Should performance indicators in general practice relate to whole practices or to individual doctors?

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SUMMARY. In a study of referrals to East Anglian hospitals 737 referrals in six specialties from three general practices were examined to see how accurately the hospital computer master index had identified the referring practice, the referring general practitioner and the doctor with whom the patient was registered. Although the practice was accurately identified by the hospital computer in 97% of referrals, the identification of the referring doctor and the patient's registered general practitioner were less reliable (72% and 49% respectively).

It is concluded that at present the practice rather than the individual doctor may be the appropriate unit of analysis for studies of general practitioners' referral rates. This may be true for other performance indicators where information on a doctor's case mix and workload is not available. The results of this study emphasize that problems may arise if data relating to individual general practitioners are interpreted out of context of the practice and the way in which it is organized.

Introduction

It is clear that the performance of general practitioners will be subject to greater external scrutiny in the future than it is at present. Already, the performance of hospital departments is subject to detailed analysis, and the Department of Health provides district and regional health authorities with specific targets to be met.

The white paper on primary health care² defines certain areas in which general practitioners' performance may be monitored more closely in future. These include premises, health promotion, vaccination and cervical cancer screening. The government's policy is that 'the remuneration of general practitioners should be more directly linked than at present to the level of their performance'. On the subject of hospital referrals, the government 'welcomes the work being done in some areas by family doctors and specialists to examine the criteria used in making referral decisions', and suggests that doctors with unusually high or low referral rates 'be invited to take part in an assessment of their approach to help them in making effective use of hospital resources'.²

This paper addresses the question of the interpretation of performance indicators when applied to individual general practi-

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tioners as opposed to whole practices, in the context of British general practice where patients are registered with one general practitioner but may be free to consult other members of a group practice. The results of a study of referrals to East Anglian hospitals are used to emphasize that problems may arise if performance indicators are applied to individual general practitioners out of context of their practice and the way in which it is organized.

Method

During spring 1988, referrals were identified from copies of referral letters dating from January 1987, kept by three volunteer practices in Cambridgeshire. The first practice, with seven principals and 11 800 patients, kept strict personal lists. In the second practice, with five principals, the 13 000 patients were free to consult any partner. In the third practice, with five principals, the 9000 patients were encouraged to be consistent in the doctor they consulted, but there were no firm rules. The intention was to identify 50 consecutive referrals in each of six specialties — general medicine; general surgery; ear, nose and throat; gynaecology; ophthalmology; and paediatrics — in each practice. If a practice had made fewer than 50 referrals to a specialty during the study period, then all referrals in the specialty for the six month period from January 1987 were taken as the sample. In this way, 737 referrals were identified in the three practices.

For each referral, the following were recorded: the general practitioner with whom the patient was registered, the doctor who initiated the referral, and the doctor associated with the patient on the computer of the hospital to which the patient had been referred. The last item of information was identified by searching the master index of the two Cambridgeshire hospitals to which referrals had been made.

Results

In two of the practices, 98% of patients had been referred by a partner in the practice. In the third practice, 6% of referrals had been made by a trainee, and 8% by a locum owing to absence of one partner on prolonged leave.

For 91% of referrals, the general practitioner with whom the patient was registered could be identified. This was not possible for the remaining 9% because the patient had left the list between the time of the referral and the date of this study. Where the patient's registered doctor was known, the doctor referred the patient in only 55% of cases, but there was considerable differences between practices. In the practice where partners kept strict personal lists, the patient's registered doctor and referring doctor were the same for 81% of referrals. In the practice where patients were free to consult any partner, the referring doctor was the same as the patient's registered doctor for only 33% of referrals.

Of the whole sample of 737 referrals, the practice making the referral was identified correctly by the hospital computer's master index in 97% of referrals. However, for the 649 referrals made by a principal who could be identified by the hospital computer, the general practitioner associated with the patient on the computer's master index was the same as the referring doctor in only 72% of referrals. The master index general practitioner, the doctor with whom the patient was registered and the referring doctor coincided in only 49% of referrals.

Discussion

General practitioners may wish to audit their own performance in an area of clinical practice. Such audit can be confined solely to one doctor, one practice or to a group of local doctors. Motivation for audit of this type is largely self generated, and the benefits are mainly confined to those participating in the exercise.³ Sometimes internal reviews are promoted by external bodies - for example training practices in East Anglia are encouraged to initiate audits of prescribing behaviour within their practices.

Alternatively, the collection of data about activities of local practitioners may be initiated from outside practices, for example by the family practitioner committee,4 the local medical committee⁵ or the prescription pricing authority. The data collected may include details of services offered by practices, or the number of item-of-service fees claimed. In the UK, almost all patients are registered with a general practitioner, so data on the performance of general practitioners may be related to the population of patients for which they are responsible.

This study demonstrates that major errors could result if information on the performance of individual general practitioners were obtained from patient data collected outside the practice. The results show a wide variation between practices in the proportion of patients referred to hospital by the doctor with whom they were registered. They also demonstrate the problems of using individual lists as the basis for comparison between doctors - in one practice a substantial number of referrals were made by doctors who were not principals and who therefore had no list of patients. There may be little relationship between a general practitioner's list size and his or her workload — for example a new partner in a practice may have a large workload but a small list, while a partner who has reduced his sessions prior to retirement may have a relatively small workload, but a large

These problems may be overcome to some extent by providing data on the performance of practices rather than individuals. However, there will still be difficulties in deciding to what extent the population registered with one practice may be compared with that in a different area, with a different degree of social deprivation, or different levels of resources for community care provided by the health authority. Such differences may make it difficult to explain apparent differences in the performance of general practitioners.

These arguments do not mean that the performance of individual general practitioners cannot be audited. However, the step from provision of information at a practice level to information which is meaningful at an individual level is likely to depend on information provided by the practice which is likely to include some measure of workload, as the number and case mix of patients consulting a doctor are inadequately represented by the doctor's list size.

In future, family practitioner committees and the Department of Health will be increasingly interested in auditing care provided in general practice.⁶ Audit is most likely to be helpful when information, whether collected by the Department of Health, family practitioner committees or individual general practitioners, is interpreted by general practitioners themselves in the light of information at present only available within practices. This should lead to improved management of practices and improved patient care. The recent white paper specifies that 'all GPs should be required by their contracts to take part' in medical audit.6 However, the external audit which may be offered by local medical audit advisory committees is likely to be inappropriate and could well lead to a reduction in the quality of patient care. The profession must not miss this opportunity

to develop ways in which doctors can make valid assessments of the medical care they provide.

References

- 1. Department of Health and Social Security. Performance
- indicators. National summary for 1981. London: HMSO, 1983.
 2. Secretaries of State for Social Services, Wales, Northern Ireland and Scotland. Promoting better health. The government's programme for improving primary health care (Cm 249). London: HMSO, 1987.
- Anderson CM, Chambers S, Clamp M, et al. Can audit improve patient care? Effects of studying use of digoxin in general practice. Br Med J 1988; 297: 113-114.
- Harris CM, Hanson F. Family practitioner committee records - a neglected resource. 1. An information service for general practitioners based on claims for fees. J R Coll Gen Pract 1986: **36:** 111-113.
- 5. Hutchinson A, Mitford P, Aylett M. Creating a general practice data set: new role for Northumberland local medical committee. *Br Med J* 1987; 295: 1029-1032.
- Secretaries of State for Health. Working for patients (Cm 555). London: HMSO, 1989.

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