

PRACTICE OBSERVED

Practice Research

Referral to medical outpatients department at teaching hospitals in Birmingham and Amsterdam

F M HULL, R F WESTERMAN

Abstract

A method of comparing the referral of patients by general practitioners to medical outpatients departments at teaching hospitals in Amsterdam and Birmingham was devised. This was applied to 89 referral letters to medical specialists at the Free University Medical School Policlinic in Amsterdam and to 88 referral letters to clinics at Birmingham University Medical School, UK. The standards of referral were lower in the Netherlands than in Britain, and this may be related to differences in the health care systems, in the culture, or in the organisation of general practice. The delay between the general practitioner's referral and the consultation at the outpatient department was four times greater in Britain than in the Netherlands.

Introduction

Primary care and secondary care meet most commonly when a patient is referred by a general practitioner to a specialist. Since the beginning of the National Health Service much has been written about this, often criticising the referring general practitioner. The improvement in the organisation of general practice over the past two decades has been paralleled by improvements in the standards of referral—for example, Dowse found that letters from doctors in health centres contained appreciably more information and more

fully hypothesised diagnoses than those from doctors who were not practising in health centres.

This study compares the referral of patients in Amsterdam and Birmingham. It was undertaken because when FMH was teaching in the medical outpatients department in Amsterdam he observed different patterns of referral from those seen in Britain. Amsterdam has half the population of Birmingham and two medical schools, each of which is larger than that at Birmingham, and provides many more hospital facilities and specialists, although the numbers of patients on general practitioners' lists are similar in the two cities. International comparisons are difficult to make because of variations in culture which influence the attitudes and expectations of both doctors and patients and because of differences between health care systems. In Amsterdam many more patients are referred than in Britain: 510-515 per 1000 patients each year compared with 154-225 per 1000 patients (according to region). Although many factors influence this, we wondered whether this difference could be explained by overreferral in Holland or underreferral in Britain.

Method

A system of scoring referral was designed, validated, and applied to 90 consecutive referrals to two consultant physicians at the outpatients departments at teaching hospitals in Birmingham and to two consultants at the Policlinic of the Academic Hospital of the Free University of Amsterdam. Referrals were scored according to the quality of the referral letter and the appropriateness of the referral. Additional data were collected on the age, sex, and country of qualification of the referring doctor and the time interval between the date of the doctor's referral letter and the date of the consultation with the specialist.

The quality of the letter was defined as follows: (a) no referral letter; (b) poor referral letter: poorly written with minimal information; (c) barely adequate referral letter: barely adequate with little indication of the referring doctor's expectations; (d) good letter: legible letter with some account of the patient's background, history, and examination findings and an indication of what the referring doctor expects of the specialist; (e)

Both letter and photographs of these letters were scored (1 = no referral letter, 5 = excellent referral letter) by three of them and also by a social scientist as an independent observer (table 1). In 27 of the 40 letters there was a discrepancy between scores of 1 or less, in 12 letters there was a discrepancy in scores of 2. In only one letter was there a greater discrepancy (letter 94). This letter consisted of a single sentence and was accompanied by a photocopied list of laboratory investigations and clearly was difficult to classify. Table 111 shows that the British referral letters were judged to be better (mean score 3.18 and 3.90) than the Dutch letters (mean score 2.74 and 2.50). The total scores for Drs N, L, and B and for the social scientist showed close similarity while Dr G was slightly more generous in his scoring. Standards of letters which were judged to be good or better were 23 consecutive referral letters, providing data for a total of 200 letters. Of these, 177 (89 from Amsterdam and 88 from Birmingham) concerned referrals from general practice; the remaining 23 concerned referrals within the two hospitals and were excluded. In Birmingham 90% of patients were referred to specialists by name, whereas in Holland 9% of patients were referred simply to the specialist's department. Table IV shows how each specialist judged the quality and appropriateness of letters relating to his own consultations. For simplicity the categories of "no letter" and "poor letter" are lumped together, and are "good" and "excellent" letters. Table V shows a pronounced difference in judgment of both the quality of the letters and the appropriateness of referral among the specialists in the different countries.

