prescribed treatment by the general practitioner. Apart from those changes listed at the beginning of this paper, there are a wide range of motivational changes which will affect both the series of decisions which will precede consultation (Robinson, 1971), and the course and content of the consultation (Stimson and Webb, 1975). It is the age of 65 rather than 55 or 75 at which Cartwright (1967) found a marked rise both in the inclination of persons to discuss personal problems with their general practitioner, and of consultations by women, and at which Dunnell and Cartwright found a marked rise in the average number of prescribed medicines taken (Dunnell and Cartwright, 1972).

Added to these empirical data, there is the theory of Blau (1973) which specifically links retirement with sickness and the more general theory of disengagement (Cumming and Henry, 1961) from which it would follow that changes in interaction between doctor and patient would occur with retirement.

The data presented here coupled with the, as yet, unsubstantiated hypothesis that the range and typical nature of prescribed treatment is subject to change on the patient reaching pensionable age, suggest that there may exist a broad treatment régime provided by the primary health care team for the pensionable population which is distinguishable from that of younger age groups. If this is the case, this has important implications not only for social pharmacology and general practice, but also for gerontology since ageing is in part the net result of past treatment.

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8. PRESCRIPTIONS WRITTEN BY ANCILLARY STAFF

RICHARD AUSTIN AND PETER PARISH

Introduction

The writing of prescriptions by ancillary staff is a subject which has received much criticism in the correspondence columns of the *Pharmaceutical Journal.* Yet it has received little systematic study, possibly because it is a highly sensitive aspect of general practitioners' prescribing activities and because of the dearth of information available for analysis. Understandably, prescribing doctors would feel threatened by any implication which suggested that they do not adequately supervise the issuing of prescriptions by ancillary staff. The majority would claim that prescriptions are written under supervision because they are signed by the prescribing doctor. However, observations by dispensing pharmacists do not always appear to support this claim (Wayne, 1970). Errors in prescription entries by ancillary staff indicate that adding a doctor's signature to a prescription form is not always consistent with checking the accuracy of prescription entries. To quote Professor Sir Edward Wayne in his report on the misuse of barbiturates in 1970,

" . . . We were informed that patients in general practice were often provided with prescriptions without being seen . . . In many instances prescriptions were made out by auxiliaries . . . often prescriptions would be incorrectly completed. The prescribing of drugs was often not recorded in the patient's case notes, so the quantity and frequency of prescribing were unknown to the general practitioner and his partners ".

The procedure of allowing ancillary staff to write prescriptions for patients without them actually seeing the doctor has become well established in general practice. Many practices have instituted repeat prescription procedures which often involve the use of repeat prescription cards assigned to each patient. These attempt to keep some control over the issue of repeat prescriptions by recording basic details are an improvement on allowing patients to obtain repeat prescriptions without any record at all.

However, repeat prescription cards do not necessarily imply improved monitoring of patients on long-term treatment. Several studies have shown that prescriptions written by ancillaries give an indication of the extent to which prescriptions are issued without the patient first seeing the doctor (Parish, 1971; Dunnell and Cartwright, 1972; Balint, *et al.*, 1970). Clearly the issuing of repeat prescriptions to patients without them seeing the doctor is acceptable with some drug treatments in some disorders (for example insulin to a stabilised diabetic patient or maintenance vitamin B_{12} to a patient with pernicious anaemia), but in some patients and with some drugs it is not appropriate. The most valid and serious criticisms of such procedures are that:

(1) It lessens the doctor's chances of early recognition of adverse drug reactions.
(2) It enhances the risk of drug interactions because the doctor may initiate drug treatment for a ' new ' disorder without realising that the patient is on long-term treatment with some other drug.
(3) It encourages the long-term use of drugs when this may be unnecessary and potentially harmful to the patient, e.g. long-term dependence on barbiturate hypnotics.
(4) It removes from the doctor the opportunity to re-appraise his patient's needs and treatments.

This study

In order to examine the extent and characteristics of prescriptions written by ancillary staff, a sample of items was selected from the Swansea cohort prescription data. These data correspond to the source described but differ in that the measurement was the prescription item, rather than the doctor. This approach was necessary because the 116-doctor sample contained a group of doctors who did not have the opportunity for ancillary prescribing as they did not employ a secretary or receptionist. Consequently, it was not possible to analyse the characteristics of doctors, and hence the analysis was concerned instead with the characteristics of prescriptions written by ancillaries.

The distribution of the degree to which individual doctors used ancillary staff to complete prescription details is shown in table 1.

While this distribution is skewed towards non-participation in ancillary prescribing, because of doctors not employing ancillary staff, there is no reason to suppose that this is not representative of our cohort as a whole.

