A study of communication between general practitioners and specialists

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SUMMARY. A random sample of referral letters from general practitioners to outpatient departments of general medicine, dermatology, neurology, and gastroenterology at an Amsterdam teaching hospital were analysed together with the specialists' replies for 144 referrals. The pairs of letters were judged by a panel of four general practitioners and four specialists. Letters were assessed according to quality and content, clarity, request for return to general practitioner care, time intervals between referral and consultation and between consultation and the specialist's reply. The judges were also asked to assess whether in their opinion the letters were of value in teaching or were discourteous. Though in general intraobserver agreement on what constitutes a good letter was low, deficiencies were revealed in the quality of letters and there were delays in transmission and missed educational opportunities.

Introduction

GOOD communication between primary and secondary care is essential for the smooth running of any health care system but particularly so where primary care doctors exercise a 'gatekeeper' function as in the UK and the Netherlands. Dutch referral rates are high, reaching 515 per 1000 insured persons in 1982.[1,2] Communication between doctors of different experience and expertise is also an important means of educating both. Regrettably this opportunity is often neglected, especially by general practitioners who often feel that they have little to teach their specialist colleagues. Communication between primary care and hospital is often of poor quality though it has improved over the last 25 years.[3-5] Variations in the perceptions of patient, general practitioner and consultant[6,7] can lead to resentment and strained relations between them and worse still they may confuse or reduce the confidence of the patient.[8] As Marinker points out this wastes resources and there is need for rationalization of the system.[9] Such rationalization depends on a better understanding of the complexity of the referral process.

Referral to hospital colleagues is an essential part of primary health care but referral patterns show immense variation nationally[10-13] and internationally. Referrals are often considered unnecessary by specialists.[7] General practitioners frequently criticize hospital colleagues about their communication, claiming that they do not read the referral letters,[17,18] do not understand the problems of the patient outside the hospital,[6-8] cross-refer within the hospital without referring back to general practitioners,[19] and do not keep general practitioners informed or return the patient to their care once a specific problem has been identified.[18] There are often delays in communicating[20-24] and specialists' replies to referrals can be irritating, discourteous and belittling. Some of these difficulties may be overcome by clear written guidelines such as have been produced in the west Somerset pink book,[25] by the MSD Foundation,[26,27] and in the Netherlands.[28,29]

An earlier study compared the quality of referal letters from general practitioners to academic medical outpatient departments at the Queen Elizabeth hospital in Birmingham and the Free University hospital in Amsterdam and revealed lower standards of referral letter at the latter.[30] The findings of this study were controversial[31] and led to criticism from Dutch colleagues within and without the Free University.

In view of this criticism and since the Free University is particularly concerned to improve the relationship between its staff and the general practitioners who refer patients to them this study was repeated to assess the quality of communication in letters between the two levels of care, this time including an assessment of specialists' letters as well as the original referral letters from the general practitioner. The study also demonstrated a possible method of audit of hospital and general practice letters.

Method

Referrals from general practitioners to the departments of internal medicine, dermatology, neurology and gastroenterology were randomly selected. A referral was considered to have been made when patients attended the appropriate outpatient clinic either with a letter from their doctor or stating that their doctor had told them to attend. Referrals were randomized by time of year, by general practitioner and by individual specialist within each department. All patients seen by specialists during the first working week of each month of 1986 were identified and three referrals from each department were selected at random. This provided a sample of 144 referrals (three from each of four groups for 12 months). Each specialist's letter together with the general practitioner's referral letter was photocopied after all identification of patient, specialist and general practitioner had been obliterated by a nurse, who also ensured that no judges saw letters that they had written themselves. There was no referral letter from the general practitioner for 10 referrals. On five occasions there was no letter from the specialist; in some of these referrals the specialist may have telephoned the general practitioner or relied upon a standard, brief and unduplicated handwritten note (these notes are written only in the department of general medicine and are followed by comprehensive letters at a later date). The pairs of letters were then judged by a panel of four general practitioners (including a critic of the former study) and four specialists (one from each of the four departments). Each judge rated the 144 referrals (36 to each of the four departments) so there were 576 assessments from general practitioners and 576 from specialists. Throughout the analysis missing letters were considered to be in the worst category. Judges

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Submitted: 18 October 1989; accepted: 2 April 1990.

were selected on grounds of willingness to undertake the task and because they were believed to be representative of their branch of medicine. Specialists' and generalists' letters serve different functions and cannot be compared directly. However, each may be assessed against a standard of quality and comparison of these standards allows assessment of how each letter fulfils its purpose.