Specialists, however, are paid differently in the two countries: British specialists by salary and most Dutch specialists by item of service payments for each consultation. The method of payment in teaching hospitals is complex, however. Original attendance was free to patients in the Netherlands to encourage referral for teaching purposes. Specialists were paid by the hospital, but now they are paid on civil servants and, in part, on the basis of the civil service in the Netherlands, have just had a substantial cut in income. These differences may have a considerable impact on the attitudes of specialists, particularly in their tolerance of the poor quality of referral. In the Netherlands referral rates are very high: in 1982 a mean of 515 per 1000 patients who were insured by the sick funds were referred for specialist advice. (This figure is higher in Amsterdam than anywhere else in the Netherlands at 619 referrals per 1000 patients.) This enormous referral rate is inflated in many ways. When referring a patient a general practitioner initiates a referral card which enables the specialist to obtain the item of service fee and entitles the patient to one year of specialist care as an outpatient.

Subsequently, new referral cards are initiated by the specialist or, when outpatient care continues beyond a year, by the general practitioner. As there is no way of distinguishing between these types of referral cards the figure is grossly overstated by the inclusion of "follow up" cases. The figures are further inflated by the inclusion of referrals to ophthalmologists for refraction (which in 1981 and 1982 made up 21% and 22%, respectively, of all referrals). Was Et and Filman made a distinction between active and passive referrals, the latter containing referral cards initiated for refraction and follow up, active referrals (about half of all referrals) being at the request of either the general practitioner or the patient. This still leaves a rate for Amsterdam at over 300 referrals per 1000 patients a year. Lamberts, providing data from nine urban practices in Rotterdam, Hoogvliet, and Maastricht, found figures of 200 and 190 referrals per 1000 insured patients a year for two consecutive years. In Britain referral rates are often expressed as a rate per 1000 encounters between a general practitioner and a patient rather than per 1000 patients at risk. It is possible to recalculate such a rate from Lamberts's figures as 65 and 67 referrals per 1000 encounters for the two years. This is much higher than the rates from FMH's practice in rural Warwickshire, which show considerable variation between years (16-31 referrals per 1000 encounters).

It had been suggested that some of these variations related to differences in the security, sex, or country of qualification of the referring doctors. In both countries there were few referrals from women general practitioners or doctors who had qualified in their own country, and there were also no differences of quality of letters or appropriateness of referral. Small variations relating to age in both countries were not significant.

Lately, the mean interval between the date of the doctor's referral letter and that of the consultation with the specialist was 23.5 days in Birmingham and 6.9 days in Amsterdam. One specialist in each country commented that there had been delays attributable to the patients (owing to deliberate postponement or not posting the referral letter). When the two patients in Holland and the one in Birmingham who delayed their consultation were removed from the analysis the difference in delay was even more striking: 21.1 days in Birmingham and 5.2 days in Amsterdam. This delay is organisational in Birmingham letters to the hospital and appointments are sent by post, whereas in Amsterdam the patients telephone or make appointments in person, taking their letter with them.

Discussion

This paper reports a comparison of quality and appropriateness of referrals to medical specialists at two teaching hospitals, one in Birmingham and one in Amsterdam. In Britain most patients are referred within the National Health Service. In the Netherlands about two thirds of patients are insured with organisations called sick funds (Ziektefondsen), which entitles subscribers to much the same privilege as NHS patients in Britain. The remaining Dutch patients are referred to the general practitioner's list. In both countries capitation payment for patients on a general practitioner's list make up a large proportion of income.

