Clinical and administrative review in general practice

N. C. H. STOTT, B.Sc., M.R.C.P.(Ed.)

R. H. DAVIS, D.M., F.R.C.G.P.

General Practice Unit, Welsh National School of Medicine

SUMMARY. Clinical and administrative review in primary medical care can be an enjoyable and creative part of group-practice life. A series of such reviews are described which improve internal or external communication for the primary care team.

Introduction

The National Health Service of the United Kingdom provides for a system of primary medical care which is based on the general practitioner. The majority of general practitioners used to work alone and without the assistance of nurses and ancillary staff. Consequently, each patient tended to have close personal and continuous contact with his doctor and this made it easy for the doctor to identify their demands or needs and to respond to them.

But single-handed practices of this sort made it difficult for doctors to provide adequate premises or to work effectively with other professional workers such as health visitors, district nursing sisters, and social workers, and was in part responsible for the educational isolation of the general practitioner. This challenge has been met by the development of a system of primary medical care based upon group and health-centre practice, with nurses, social workers, and ancillary staff working alongside the general practitioner as a team (Department of Health and Social Security, 1971).

The extremely rapid evolution of primary care teams has not, however, always been accompanied by enough attention to the organisational implications or to methods of maintaining and improving the quality of care. The professional and public response to these changes have not always been favourable. The accusations of ' dragons at the gate', ' rigid appointment systems', ' impersonal care', and ' officialdom ' have pointed to some problems in the organisation and public image of complex multi-disciplinary primary care teams.

Furthermore, the benefits to the patient of shared care and the educational advantages of team work are not always realised, if doctors and other workers implement only the convenient aspects of group practice, for example, night and week-end cover, and continue to practise with the attitudes of a single-handed worker. The team has a minimal hierarchical structure, since it consists of professionals who each contribute to the success of the system of care. Hence the relationship between members of the team can be important in determining its stability and the quality of care.

Feedback in systems

It is well established in the biological and physical sciences, and there is growing evidence from social studies, that stable ' systems ' usually depend upon some form of feedback control; whereas unstable systems are those which have exceeded the limits of their feedback control mechanisms. If the management of medical services is examined in

these cybernetic terms, it is clear that adequate feedback of information depends firstly on the identification of the ' needs ' of the population served and secondly on the way in which the professionals at each level in the service respond to those needs.

In the clinical sphere feedback should occur through the continual critical re-appraisal of work and this is enshrined in the departmental clinical meeting, but the material discussed is usually selected for its academic interest rather than its relevance to the needs and demands of the community. This paper discusses methods designed to provide feedback of organisational and clinical information to the primary care team, and illustrates some of the methods with results obtained in a modern health centre during the past two years.

General practice unit

The staff of the General Practice Unit of the Welsh National School of Medicine, in addition to their teaching duties are in contract with the Family Practitioner Committee of the South Glamorgan Area Health Authority and provide general medical services from a health centre for the residents of a relatively new community. The staff of the Unit are divided into three teams each consisting of two principals, one registrar (trainee assistant), one health visitor, one district nurse, and one receptionist. Patients are encouraged to seek advice from the members of one team except in an emergency. An appointment system is used.

Aims

The main aim of the review procedures is to improve the efficiency and effectiveness of primary medical care in the context of the primary care team, by providing feedback of administrative and clinical information which may modify professional behaviour.

METHOD

The method consists of:

(1) Administrative review,

(2) Clinical review.

(1) Administrative review

Four distinct stages can be defined:

(a) *Classification.* A definition of the steps involved in providing care.

(b) *Data collection.* The formulation of procedures designed to collect data which will identify factors which influence current effectiveness and efficiency at each stage.

(c) *Feedback.* A method of presenting the results to members of the team in a way that, it is hoped, will influence their future conduct.

(d) *Evaluation.* Procedures may be needed to test whether the process has resulted in beneficial changes, but this stage can be unnecessary if the benefits are obvious to all concerned.

