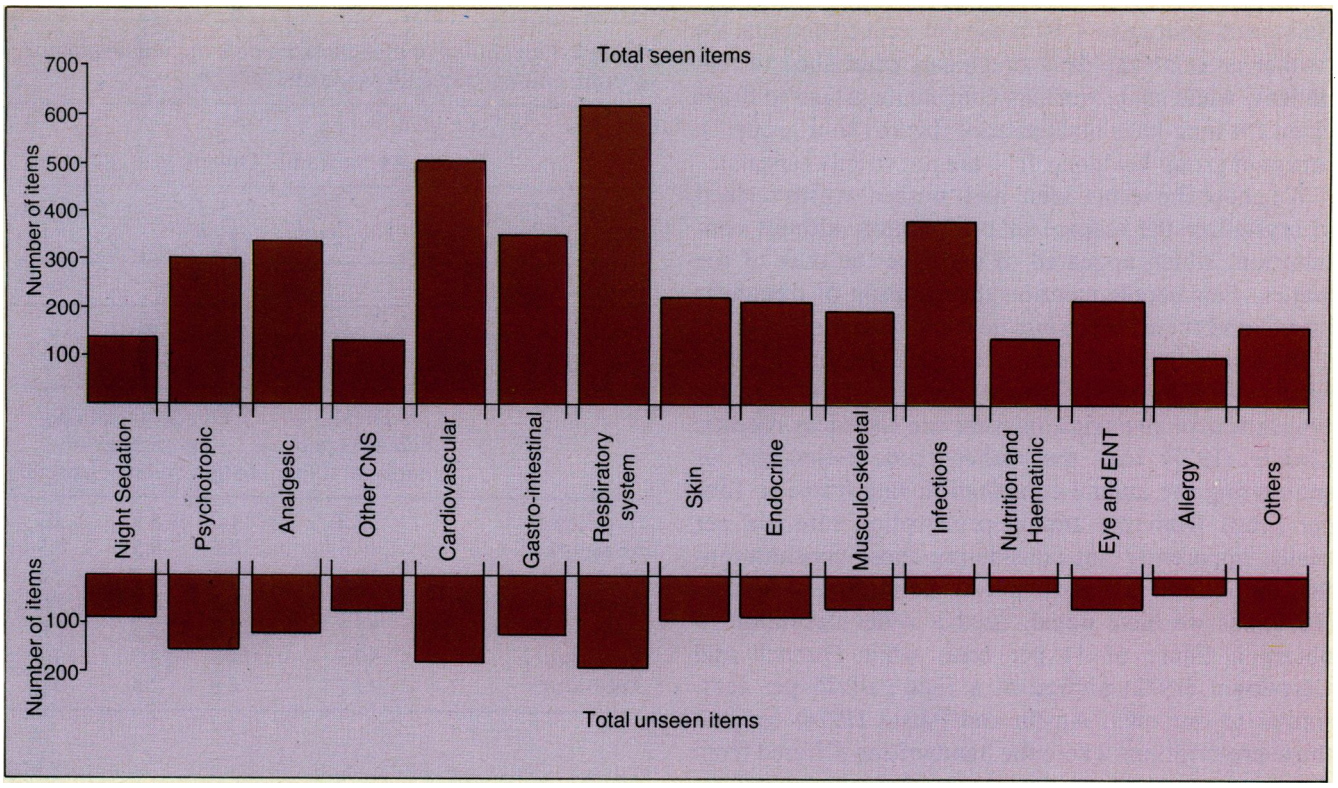