The quality of general practitioners' letters was judged according to criteria defined in the earlier study.[30] We also determined whether the reason for referral given by the general practitioners was clear and whether they had requested that the patient be returned to their care.

The quality of specialists' letters was judged using similar criteria to those for the general practitioners' letters. We also determined whether the specialist answered the general practitioner's reason for referral and, in cases where the general practitioner requested early return of the patient, whether the specialist complied and, if not, whether an adequate reason was offered. An adequate summary of the subjective and objective findings and the assessment and management plan of the case was sought in the specialists' letters as was a demonstration that they were aware of the patient's psychosocial background. The general practitioners' and the specialists' letters were searched for an indication that the general practitioner taught the specialist something and that the specialist had taught the general practitioner something. Finally, the judges decided whether the specialists' letters were discourteous. The latter two criteria are necessarily subjective since the assessment of educational value or perception of discourtesy may vary between individuals.

The time from initial referral to consultation and between the consultation and the specialists' reply was established from the dates of the general practitioners' and specialists' letters.

Judges were also asked to assess whether the two letters gave a clear understanding of the patient's problem, diagnosis and management.

Statistics

Interobserver agreement with respect to the assessment of the same letters was measured using the weighted kappa statistic; this statistic is defined as the proportion of agreement beyond chance.[32] When the kappa statistic showed the interobserver agreement to be low, mean scores of judgements by general practitioners and specialists as groups were used for further calculations instead of single judgements by observers. Where mean scores of assessments by general practitioners and specialists as groups were contrasted, paired *t*-tests were applied. Where differences between departments were derived from general practitioners' letters and specialists' answers, they were assessed using analysis of variance.[33] In these analyses a letter was the unit of analysis.

Results

General practitioners' letters

Table 1 shows the judges' opinions of the general practitioners' referral letters. The majority of referral letters were of low quality; only 39.5% were judged as good or excellent, thus confirming the findings of the earlier study.[30] There was poor interobserver agreement — the weighted kappa between general practitioners, between specialists, and for all judges was about 0.2. General practitioners were significantly harsher critics of their colleagues than were the specialists ($P<0.01$). Interestingly the general practitioner who had been very critical of the findings of the first study[30] commented that the letters were so much worse than he had imagined that if anything he now felt that the views expressed earlier were too mild. Almost no agreement was found between the dermatologist and the specialist in general medicine. The former rated 94 of the 144 letters (includes 10 missing letters) as good or excellent while the latter rated 120 as barely adequate or worse.

General practitioners stated explicitly why they had referred patients in about half of the referrals (Figure 1) — general practitioners assessed this at 51.4% and specialists at 43.4%; a significant difference of opinion ($P<0.001$). In a further quarter of referrals the reason was clearly implied; in the remainder there was either no referral letter or the reason was not explicit or clearly implied. There was no statistical difference in the percentage of referrals to each department for which general practitioners gave an explicit reason for referral.

Only a few doctors specifically asked the specialist to return the patient to generalist care after consultation (Figure 1) and there was a disagreement between generalist and specialist judges on this point with the former finding requests from general practitioners for return of their patients in nearly 5% of referrals and the specialists in only 1%. In many cases letters were not clear on this point but 74% did not request return of the patient.

Specialists' letters

Specialists' letters, judged against the criteria of quality, scored much higher than did the general practitioners' letters with 78.6% judged as good or excellent (Table 1). There was a similar

Table 1. Judgements of 144 general practitioners' and 144 specialists' letters by the four generalist and four specialist judges.[a]

	No. (%) of GPs' letters to:					No. (%) of specialists' letters from:				
	Dermatology	Gastroenterology	Neurology	Internal medicine	All departments	Dermatology	Gastroenterology	Neurology	Internal medicine	All departments
GPs' ratings										
Good/excellent	55	63	54	33	205	117	114	115	102	448
Barely adequate/poor	89	81	90	111	371	27	30	29	42	128
Specialists' ratings										
Good/excellent	53	69	66	62	250	101	118	129	109	457
Barely adequate/poor	91	75	78	82	326	43	26	15	35	119
Total										
Good/excellent	108 (37.5)	132 (45.8)	120 (41.7)	95 (33.0)	455 (39.5)	218 (75.7)	232 (80.6)	244 (84.7)	211 (73.3)	905 (78.6)

[a] Ten letters from general practitioners and five letters from specialists were missing and were judged as poor.