Lamberts's figures conceal a range for the nine practices from 50 to 88 referrals per 1000 encounters. Donald pointed out that in Britain variations among doctors accounted for a fivefold difference in the cost of referral, with some doctors generating an expenditure of £/year a year; costs in the Netherlands must be even higher. Another important influence on referral patterns concerns differences in practice organisation between the two countries. In 1982 62% (roughly 5600) of Dutch general practitioners were single-handed, and 12% worked in partnerships of more than two doctors. Practice premises tend to be simple, adapted from houses or shops, and often have little ancillary help. Though poorly organised practice is still found in Britain, the overall impression of Dutch practice is similar to that of British general practice in the 1950s and early 60s.

Krol, looking at paediatric referral, showed that the number of referrals in the Netherlands is increased and attributed this in part to the greater medical knowledge of patients; he also stated that the general practitioners' motives in referral are unclear or even unknown. In another study of 100 Dutch referrals for respiratory conditions it was suggested that letters should be typewritten, list medication, ask a clear question of the specialist, and record important details such as smoking. That such basic elements have to be listed confirms the poor quality of referral letters.

The quality and appropriateness of referral appear to be better in Birmingham than in Amsterdam. This may be related to the higher referral rates in the Netherlands. Other explanations for this finding may include less organised primary care in the Netherlands compared with that in Britain and the readiness of Dutch referrals to be made to a department whereas British referrals are made to a named (often by first name) doctor. In Birmingham the mean

excellent letter: clearly legible letter stating relevant past history, psychosocial factors where relevant; the patient's problem, history, examination, and (where relevant) results of preliminary investigation and a clear indication of what the referring doctor wants to know from the specialist. The adequacy or appropriateness of the referral was defined as follows: (a) unnecessary referral: the patient's problem should be dealt with in the competence of a general practitioner; (b) inappropriate referral: the patient has a problem but the referring doctor has not identified it sufficiently to refer to the correct specialist (or other source of help) or the patient should have been advised, seen sooner, or referred urgently; (c) inadequate referral: though inadequately investigated by the general practitioner the

patient needs specialist advice or help with diagnosis or management; (d) adequate referral: though the patient could have been further diagnosed or managed without referral, there is a definite need of specialist advice or diagnosis or management; (e) appropriate referral: the referring doctor needs specialist help to diagnose a difficult problem, or an investigation not available to referring doctor, or needs help in managing the problem.

Allocation of referral letters to these categories of quality by four different doctors might be questioned. Although such bias between doctors, or between the same doctor at different times, cannot be completely excluded, estimation of such variation was attempted in two ways, before and after the collection of data.

Validation before data collection—A fictional case was constructed concerning a 39 year old man who presented with a persistent cough after having had influenza; there was a history of stress with minimal information; (c) barely adequate referral letter: barely adequate with little indication of the referring doctor's expectations; (d) good letter: legible letter with some account of the patient's background, history, and examination findings and an indication of what the referring doctor expects of the specialist; (e)

Validation after data collection—The genuine referral letters were photocopied and every fifth letter from each specialist was graded by all four specialists and by a social scientist, who was an independent observer. Such a method of validation may be open to bias because a single referring doctor, because of his knowledge of individual specialists, might have written different letters to each of the four specialists who judged the letters. It was not possible to validate the specialists' allocation of the appropriateness of the referral since this could be done only by the physician to whom the patient had been referred. Thus there may be subjective variation between over quality of referral, however, great some way to justify comparisons of appropriateness between the referrals to specialists in the two countries

Results

Validation before data collection—Table I shows the rank order given by the Dutch specialists (N and L) and the British specialists (G and B) on the 10 fictional letters (I-X). There is close agreement between the specialists' ranking of these letters confirmed by correlation coefficients (Spearman's rho) and Kendall's coefficient of concordance (0.938). Table II shows how the four specialists categorised the referral by quality. This showed complete agreement between all four specialists in categorising letters V and X. In the control group, there was agreement between the British doctors in letters III, IV, VI, and VII. The Dutch doctors disagreed in judging letters I and IV by more than one category; for the other letters disagreement never exceeded one category.