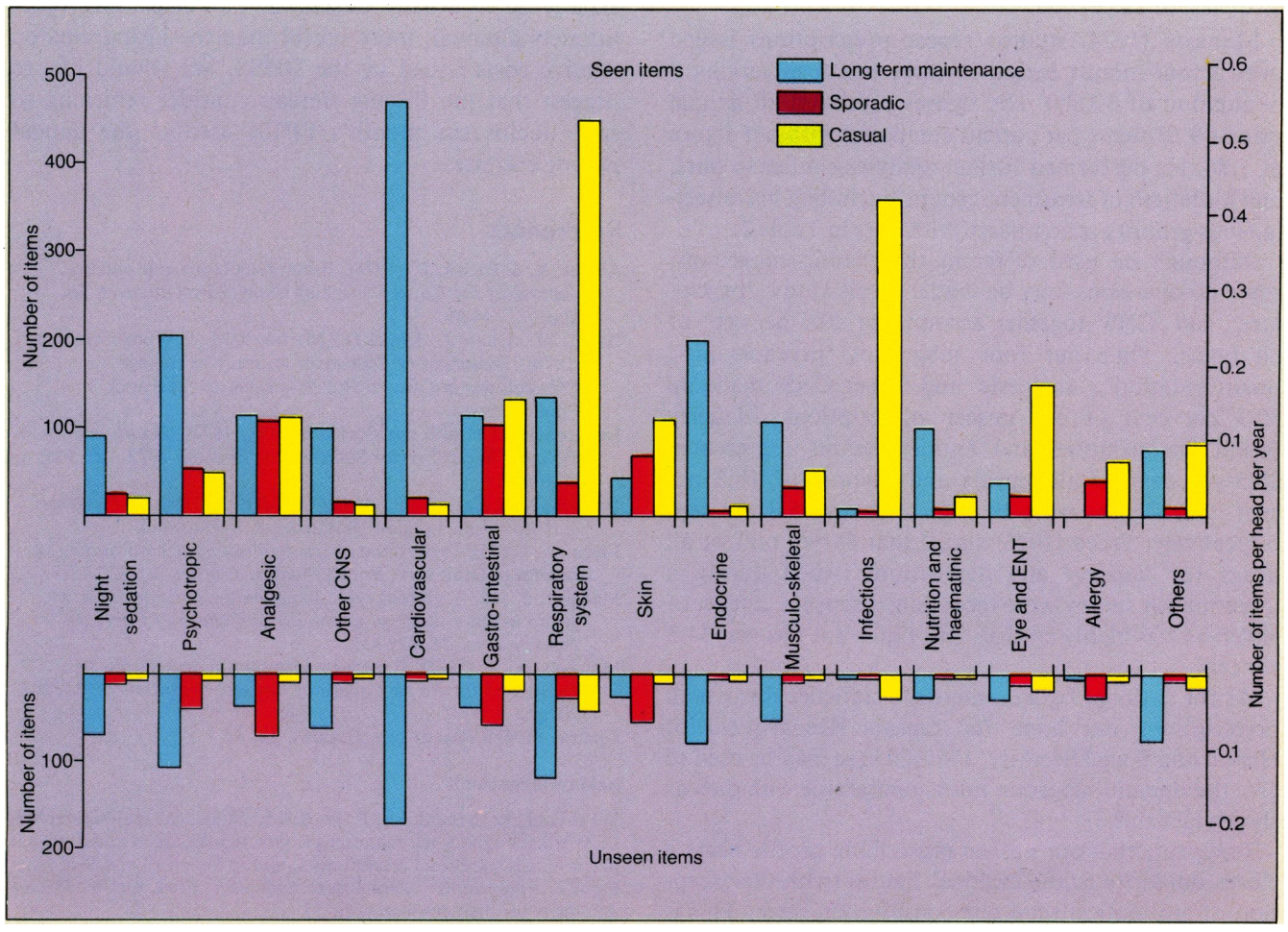