Proportion of prescriptions written by ancillaries

The monthly prescription samples of the 116 doctors produced 86,498 prescriptions. Of these 8,729, or ten per cent had been written by someone other than the signing doctor. (In this study it was presumed that these forms were written by a member of the doctor's ancillary staff). Obviously, the ten per cent refers to all prescriptions whether new (one-off) or long-term repeat. It is impossible in this study to differentiate between these, but the studies quoted above have shown that the number of prescriptions issued by

TABLE 1

DISTRIBUTION OF DOCTORS BY EXTENT OF PRESCRIPTIONS WRITTEN BY ANCILLARIES

Percentage of prescriptions written by ancillaries	*Doctors*
0	45
0–5	17
6–10	12
11–15	13
16–20	6
21–25	10
26+	13
	n=116

ancillaries without the patient seeing the doctor increases to about 30 per cent of all prescriptions once treatment has been continuous for six months or more.

Therapeutic groups

Table 2 shows the involvement of ancillary staff in writing prescriptions within major therapeutic groups. Ancillary activity was particularly high for drugs used to treat long-term disorders, especially the group of drugs which act on the central nervous system and includes psychotropics and pain relievers (DHSS classes 22 to 34).

Only small proportions of drugs used to treat acute infective and allergic disorders, eye disorders and ear disorders were issued by ancillaries. This further indicates that ancillary staff were generally involved with patients suffering from long-term disorders.

Proprietary and non-proprietary preparations

Ten per cent of all prescriptions for proprietary preparations were written by ancillary staff as were ten per cent of all prescriptions for non-proprietaries. The proportion of

TABLE 2

PERCENTAGE OF PRESCRIPTIONS WRITTEN BY ANCILLARIES

(within major therapeutic groups)

Therapeutic groups	*DHSS class*[1]	*Percentage by ancillaries*
Preparations affecting metabolism	49–57	*19·6*
Others—including dressings and appliances	82–88	*18·2*
Preparations acting on the cardiovascular system and diuretics	9–16	*16·3*
Preparations acting on nervous system (narcotics and psychotropics)	22–28	*13·9*
Preparations affecting nutrition and blood	58–64	*12·8*
Preparations used in rheumatic diseases	65	*12·8*
Preparations acting on nervous system—others	29–34	*10·7*
Preparations acting on skin and mucocutaneous junction	76–81	*9·4*
Preparations acting on lower respiratory system	17–21	*8·9*
Preparations acting on alimentary system	1–8	*8·9*
Preparations affecting allergic reactions	66–68	*5·6*
Preparations acting on ENT and preparations for eye	69–75	*2·7*
Preparations acting on genito-urinary system	35–38	*2·7*
Preparations acting systematically on infections	39–48	*2·4*

[1]See appendix.

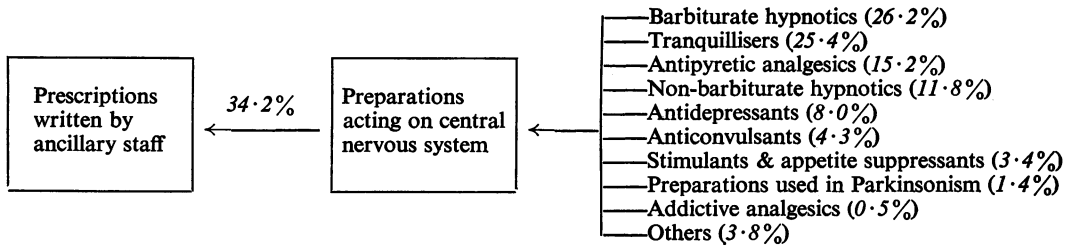
prescriptions written by ancillaries for proprietary/non-proprietary preparations was five per cent. This is a group of drug preparations prescribed by non-proprietary names yet available only by their proprietary brand names, because no equivalent non-proprietary standard preparation is available.

Drugs which act on the central nervous system

About one third of all prescriptions written by ancillary staff were for drugs which act on the central nervous system (classes 22–34). Of these 26 per cent were for barbiturate hypnotics, 25 per cent for tranquillisers, 12 per cent for non-barbiturate hypnotics, three per cent for stimulants and appetite suppressants and 0·5 per cent for addictive analgesics (figure 1). These distributions support Parish's (1971) finding that there " is a relationship between ease of obtaining a repeat prescription, duration of treatment, and the dependence producing properties of the drug prescribed."

FIGURE 1

ANALYSES OF CATEGORIES OF DRUG WRITTEN ON PRESCRIPTION FORMS BY ANCILLARY STAFF



N.B. Years: 1970 and 1971

Drug preparations which may be bought over the counter

Table 3 shows that about one in three of all prescriptions written by ancillary staff could have been bought over the counter by the patient (Forensic classes 5 and 8). This is somewhat reassuring as far as safety is concerned, but nevertheless the same criteria as listed earlier apply.