Validation after data collection—Each of the four specialists selected every

TABLE I—Rank order (1-10) of each fictional letter (I-X) assessed by each specialist (N, L, G and B) (1 = best, 10 = worst)

Table with 10 columns (I-X) and 4 rows (N, L, G, B) showing rank orders for fictional letters.

TABLE II—Quality of referral letter as assessed by the four specialists

Table with 10 columns (I-X) and 4 rows (N, L, G, B) showing quality categories for fictional letters.

1 = no referral letter, 2 = poor referral letter, 3 = barely adequate letter, 4 = good letter, 5 = excellent letter.

TABLE III—Assessment of 20% sample of each Dutch (N and L) and British specialist's (G and B) letters by all specialists and by a social scientist (SS)

Table with 10 columns (I-X) and 6 rows (N, L, G, B, SS, Total) showing assessment of 20% sample of letters.

*See Remarks to table II.
†See Table III for details of discrepancy of three categories, 12 letters show a discrepancy of two categories, 13 letters show a discrepancy of one category, and four letters show perfect agreement.

writing time for an appointment with a specialist is four times that in Amsterdam. This study indicates a need to know much more about communication between primary and secondary care in both countries.

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Diagnosing cancer in general practice: from suspicion to certainty

MAGNE NYLENNA

Abstract

Three hundred and eighty two patients who were suspected of having cancer by general practitioners were followed up for up to two years until the suspicion was either confirmed or rejected; 7014 patients who were not suspected of having a malignancy served as the control group. Less than every tenth suspicion proved correct. The general practitioner's assessment of the strength of suspicion of cancer was the best predictor of outcome in the suspected patients. The incidence of cancer among the unsuspected patients did not differ from the total incidence of cancer in the study area. The patient's fear of cancer was an important predictor of a malignancy. A higher proportion of patients who consulted for non-symptomatic reasons than for symptomatic reasons was reported to have a malignancy. No single symptom had a strong predictive value for cancer. The predictive value of a palpable lump or tumour was 2.5%.

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Abstract

When a malignant tumour is the primary diagnosis or one of the hypotheses acted upon beyond the initial consultation is normally taken. The patient will be followed up, which often includes referral to a specialist or admission to hospital. This is reflected by the fact that about every new case of cancer in Norway is reported from a hospital department (Cancer Registry of Norway, personal communication, 1986), even though patients normally see a general practitioner first for symptoms or complaints. In this study a group of patients who were suspected of having cancer by the general practitioner was investigated, and the content and outcome of the diagnostic process were analysed. The aim of the study was to evaluate the general practitioner's follow up of the patients with suspected cancer and to characterise those patients who had a malignant tumour.

Patients and methods

The study was carried out in a limited, defined area with 29 420 inhabitants in western Norway. A total of 61 general practitioners participated. During September and October 1983, 10 278 encounters with 7396 patients were recorded. Of these, 429 encounters with 382 patients, representing 385 cases of suspected cancer, were classified as resulting in a follow up for suspected cancer. Patients whose general practitioner decided to investigate or examine beyond the initial encounter for a suspected malignancy were considered to be cases of suspected cancer.

The general practitioners assessed the strength of the suspicion and the patient's own influence on the follow up on visual analogue scales. The outcome of the diagnostic process was studied in two ways: (a) Each patient who was suspected of having cancer was followed up until the general practitioner reported that the suspicion was either confirmed or rejected. A verified premalignant condition was classified as confirmed cancer. The follow up period lasted for up to two years. (b) After 1 September 1985 the whole series was matched against the new cases of malignant and premalignant diseases reported to the Cancer Registry of Norway during the two year period. In this way the outcome for patients with suspected and unsuspected cancer could be analysed.

The difference between verified and rejected suspicions was analysed by a multivariate method in an attempt to classify the patients with a verified suspicion. For this analysis Fisher's linear discriminant method was used. Other statistical methods used were the chi square and Student's t test.

Department of General Practice, University of Oslo, Frohns Stange gate 15/17, 0504 Oslo 2, Norway.
MAGNE NYLENNA, MD, research fellow