Any administrative aspect of primary medical care can be portrayed in logical steps by the use of a simple flow diagram. For example, figure 1 illustrates the hurdles a patient faces when he needs a doctor in our primary care team. Each stage can be quick and easy, or slow and disorganising, and thus each step may influence the relationship of the patient with the doctor or nurse.

Such an analysis helps to define those factors which influence the degree of accessibility or acceptability of primary care and the efficiency of communication and the appointment systems. Any doubt or controversy can be resolved by mounting a simple operational study to measure the factors involved, followed by discussion of the results

by the members of the team. Examples of the factors which may influence the accessibility of the doctor or nurse are shown in figure 1 and we have chosen a few of these to illustrate our methods. For example, we measured the punctuality of doctors in starting consulting sessions.

Patient's route to primary care	*Examples of factors which modify accessibility*
Decision to see doctor	Patient expectations and multiple other variables.
Books an appointment	Telephone/practice accessibility Number of available appointments Timing of consulting sessions Receptionist skills and attitudes Patient's attitude and commitments
Waits in waiting room	Patient punctuality Doctor punctuality Practice organisation and design Receptionist-patient relationship
Consults with doctor	Doctor-patient relationship Team-patient relationship

Figure 1

The accessibility of a doctor to a patient and examples of factors which may modify it.

Punctuality

Type A doctor (figure 2) usually started his consultation sessions reasonably promptly, whereas type B (figure 3) clearly made no attempt to abide by any starting time at all.

Presentation of these two behaviour patterns at a staff meeting led to discussion about why the individual variation occurred and this heightened awareness of its unfortunate effect on the patients' attitudes to appointment systems. It was decided to modify starting times for type B doctors, with the result that there was a shift towards type A behaviour with greater satisfaction from patients.

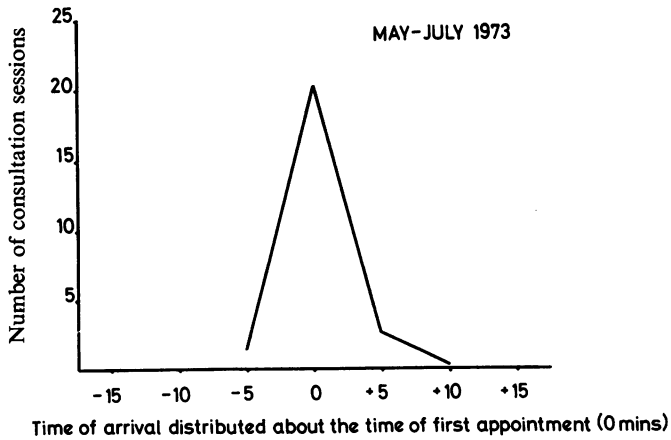

Figure 2

Distribution of punctuality for general practice first appointments (Type A doctor)

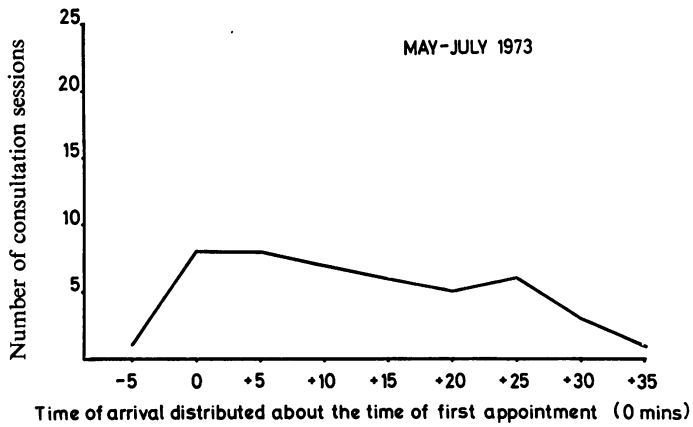

Figure 3
Distribution of punctuality for general practice first appointments (Type B doctor)

Variation of demand

Another factor in the efficiency of an appointment system is the arrangements for dealing with the day-to-day and month-to-month variation of demand. Consulting rates are usually highest in winter and on Mondays. Most seasonal variation is due to acute infective illness and these patients cannot always wait for a day ot two for an appointment. This is particularly true of children.

