

Package programmes for research in general practice

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In order to perform adequate clinical and administrative investigations in general practice it is essential to have appropriate methods of recording data. Data recording can be laborious and a waste of time if it is done without precise aims and planning.

In National Health Service practice the 17.5 × 12.5 cm (7" × 5") medical record envelope is now in standard use. These envelopes and their assorted contents follow patients from doctor to doctor and help to transmit information about individual patients. Such records are suitable for some kinds of research particularly when they include a summary card or colour tagging system.

Computer based methods will be appropriate for both research and day-to-day use of records when problems of cost, transfer of data, speed of access and confidentiality have been surmounted. Although much work is being done in this field, it appears that a general acceptance of computers in the practice centre for routine record keeping will not occur for some time.

Research needs, unlike routine clinical needs, can often be served by sample data and therefore a series of 'package programmes' is being developed. These are aimed at efficient and convenient recording and analysis of clinical and administrative procedures during limited time periods. Areas so far covered have included referrals to hospital outpatients, laboratory services, prescribing habits and attendance patterns. The results of these investigations have been useful to the participating doctors for self-calibration and comparison of their activities with those of their colleagues. They also provide reliable evidence on problems such as delays associated with referrals.

Use of package programmes

Package programmes will probably be used in four different ways. First, an individual general practitioner will use the method to observe objectively a particular aspect of his own activity. Second, the design of the programmes is aimed at helping objective comparisons between general practitioners on an informal basis—for example at a local postgraduate research centre.

The third use of package programmes involves the return of the data to the Research Unit of the Royal College of General Practitioners for analysis by more sophisticated methods. After this analysis, the collective results of observations from several practices can be returned to the participants.

Finally, the data collected by the Research Unit will be used to create models of various aspects of practice activity. These models will be of value in establishing indices of the quality of care provided by the general-practitioner services and also as a basis for predicting the effects of change in these services.

Structure of package programmes

Package programmes consist of:

- (1) a set of instructions
- (2) sheets for recording data
- (3) summary sheets
- (4) clerical, computing, statistical and interpretative services for routine analysis of data.

The instructions are usually brief and contain details of data recording, methods of sampling where appropriate, the duration of the study, and procedures for conducting and reporting the results of the investigation.

One objective of the development of a package programme is to reduce to a minimum the amount of interference with the normal activities of the observer. To this end, a partly standardised form is being developed that can be used as an appointment list, a routine record of all consultations, a medium for transfer of data to the diagnostic index, and as a sheet for collecting data for certain patient-centred package programmes.

This form contains heading information including doctor and investigation references, patient details such as a Hogben number, sex, diagnosis and occupation and space for recording data about the investigation in hand. The various columns are numbered to help punching on to computer cards. An area at the bottom of the form is designed for a summary of the data for the records of the 20 patients contained on the form.

This method of data recording involves 'source coding' and to aid this activity simple coding instructions are printed on forms for use in each particular package programme.

During the development of package programmes other methods of data recording have been used ranging from simple tally sheets to multiple-choice questionnaires. Sometimes these methods may be appropriate but usually the above method will provide appropriate detail for useful and convenient analysis.

Summary forms for use at practice level contain totals of the variables under observation and denominators such as the list size or the number of consultations during the study periods. These results are then standardised by conversion to percentages, averages or ranges to form a basis for comparisons.

The Research Unit of the Royal College of General Practitioners and the Department of Engineering Production are developing standard computer and statistical methods for the analysis of data obtained by general practitioners using particular package programmes. This activity with an interpretative service will help to create a scientific environment for research in general practice. In addition new programmes will be developed and old ones brought up to date.

Development of package programmes

Usually a package programme is developed after a pilot experiment, following the identification of a problem by one doctor or a group of doctors. The instructions, data collection and summary forms are tested and modified according to the experience of the doctors participating in the pilot experiment. After this development work, the completed package programme is available for use whenever the need for a particular type of investigation arises.

Existing package programmes

Study of referrals

A group of about 20 general practitioners in a Midland city was concerned about referrals to hospitals in their area. To learn the characteristics of referral services and, incidentally, the referral habits of individual doctors as compared with the group, a series of package programmes was developed. After some pilot studies and development work on the design of the forms for collecting data four parallel investigations were conducted:

- (a) Outpatient referrals
- (b) Domiciliary referrals
- (c) Emergency admission referrals
- (d) Laboratory and technical referrals

In addition to the basic forms for collecting data, details of the individual practices were recorded and computer programmes developed for the analyses. As this was a large study, secretarial assistance was necessary and the time needed for analysis was considerable. However, the experience gained from this investigation will make future studies easier. Some results of this study have been discussed at meetings of the General Practitioner Research Club.

An expected finding was the considerable variation between doctors for each of the four sources. The referrals to laboratory and technical services, which were generally high, appeared to be related to the availability of transport systems for specimens. Both waiting times for appointments at outpatients and reports from specialists were variable. Further light may be thrown on the latter investigation as it is intended to follow with another from the consultants' side. The emergency hospital admission service was found to involve fewer delays than had been predicted by the participants prior to the investigation.

(2) *Prescribing patterns*

The national expenditure on prescribed drugs is largely controlled by the prescribing doctors. The only information available to the general practitioner about this activity is the form of quarterly returns from the local executive council which are too general to be of any real value. A more detailed investigation of prescribing patterns is possible with a package programme. This aims at an 'internal audit' relating to both new and repeat prescriptions.

Preliminary use of this package was concerned with the prescription of psychotropic drugs. Although some doctors simply confirmed their own predictions other participants were surprised at the pattern of their prescribing activities particularly for repeat prescriptions.

An example of the expanded use of a package programme is presented here. The varying use of antidepressive drugs amongst a group of doctors can be analysed and the results discussed perhaps in a postgraduate medical centre. The exercise could be repeated after an interval and in this way the impact of the initial investigation and discussion on prescribing habits can be studied.

(3) *Going to the doctor*

A survey of the travel characteristics of patients in some rural and urban practices was carried out by the Research Unit of the Royal College of General Practitioners. This investigation was on a small scale and provided limited comparisons between different types of practice. The methods used, however, fit in well with the principle of package

programmes and are likely to provide useful local information where amalgamation of practices is being considered and where the planning of appointment systems, staffing policies, transport services, car parks and waiting rooms are being undertaken.

Conclusions

The concept of package programmes for clinical and administrative research has been applied with success in a few areas. Further investigations are in progress to enlarge and revise the library of package programmes. The development of these programmes is, however, dependent on the interest and co-operation of general practitioners who wish to question their own activities and compare them with those of their colleagues.

A short questionnaire is enclosed with this *Journal* to provide information about areas of research in which general practitioners are interested and to identify those doctors who would like to take advantage of these methods.

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