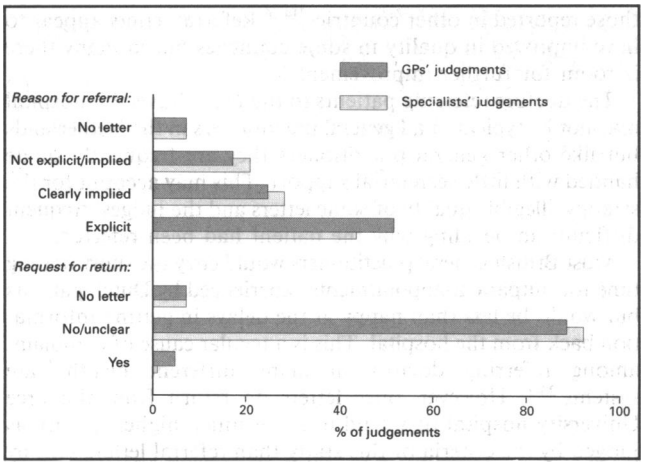

Figure 1. *General practitioners' referral letters: reason for referral and request for return (n = 576).*

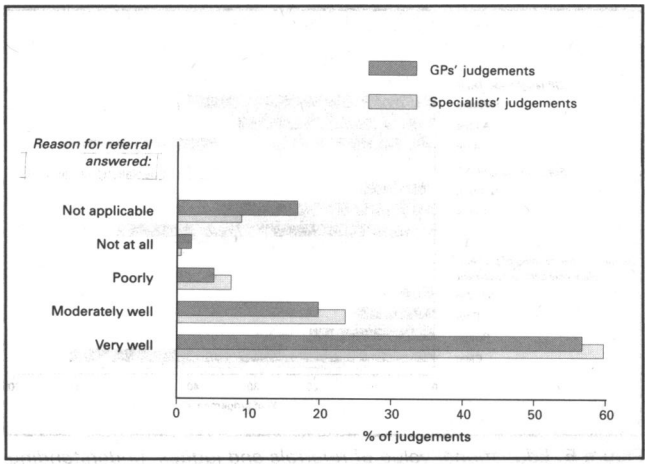

Figure 2. *Specialists' letters: answer to reason for referral (n = 576).*

variance between the judges' decisions about specialists' as about generalists' letters.

A specialist's ability to answer the referring doctors' reason for referral depends on that reason being apparent. Figure 2 shows that both groups of judges were in broad agreement that specialists answered the reason for referral very well in 55–60% of cases. In a fifth of referrals the reason was answered moderately well but in an eighth the reason was not clear enough to judge whether it had been answered.

In 32 of 1152 judgements the general practitioner was judged to have requested return of the patient, and in a further 15 this request was implied. The specialist complied in 25 cases and gave reasons for not doing so in seven of the remaining 22.

Specialists' letters were judged by both general practitioner and specialist assessors as being good at summarizing the subjective and objective findings and the assessment and management plan for each case (Figure 3). Specialists were rated most highly for the recording of objective data but slightly less well on the other measures. By contrast they were judged less good at appreciating the patient's psychosocial background (Figure 4) with only 20% of letters indicating very good awareness of these factors. Surprisingly, specialist judges, especially the dermatologist, and general practitioners sometimes commented that awareness of these factors was irrelevant.

The assessment of discourtesy is inevitably subjective, but specialists' letters were very rarely judged discourteous — general practitioners judged 95.5% and specialists 92.8% of letters as not at all discourteous. In three judgements general practitioners thought letters were definitely discourteous and in 22 judgements somewhat discourteous. Specialists judged no letter definitely discourteous but suspected discourtesy in 40 judgements. Discourtesy was judged to occur more commonly in letters from dermatologists (23 assessments) than from specialists in neurology (19), general medicine (17) or gastroenterology (six).

Educational value of letters

General practitioners with their detailed knowledge of the patient as an individual have much to teach specialists but the judges did not feel that the referring doctors taught the specialists very much in these referrals (Figure 5). Specialists, on the other hand, taught generalists considerably more and both groups of judges agreed on this. General practitioner judges were more positive about teaching effects than specialists, in both directions ($P<0.001$).