Many doctors cope with this problem by working faster. This implies a modification of the appointments system, and also of the clinical method because shortage of time may cause history taking and examination of the patient to be more limited or clinical records to be more perfunctory. Consequently, clinical standards as well as accessibility of the doctor and acceptability to patients can be affected.

It is however, easy to elicit the facts of seasonal variation of demand and hence the time allowed per patient in each practice with a view to maintaining acceptable standards through a more flexible system of planned appointments. We are currently using a system of adjusting total appointments according to seasonal demand plus a planned 'last minute booking' rate of ten per cent. This seems to cater for the needs in our population, which includes 40 per cent below the age of 15 years.

Systematic plan of management

A similar systematic approach involving the definition of the procedures involved in for example, the examination of telephone enquiries, provision of repeat prescriptions, organisation of special clinics, and the handling of complaints, will help to identify modifying factors which may otherwise be hidden.

The " angry patient " is a good example because the receptionist is often the first to experience the crisis in the reception area. She must know how to react, and what to do with the information she has acquired, because the doctor is unlikely to manage the patient with empathy if he is unaware of frictions or accusations which have been occurring outside his door.

The receptionist may however, be tempted, out of misplaced loyalty, to keep quiet about a patient's complaints or abuses. Patients, having ventilated their grievances on her may not convey their feelings to the doctor, who then lacks information which can be important to clinical management, doctor-patient relationships, and practice administration.

The examples given above of administrative feedback serve to illustrate the principles of the techniques available. They are not new or revolutionary, but involve looking critically and analytically at familiar organisational problems, preferably with use of simple flow diagrams, and then trying to establish a simple way to feed back information which will ensure that all members of the team are kept aware of the needs of patients and staff and of the consequences of their actions at every level of service.

(2) Clinical review

One of the advantages of group practice is that it provides the opportunity for mutual education of the members of the team. The realisation of this opportunity depends on the willingness of the team members to accept critical comments from each other. The effective sharing of clinical information is also a prerequisite of effective and efficient shared patient care. Inter-professional communication is therefore a skill which the primary care professionals have to master if they are to become an effective team.

We, therefore, adopted the objective of attempting to achieve 'improved communication' through weekly clinical review meetings. The techniques used can be divided into two types of study—firstly there are those skills involved in internal communication, for example, records and the clinical language. Secondly, there are the skills involved in external communication, for example, when patients are referred to hospitals and in teaching.

(a) *Internal communication*

(i) *Records.* Effective team care depends upon adequate clinical records which are available day and night. To communicate effectively a record needs structure. The structure adopted in the practice was problem-orientated with simple conventions for numbering, closing, and changing episodes of illness.

General acceptance of this format was only achieved by repeatedly reviewing the records and a discussion of errors of format until all the doctors involved were using the system. The legibility of the clinical records was improved by asking doctors with poor hand-writing to make clinical notes on disposable sheets from which a secretary typed the information into the patients' records, but tape recorders are probably equally effective.

(ii) *Clinical language.* The language of clinical communication was improved by achieving agreement to be more precise in the use of key clinical words. This involved relating the diagnostic assessment much more closely to the data obtained and recorded in the history, examination, and investigation of the patient. As a consequence fewer "probable diagnoses" were made and the key clinical words describe symptoms, or confident diagnoses.

TABLE 1

EXAMPLES OF MINIMAL CLINICAL CRITERIA AGREED BY OUR TEAM OF DOCTORS

Keyword/statement	*Minimal clinical criteria*
Acute bronchitis	Purulent sputum and cough with rhonchi in chest.
Urinary tract infection	Excessive pus cells in urine or positive nitrate test or positive culture on M.S.U.
Gastric ulcer	Radiological or endoscopy diagnosis.
Dyspepsia	Epigastric discomfort affected by meals or antacids.

