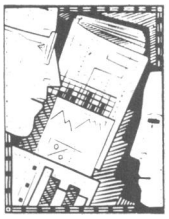

(9) Several complaints about administration of the commercial appliance department seemed justified—for example, being asked to attend when the department was closed. Long waits were also a common complaint about the appliance department, and these problems require further investigation.

(10) Patients who had got better by the time they attended the clinic were rarely regarded as appropriate referrals by the consultants. It might be possible to include in the patient's initial appointment a note to indicate that patients should consult their general practitioner if their symptoms were resolved by the clinic date, with a view to cancelling the appointment. Consideration might also be given to contacting patients who had been on the waiting list for many weeks to find out whether they still needed to attend.

CHANGES SUGGESTED AS A RESULT OF THE SURVEY

The changes suggested as a result of this survey fall under four main headings. Firstly, general practitioners might improve their skills in managing certain orthopaedic problems. The training of general practitioners in orthopaedics has been criticised, and several studies have aimed at improving matters by using educational interventions, but with only limited success.[8-11] Emmanuel and Walter have described a general strategy for improving the appropriateness of referrals, with general practitioners and consultants meeting to discuss guidelines for referral.[6] This approach is being adopted nationally by the Dutch College of General Practitioners.[12] A dialogue between Doncaster general practitioners and orthopaedic consultants about the appropriateness of referrals would be greatly assisted by the development of clear referral guidelines. An alternative strategy would be to provide a different source of management advice for musculoskeletal problems—for example, an associate specialist in physical medicine who would refer on to the consultant orthopaedic surgeon only those patients requiring surgery.

Secondly, improved information may help general practitioners to choose more appropriate referral pathways. Thirdly, improved administrative arrangements might lead to shorter waiting times in clinics and other departments. Finally, we have identified several issues in which poor communication leads to dissatisfaction with the referral process—including referrals in which the general practitioner has not made the reason for referral clear to the consultant, consultants' letters which are insufficiently informative, and dissatisfaction with communication within the clinic, particularly by patients regarded by the consultant as inappropriately referred. In addition, some general practitioners expressed a need for easier telephone access to consultants for advice.

We have shown that questionnaires to general practitioners, patients, and consultants can be used to identify parts of the referral process in which improvements could be made. We employed a research assistant partly because of the large amount of data collected on each patient and partly because we wished to ensure a high response rate to the questionnaires. It would, however, be possible to collect more limited data without employing extra staff, and the method described clearly has potential for identifying areas where quality of care within the NHS can be improved.

We are grateful to Mrs Jean Reynolds for help in administering the study and to Doncaster health authority and the orthopaedic department at Doncaster Royal Infirmary, which funded the study.

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Hospital case notes and medical audit: evaluation of non-response

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Written accounts of patients' treatment are widely used in medical audit.[1-3] The *Report of the Confidential Enquiry into Perioperative Deaths* recently drew attention to the difficulty of obtaining patients' case notes but did not show whether non-response could bias the results of audit.[4] We recently completed a multidistrict study in which we collected data by reviewing case notes. We evaluated whether non-response was systematic and a potential source of bias.

Methods and results

We studied the records of 609 men aged less than 75 who were resident in the South Thames regions and registered at the Thames Cancer Registry with bladder cancer in 1982. The patients' case notes and radiotherapy records were sought at the hospital(s) at which they were treated. Clinicians gave permission before case notes were obtained. The retrieval of each set of case notes was considered as a binomial trial. The associations of explanatory variables with retrieval were estimated by using logistic regression.[5] The following variables (categories) were included in analyses: survival (alive, dead); year of death (years 1982-9, not deceased); district of residence (28 districts); region of residence (two regions); teaching status of hospital (undergraduate teaching hospital, other). We tested the significance of associations using the deviance difference as an approximate χ^2 statistic. Confidence intervals for odds ratios were estimated.

The retrieval rate of hospital notes was lower for deceased patients than for surviving patients (table). The associations of other variables with retrieval of case notes varied between surviving and deceased patients so analyses were performed separately for the two groups. For surviving patients the response rate varied significantly with district of residence; retrieval rates from individual districts ranged from 38% to

100%. Retrieval rates were less from undergraduate teaching hospitals than from other hospitals. The retrieval rate was lower from one region than from the other, independent of the proportion of patients treated at teaching hospitals.