Figure 2. *Average number of items per month for seen and unseen prescriptions.*

Figure 3. *Comparison of the three treatment categories for seen and unseen prescriptions.*



Balint and colleagues (1970) use the term to describe the further issue of any drug previously prescribed to that patient, while some workers confine the usage to drugs given for long-term maintenance therapy (our group 1): (drugs in group 3—'one-off'—are not strictly repeats).

We chose the terms 'seen' and 'unseen' which seemed to crystallize the essence of prescription without consultation, which appeared to us to be the crux of the matter. Few people mention the duration of treatment issued, and there is certainly no standardization of this.

In view of these variations, it is hardly surprising that widely differing results are obtained in calculating the proportion of prescriptions that are issued as repeats. *Update* (1977) uses the rather crude estimation of subtracting the annual consultation rate (three to four per head) from the annual prescription rate (six per head), apparently not considering those consultations that do not end in a prescription. Balint and colleagues (1970), as we have noted, used a wider definition to obtain a figure of 41 per cent, while Dunnell and Cartwright (1972) arrived at a figure of 25 per cent, similar to our own. Austin and Parish (1976) counted those prescriptions where the handwriting differed from the signature. Not all doctors in their study had receptionists, and many must have written unseen prescriptions themselves, perhaps accounting for their rather low figure of 10 per cent. Madeley (1974), in a survey of a single practice, found a 'receptionist repeat' incidence of 22 per cent.

Manasse (1974) studied repeat prescriptions issued over a four-month period in three practices serving a population of 30,600. His figures produced an annual rate of 9.65 items per patient compared with our figure of 1.86. He performed further analyses similar to ours, and his length of treatment groups (including his miscellaneous group) are compared with ours in Table 2.

Although he used different therapeutic subgroups, some comparisons may be made. In his study, 'psychiatric' and 'CNS' together account for 40.3 per cent of all items, while our four subgroups 'psychotropic', 'night sedation', 'analgesic' and 'other CNS' made up 30.3 per cent of our unseen prescriptions. Madeley found that 'sedatives' and 'antidepressants' represented 28.3 per cent of all repeats and 'hypnotics' 18.3 per cent. Our figures were 10.8 per cent and 5.8 per cent respectively. Freed (1976) stated that 64 per cent of all drugs for 'anxiety and depression' issued during a three-month survey were receptionist repeats, a level of which he was highly critical. Our figure for this was 34.3 per cent.

As for national figures, there are statistics for overall prescriptions but none for repeats (Department of Health and Social Security, 1977). These may be used to give therapeutic subgroup rates comparable with ours as shown in Table 3.

It appears that our unseen prescribing profile bears a closer similarity to the national figures (with the exception of antibiotics) than our consultation rates. This is of uncertain significance but might reflect selection of drugs by patients rather than doctors.

Table 2. Percentage of prescriptions by length of treatment groups: comparison with Manasse (1974).

	1. Long term	2. Sporadic	3. One-off	4. Miscellaneous
Manasse (1974)	*81.9*	*10.4*	*5.5*	*2.2*
This study	*62.6*	*24.7*	*12.9*	—

Table 3. Percentage of prescriptions by therapeutic subgroup: comparison with DHSS (1977).

	DHSS Percentage of national total	Our prescriptions Percentage of Total	Seen	Unseen
Hypnotics	*4.9*	*4.0*	*5.9*	*3.3*
Analgesics	*6.5*	*8.5*	*8.5*	*8.5*
Psychotropics	*11.5*	*8.4*	*10.8*	*7.6*
Gastro-intestinal	*7.5*	*8.8*	*8.7*	*8.9*
Cardiovascular	*12.2*	*12.5*	*12.3*	*12.6*
Respiratory	*10.3*	*14.6*	*13.0*	*15.2*
Antibiotics	*13.1*	*7.6*	*2.4*	*10.0*

One further benefit of this study has been the sight of the authors' FP10s returned from the Pricing Bureau with the cost of each item marked. This salutary experience is usually denied to non-dispensing practitioners although more useful than the histograms on relative costs issued by the DHSS. We should like to suggest that the Pricing Bureau consider returning to each doctor the month's FP10s used in the annual pricing exercise.

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