In order to achieve this objective it was necessary for the teams to develop statements of minimal clinical criteria for a number of common clinical problems. Each was discussed in the weekly meeting in order to achieve unanimous approval.

Four examples of the agreed minimal clinical criteria statements are shown in (table 1), but the most important general concept was an agreement to avoid the use of diagnostic queries so that each problem was defined at the level of certainty. This process enhances the value of brief clinical notes and problem summary lists, and it results in the doctor knowing precisely what a colleague means when particular terms are used. The procedure involves extensive clinical discussion of common conditions and thus combines ' communication', ' educational ' and ' care ' objectives.

(b) *External communication*

Referral to hospital. Clinical conditions which are referred to consultants tend to be the less common conditions. Thus the referral event is important if the patient is to receive appropriate care, while the primary physician may receive useful feedback which can be of educational value. Each new referral letter was reviewed at the weekly clinical meeting and the following questions were asked:

(1) What problems are defined and do they seem to be correct?

(2) Was the referral to the appropriate person?

(3) Were all relevant investigations performed before referral?

(4) Did the letter give all relevant information?

(5) What did the practitioner expect the specialist to do?

In other words, the referring doctor is expected to have thought about the case carefully and analytically if he is to avoid comment from his peer group. This is a testing exercise and one of great educational value both to principals and vocational trainees.

Three months later, the same cases were reviewed again and the consultants findings and intentions were compared with those of the referring practitioner. This identified areas of new knowledge or skills as well as failures of communication. The process achieves its educational objectives and also identifies any weaknesses in the follow-up and review procedures of the consultant services. A useful extension of this method will be to invite consultants to take part in the exercise from time to time.

The following is an example of a case that was dealt with in this way and it illustrates the educational and patient-care benefits of clinical review by a peer group:

Mrs NR, a 50-year-old housewife, developed blood-stained diarrhoea and mucus and was referred to a gastroenterologist for investigation. A hospital diagnosis of ' colitis ' was made and a right-sided abdominal mass noted and investigated by the specialist team. Treatment with oral prednisolone and ' Salazopyrin ' was started and she was seen at the outpatient department at regular intervals until she was discharged four months later, with instructions to continue taking ' Salazopyrin ' for two years.

The specialist's letters did not reveal the extent of the disease, the nature of the mass he had described (presumably it was faecal), nor why he felt neither sigmoidoscopy/barium enema follow-up to be necessary. Thus although the disease had been treated, the facts had not been communicated and long-term goals were left in the air. This was identified on the clinical review of this case and it resulted in proper formulation of management plans.

(*c*) *Teaching review*

Continuing education is an important dimension to all of the exercises described, but another technique deserves special consideration. After every surgery each principal reviews the clinical notes of all cases seen by his registrar (trainee) and discusses anything relevant to them.

This brief session over coffee lasts 10–20 minutes and ensures that the principal maintains a continuing knowledge of the patients he has delegated to his registrar.

Furthermore, the registrar has to discuss problems while they are still fresh in his mind and he cannot wittingly or unwittingly leave any out.

The ' hot ' review situation thus generated is an ideal time to teach continuity of care, the relevance of background information and to suggest modifications of therapeutic and investigation habits which are different from hospital practice. It is also of particular value in the handling of emotional and social problems, as their content is often difficult to convey on paper, and is best discussed immediately.

Because registrars are frequently involved in cases which the principal has been looking after, there is also great scope for this form of communication to be two-way, and the privacy of one-to-one communication reduces inhibitions and enhances the educational exchange! Successive registrars have reacted favourably to this type of review and most have felt that it should be sustained throughout the year in the training general practice.

Discussion

We have presented the principles of a method of providing a system of clinical and administrative feedback in primary medical care and we have illustrated this with some examples and results obtained in a health-centre teaching practice. The current fashion is to describe this as ' medical audit.'