TABLE 3

DISTRIBUTIONS OF PRESCRIPTION ITEMS BY FORENSIC CLASS BY PERSON WRITING PRESCRIPTION

Forensic class	*Legal category*	*Doctors %*	*Ancillaries %*
0	Dangerous Drugs Act 1965 (full restrictions)	*0·2*	*0·2*
1	Drugs (Prevention of Misuse) Act 1964	*1·2*	*2·4*
2	Schedule 4a of the Poisons Rules	*5·3*	*12·6*
3	Schedule 4b of the Poisons Rules	*23·0*	*29·9*
4	Therapeutic Substances Act 1956	*25·2*	*10·7*
5	Schedule 1 of the Poisons Rules; Dangerous Drugs Act 1965 (regulations) with Schedule 1	*3·5*	*4·2*
6	Schedule 7 of the Poisons Rules (Section 18(1)(c)(iii) of the Pharmacy and Poisons Act, 1933)	*9·2*	*4·6*
7	Part 1 or 2 of the Pharmacy and Poisons Act 1933; Part 1 with Dangerous Drug Act 1965 (invoice); Schedule 5 of the Poisons Rules	*6·8*	*5·2*
8	No restriction, Schedule 3 exemption	*25·6*	*30·1*
	Total	*100·0*	*99·9*

TABLE 4(a)

PERCENTAGE OF PRESCRIPTIONS WITHIN AGE/SEX GROUPS COMPLETED BY ANCILLARY STAFF

Age/sex group	*% by ancillary*
Female over 65	*19·3*
Male over 65	*19·0*
Male adult (16–64)	*10·3*
Female adult (16–64)	*10·0*
Male child (0–15)	*4·1*
Female child (0–15)	*3·2*
Unspecified sex over 65	*5·3*
Unspecified sex adult	*1·6*
Unspecified sex child	*5·3*
Age group unclear	*5·3*

Characteristics of the patients

Table (4a) shows age and sex distributions of patients who had received a prescription written by an ancillary and table 4(b) compares those prescriptions written by the signing doctor and those written by ancillaries and signed by the doctor. These tables show quite clearly that elderly patients, particularly elderly women, are the greatest recipients of prescriptions written by ancillaries.

A smaller proportion of prescriptions written by ancillaries were for children under 15 years of age. This may indicate the acuteness of most childhood disorders, which usually do not involve long-term repeat drug treatments for which ancillaries appear to be principally involved.

Completeness of prescription details

Seventy five per cent of prescriptions completed and signed by the doctor were considered to have adequate prescription details, using the criteria of the *British National Formulary*, 1974–76), compared with only 51 per cent of prescriptions written by ancillary staff. Furthermore, 32 per cent of all prescriptions written by ancillary staff contained no instructions to the patient on how and when to taken the prescribed medicines.

The proportion of inadequately written prescriptions written by ancillary staff may possibly be accounted for by the fact that a large number were repeats and the patient

TABLE 4(b)

DISTRIBUTIONS OF PRESCRIPTIONS BY AGE/SEX GROUPS BY PERSON WRITING PRESCRIPTION

Age/sex group	*Doctors %*	*Ancillary staff %*
Male over 65	*5·5*	*11·5*
Female over 65	*10·1*	*21·5*
Male adult (16–64)	*20·1*	*20·6*
Female adult (16–64)	*34·1*	*33·9*
Male child (0–15)	*8·4*	*3·2*
Female child (0–15)	*7·8*	*2·3*
Unspecified sex adult	*8·1*	*4·0*
Unspecified sex child	*3·3*	*0·5*
Unspecified sex over 65	*2·1*	*2·2*
Age group unclear	*0·5*	*0·2*
Total	*100·0*	*99·9*

was perhaps expected to remember how and when to take the medicine. Instructions like ' as before ' or the absence of instructions accounted for most of these.

Conclusions

These preliminary findings suggest further research to us and it is our intention to examine prescriptions written by ancillaries for all cohort doctors in order to observe changes over time and to give a more up-to-date assessment. However, there are observations from this small sample which can be made at this stage that should have implications for prescribing doctors. These are:

(1) The high proportion of prescriptions for drugs of dependence written by ancillaries,

(2) The risks of failure to identify early adverse drug reactions and interactions, particularly in elderly patients,

(3) The high proportion of incomplete prescription entries by ancillaries.

Finally, if general practitioners wish to transfer some of their prescription writing to their ancillary staff, should they not attempt to instruct them into how to complete a prescription according to basic requirements, rather than permitting ancillary staff to shift some of the responsibility of remembering drug regimens onto the patient who may often be elderly?

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9. HIGH-COST PRESCRIBING DOCTORS

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There are several aspects of medical practice where limited intervention by Government is accepted. An example of such intervention is the monitoring of individual doctor's prescribing costs. These monitoring procedures, which are described above result in some doctors being labelled ' high-cost prescribers '. The procedures are strictly limited to prescribing and seldom are other aspects of a doctor's treatment decisions brought into question.

The medical profession has, as one of its concerns, the retention of clinical freedom for its members—a freedom, which when related to prescribing which means the right to prescribe whatever drug a doctor considers to be appropriate for the treatment of his patient. Thus, in respecting clinical freedom in prescribing on the one hand, while focusing on costs on the other, the DHSS could appear somewhat ambivalent in its relationship with the prescribing doctor and the consequences for the public as ' patient ', ' taxpayer ' or both may vary and are almost impossible to measure. It is also difficult to interpret the consequences for the individual prescribing doctor labelled as a high-cost prescriber. Outside the DHSS there is no documented evidence about who these doctors are, why they are high cost prescribers, and what are the effects of DHSS investigations.