For deceased patients the retrieval of case notes varied with district of residence but no association was found with the region of residence, the year of death, or the teaching status of the hospital. Of 223 patients recorded as having had radiotherapy, 184 were deceased. Records were retrieved from 11 centres treating 216 patients. The overall response rate was 172/216 (80%), but response ranged from 50% to 100% for the individual centres. The retrieval rate was lower from one region than from the other, but retrieval of records was similar for surviving and deceased patients and did not vary by year of death, district of residence, or the teaching status of the hospital.

Variables associated with retrieval of hospital case notes and radiotherapy records of surviving and deceased patients

Variable	No retrieved/ No sought	Relative odds of retrieval (95% confidence interval)	χ^2	Degree of freedom	p Value
		Hospital case notes (n=609)			
Survival of patients:					
Alive	255/297				
Dead	191/312	0·26 (0·18 to 0·39)	48·7	1	<0·001
Surviving patients (n=297):					
Region of residence:					
Region A	117/127				
Region B	138/170	0·37 (0·17 to 0·78)	7·6	1	<0·01
District of residence*:					
Worst rate	3/8				
Best rate	16/16		48·3	27	<0·01
Hospital:					
Non-teaching	229/256				
Teaching	26/41	0·20 (0·10 to 0·43)	15·7	1	<0·001
Deceased patients (n=312):					
District of residence*:					
Worst rate	0/9				
Best rate	20/22		74·8	27	<0·001
		Radiotherapy records (n=216)			
Region of residence:					
Region A	76/87				
Region B	96/129	0·42 (0·20 to 0·88)	5·6	1	<0·05
Radiotherapy centre†:					
Worst rate	14/28				
Best rate	14/14		32·8	10	<0·001

*Best and worst retrieval rates among 28 districts.
†Best and worst retrieval rates among 11 centres.

Comment

Our analysis shows that the factors influencing the retrieval of patients' case notes and radiotherapy records are to some extent systematic. Non-response bias has potential to influence the findings of audit through underrepresentation of deceased patients and patients treated at teaching hospitals. Variation in response rates among districts and hospitals may be an important confounding factor for studies designed to investigate the reasons for differences in outcome among hospitals or health districts.

The commonest reason for not obtaining the case notes of deceased patients was that these records had not been filed in systematic order. The variation in response rate among districts mainly reflected the adequacy of the filing system for patients' case notes at the district's hospitals. The favourable response rate obtained from radiotherapy units shows that it is possible to maintain the records of deceased patients, although these units have fewer records to store.

Case note review is the form of audit most often used by clinicians. Maintaining access to clinical records is an important part of this process as well as being essential for consistent clinical practice. District health authorities need to ensure that case notes of surviving and deceased patients can be reliably retrieved both for clinical use and for audit.

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Audit in Person

Surveys of patient satisfaction: II—Designing a questionnaire and conducting a survey

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This article considers some of the basic issues in designing a survey of patient satisfaction, particularly developing or selecting a questionnaire and conducting and analysing a survey. A few instruments have been developed by research teams for widespread use in the NHS. Examples include a hospital patient questionnaire developed by Clinical Accountability, Service Planning, and Evaluation (CASPE)[1]; a questionnaire to measure satisfaction with consultations developed for use in general practice[2]; and a questionnaire to measure satisfaction with breast screening.[3] Investigators can use such instruments knowing that some basic properties such as reliability and acceptability will have already been established (although it is always wise to examine carefully the published details of such developmental work). Another advantage may be that there may be other data with which their own eventual results can be directly compared. However, most surveys of patients' views tend to be based on a questionnaire that the investigators have developed themselves.

Questionnaires of patient satisfaction take one of two forms: they may be either episode specific or more general in terms of the focus of the questions. Those that are episode specific tend to include questionnaire items such as, "Did the doctor give you a clear enough explanation of what was wrong with you?" whereas a more general focus would be provided by, "Does your doctor give you sufficiently clear explanations of what is wrong with you?" The choice will depend partly on the type of health care setting and partly on the research question. A recent meta-analysis of studies of patient satisfaction concluded that questionnaires with more episode specific content tend to produce more uniformly favourable responses from patients compared with somewhat more negative views elicited