INTRODUCTION

The prescribing of drugs is a key feature of general practice, yet critical examinations of the factors which affect prescribing have been rare. All would be well if the prescriptions were simply a straightforward reflection of the diagnosis made by the doctor, but this is unlikely. For example, it is known that general practitioners vary greatly in what they prescribe for patients with similar disorders or problems, which prompts the question of what leads to such variation. Again, analyses of gross prescribing data show that over the years there are trends in the prescribing of various groups of drugs. Many questions can be asked about, for instance, the way in which doctors find out about new drugs, and how they evaluate this information.

Any study of prescribing behaviour starts from the premise that much of the variation in prescribing is not to be explained by idiosyncrasy on the part of doctors. Although non-commercial studies of prescribing behaviour are still in their infancy, examination of the variation is of interest to the practitioner, pharmacist, pharmacologist, and social scientist. Those studying prescribing from any of these disciplines will look for patterns and consistencies in prescribing, and seek explanations.

Prescriptions written by general practitioners are interesting. All general practitioners write them, and they are written frequently. They are written in a fairly standard way, and a considerable amount of information can be gleaned from them. Basically the prescription form contains the name of the drug, the quantity prescribed, the strength, dose, and directions for taking it. It also tells us the sex of the patient for whom it is intended and, via the details required for exemptions from prescription charges, gives the broad age group to which the patient belongs. Secondary analysis can derive from these data, for example, the therapeutic group, the manufacturer, and the year of introduction of the drug. These in turn can be related to the information about the patient and prescribing doctor. Numerous analyses are therefore possible.

What is prescribed is also influenced by the behaviour of doctors and patients on whom in turn there are many influences. Therefore, prescriptions not only give some epidemiological data about prescribing for particular disorders, they can also be used as a vehicle for analyses of the activities of doctors and patients, and to analyse the impact of various agencies active in the medical field.

Sociologists

The papers selected for this supplement deal with many different aspects of prescribing. Most of the papers have been written by sociologists who are interested in the sociology of health, illness, and medicine. It is useful to consider how the approach of sociology differs from that of other disciplines. The sociologist may operate at many levels, but is primarily motivated to understand and explain social behaviour, and to examine critically the institutions of society. It would be a mistake to view the sociologist just as a collector and collator of 'facts' about prescribing, or employed simply to do a better job of collecting these facts than a non-sociologist. Indeed, if these facts have been collected by others, then the sociologist is bound to question the organisational 'whos' and 'whys' of their collection. The collection of data must therefore be systematic, and guided by theories about the nature of the social world. This applies also to the interpretation of the data which is collected.

The theoretical base may often be only implicit in these writings, for this supplement is written mainly for an audience of general practitioners and not an audience of social

scientists, but theories are never far below the surface. A concern with doctors' use of information may be guided by a sociological and philosophical interest into the nature of knowledge; a concern with prescribing accountability may reflect an interest in the study of the professions in general and thus 'patients' in one context might be seen as equivalent to 'clients' in another.

What emerges is that sociologists differ in their sociological persuasions—it is not only in prescribing that we find variation! The reader will find a variety of styles of research and reporting, from numerate analyses to observational studies.

One major source of data in this supplement is the study of the characteristics and prescribing of a large number of general practitioners—which will be referred to as the 'cohort study' or the 'cohort doctors', but other studies have been based on interviews with doctors, patients, pharmacists, and others, and on observations of interaction between these groups in different settings.

The cohort doctors

The general practitioners studied comprise those 859 doctors who entered general practice in England and Wales between 2 July 1969 and 1 July 1970—the cohort doctors. The aim of this longitudinal study was to examine the professional socialisation of these doctors, to see if there were patterns of prescribing, and if so to follow the development of these patterns.

The numbers in this cohort have declined with time, because a number of doctors have moved out of general practice. By October 1971, an average of two years after the cohort was assembled, 19 per cent (163) of the original 859 doctors had made one or more moves away from the executive council area (now family practitioner committees) in which they became a principal for the first time (Webb and Williams, 1972). Some stayed in general practice and simply moved to another area. Others left general practice, perhaps for other branches of medicine. Others died. By January 1975, the total in the cohort had fallen to 714 doctors. The early mobility of the cohort posed obvious problems for administration of the research, not least of which was finding out where the doctors had gone.

Questionnaires

A *first questionnaire* was sent to each cohort doctor six months after he became a principal. The response rate was 64 per cent. This we regarded as encouraging since the questionnaire was long and complex and was received by a group of professional men and women at a particularly busy time in their careers. The questionnaire asked mainly for factual information about the doctor's background, his education, and his subsequent training.

A *second questionnaire* which was somewhat shorter was sent in July 1972, with an effective response rate of 63 per cent (i.e. 453 of the 721 doctors in the cohort at that time). Forty-five per cent of the original sample replied to both questionnaires. This questionnaire asked about the organisation of the practice, ancillary help, and use of facilities. It also began to concentrate on those sources of knowledge which the doctor drew upon for his prescribing of drugs. Many of the results from this particular section of the second questionnaire are reported in the papers which follow.

A *third questionnaire* was sent in summer 1976, but the results are not yet available.

The prescriptions

A selection of prescriptions written by each member of the cohort is obtained through the normal sampling procedures of the Department of Health and Social Security. The Prescription Pricing Authorities forward these to the Unit for Research into Drug Usage, at the Department of Pharmacy, Heriot-Watt University. There all

the information contained on the prescriptions written by a doctor for the month of DHSS sampling is transformed into computer-readable form which is suitable for analysis. The DHSS sampling procedure, by providing a spread of sampling throughout the year, ensures that there will be no excessive seasonal bias to the results.

The prescription data are then placed upon magnetic tape and transferred to the University College of Swansea, where they are further processed and correlated with data about the doctors obtained from questionnaires.

Although there is now available at least one record of each doctor's prescribing activity for a given month in one of the years since the cohort was formed, there have inevitably been many difficulties in extracting the prescribing data in a usable form. Because of this, most of the prescription research in this supplement derives from the analysis of data on a sample of 116 cohort doctors' prescriptions supplied by the Prescription Pricing Authorities in the months between June 1970 to November 1971. One month's prescriptions for each doctor were analysed. This sample represents the first available prescription data. The doctors who issued these prescriptions are representative of the cohort in terms of age, sex, and time since qualification.

Other studies

Other papers in this supplement derive from studies which have implications for prescribing, although they may not always have been started to investigate prescribing directly. There are for instance studies of pharmacists and patients, of interaction between doctors and patients, a study of drug advertisements, and more generally, of professions which have used the medical profession as a prime example. These studies help to identify the broader setting in which the act of prescribing takes place. Without such knowledge the variability of prescribing must remain largely inexplicable.

PETER A. PARISH
GERRY V. STIMSON
ROY MAPES
JEAN CLEARY

Swansea.

REFERENCE

Webb, B. & Williams, W. M. (1972). Mobility of general practitioners during the first few years in general practice. *Sociological Review*, **20**, 591–600.