The term medical audit was coined in the United States of America and was introduced mainly in an attempt to control excesses of medical care. For example, the Tissue Review Committee which was one of the earliest audit procedures, provided for a review of all pathological specimens removed during surgical operations, with the objective of reducing unnecessary surgery. Similar methods of monitoring other aspects of hospital care were later introduced at the insistence of medical insurance agencies, and since 1974 the Federal Government has persuaded the medical profession to introduce the Professional Standards Review Organisations to survey the justification for admission of patients to hospital, their length of stay, and their quality of care. The term medical audit has consequently come to be looked upon as something new.

A self-critical approach has however, always been a *sine-qua-non* of good medical practice and it is the basis of scientific medical practice. It is also inherent in the approach to efficiency and effectiveness suggested by Cochrane (1972) and fundamental to the role of a caring profession.

The measurement of quality of care itself poses considerable problems (Acheson, 1975). It may be relatively simple where treatments for specific conditions can be evaluated by means of randomised controlled trials, but it is much less clear when there are variations in the systems of care, which are bound to occur as a result not only in personal, demographic and social variations, but also because of the different personalities of the staff involved in the service. Cassell and his co-workers (1975, personal communication) have suggested that agreed objectives of quality of care can be defined by different groups and that this can be followed by measurements to determine how far these objectives are being achieved clinically. However, the objectives for ' quality care ' in any clinical condition involve so many variables that this approach must be regarded with caution until it has been tried by more workers in general practice. Indeed, any approach to medical audit which is not based on practical and local field experiments is suspect, because the literature abounds with ideas, but reveals few results, particularly in general practice (Stott and Davis, 1975).

Because the variables are innumerable and the language of clinical communication is often inconsistent, we have focused on the development of improved team communications first and in so doing we have re-affirmed the benefits of this exercise both for education and patient care. Criteria for ' quality ' are identified repeatedly during the

analyses of internal or external clinical communication. For example, the doctor who records " tonsillitis: ampicillin " is likely to be asked to identify what he includes under the diagnostic heading " tonsillitis " and why he chooses ampicillin for therapy. This peer group discussion will probably revise many important concepts in clinical medicine as well as highlighting the differences between management in hospital and general practice of the upper respiratory infections. Thus communication, clinical skills, knowledge, and attitudes to patient care can be introduced by considering a two word entry on a patient's record.

The most important and difficult aspect of peer review is how to present clinical criticism or operational analysis of administrative results in a way which will avoid hostility and yet generate constructive dialogue within the team. Our experience is that a weekly lunch-time meeting can achieve this goal provided team members are prepared to try to be aware of their own reactions to challenge and thereby avoid hostility. It is also important for all members of the team to produce material for feedback. We have observed the reactions in these meetings during a two-year study, and certain predictable responses have occurred (figure 4).

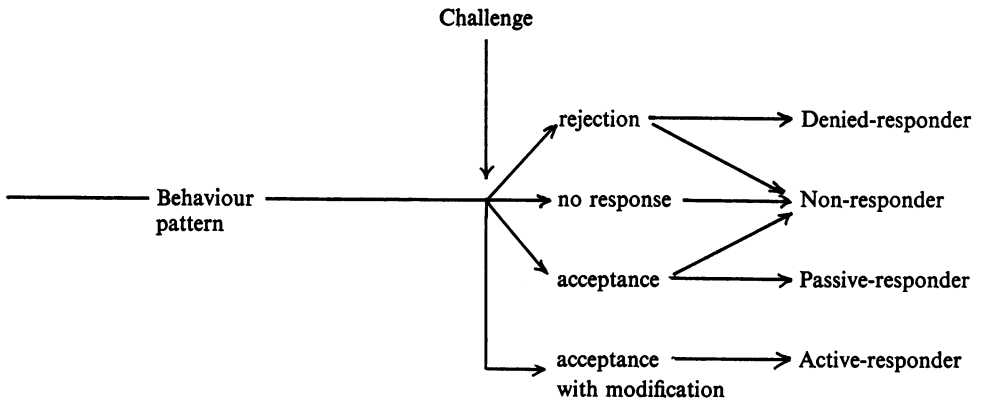

Figure 4
Behavioural responses of doctors to challenge in a review by the group.

There are occasions when there have been non-responders or vigorous rejectors of a suggested change, also, those who agree, but gradually slide back into previous habits. Yet many times the response has been a creative two-way discussion with the formation of a consensus or agreement to seek further evidence before making a decision. We all probably react in each of the ways depicted in figure 4 in response to different challenges so that it is important to identify these as examples of ' behavioural responses ' and not ' personality characteristics.'

The Balint type of teaching (Balint, 1964) has helped us to gain useful insights into our own reactions to patients and how we communicate with them. It is no less relevant to consider peer group interactions or inter-professional rivalry in behavioural terms. To understand ourselves and our colleagues is the first step towards proper team work, and as single-handed practice gives way to the primary care team the attitudes and skills involved in achieving optimum inter-professional relationships and communication become more and more important.

The skill of effective communication, like most skills, takes painstaking practice to achieve. Not all members of the practice saw the relevance of this at the start. The

insistence upon a structured record and the discussions about minimal criteria for key clinical words or statements seemed to some to be academic. We observed more immediate enthusiasm for external communication review, perhaps because it appeared to be more immediately relevant to clinical care.

We found that it was important to vary the nature of the material undergoing review. A great variety of aspects of clinical care remain to be dealt with at the feedback meetings so there will be no shortage of new material for the future and repetition of many exercises will be necessary as new doctors join the practice and as old-timers need to be reminded.

The principles of these review procedures are not new or threatening and to imply that they are by calling them medical audit appears to us to be misleading and may be counter-productive. We would suggest that some less threatening title, such as ' clinical and administrative review,' should be used and that every effort should be made to encourage every primary care team to undertake this work. One of the major problems of delivering medical care which is financed by the state or by large insurance companies is the difficulty of inculcating a personal responsibility for standards among those actually involved in providing the service. Local clinical and administrative reviews both in hospital and in primary care would do much to solve this problem and our own experience suggests that it can be an enjoyable and creative part of group practice life, provided enough variation is maintained in the methods used.

For the Department of Health and Social Security or the Royal Colleges to try to impose a system of audit from the top would appear to us to be misconceived for the following reasons:

(1) It would be an unnecessarily expensive and fruitless task because of the impossibility in obtaining agreed standards which would be nationally or even regionally applicable.

(2) The process needs to continue at field level in order to progress.

(3) It is likely that such efforts would be looked upon by the profession as bureaucratic control.

We believe that the desired effect could be achieved more effectively if clinical and administrative review in group practices were allowed to become a symbol of high quality medicine and practical continuing education.

Acknowledgements

This work has been made possible thanks to the collaboration of our partners Drs B. B. Wallace, R. H. G. Lloyd, D. Millward, A. S. Parsons, J. K. Richmond, and numerous registrars (trainees) who have often contributed enthusiastically or critically to the projects. We have been challenged and stimulated by many practitioners, but we must mention Dr Peter Thomas who suggested the title to this work while we were looking for a more appropriate and descriptive label than ' medical audit.' His wit identified ' C.A.R.' as a fitting activity for general practitioners.

Many of the techniques we have described, involved receptionists or records staff. The preparation of data for presentation depended on the quiet efficiency of Mrs Margaret Jones and we are also grateful to Mrs P. Maunder who typed repeated drafts.

REFERENCES

Acheson, H. W. K. (1975). *Lancet*, **1**, 511–513.
Balint, M. (1964). *The Doctor, His Patient and the Illness*. London: Pitman.
Cassell, J. (1975). Personal Communication.
Cochrane, A. L. (1972). *Effectiveness and Efficiency*. London: Nuffield Provincial Hospitals Trust.
Department of Health and Social Security. Welsh Office. (1971). *The Organisation of Group Practice*. London: H.M.S.O.
Stott, N. C. H. & Davis, R. H. (1975). *Lancet*, **1**, 679.