Time delays

The time between referral and consultation with a specialist varied from a median of 5.0 days for internal medicine to 17.5 days for dermatology (Table 2). In contrast the dermatology department replied to the general practitioner in a median of 11.5 days compared with 39.0 for internal medicine while

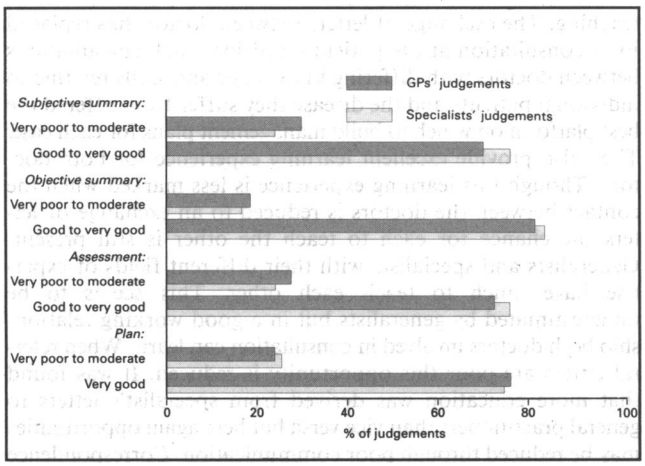

Figure 3. *Subjective and objective findings and the assessment and plan of the case found in specialists' letters (n = 576).*

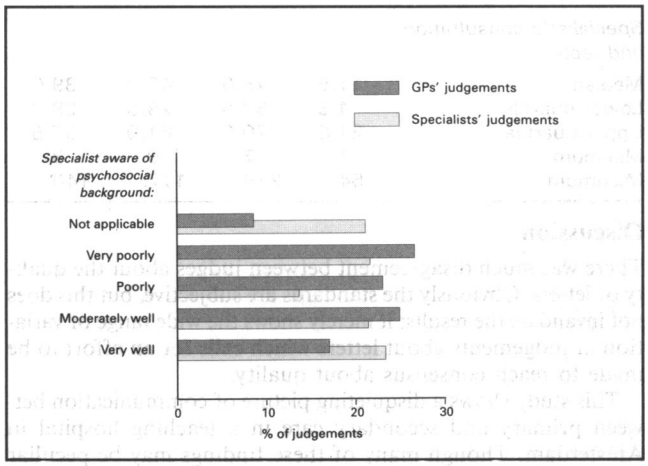

Figure 4. *Specialists' letters: awareness of psychosocial background (n = 576).*

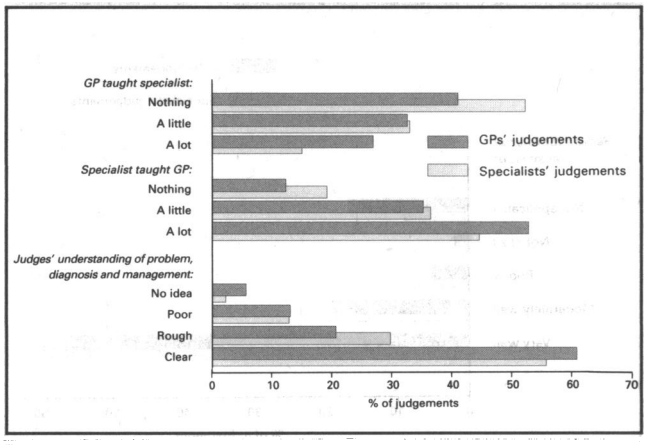

Figure 5. *Educational value of referrals and judges' understanding of the cases (n = 576).*

neurologists and gastroenterologists took six to seven weeks. This reflects secretarial shortage rather than medical inefficiency.

Judges' understanding of the case

Finally, the judges were asked what understanding the correspondence had given them of the patient's problem, diagnosis and management. There was broad agreement that for 50–60% of the pairs of letters they were left with a clear understanding of the case but general practitioners judged that from 18.6% pairs of letters they had a poor or even no understanding of the case while the corresponding figure for specialist judges was 14.8% (Figure 5).

Table 2. Time intervals between referral and consultation and between consultation and the specialist's reply.

	Time interval (days) for departments of:			
	Dermatology	Gastroenterology	Neurology	Internal medicine
Referral and consultation with specialist				
Median	17.5	6.5	11.0	5.0
Lower quartile	10.5	4.0	8.0	3.0
Upper quartile	24.0	13.5	14.0	7.0
Minimum	0	0	1	1
Maximum	132	69	68	33
Specialist's consultation and reply				
Median	11.5	46.0	43.0	39.0
Lower quartile	4.5	33.5	29.5	28.0
Upper quartile	21.0	70.0	61.0	57.5
Minimum	1	7	0	8
Maximum	54	236	172	140

Discussion

There was much disagreement between judges about the quality of letters. Obviously the standards are subjective, but this does not invalidate the results; it merely shows the wide range of variation in judgements about letters which calls for an effort to be made to reach consensus about quality.

This study shows a disquieting picture of communication between primary and secondary care in a teaching hospital in Amsterdam. Though many of these findings may be peculiar to one academic hospital, one city and one health care system, many of the communication problems have similarities with those reported in other countries.[14-16] Referral letters appear to have improved in quality in some countries but in many there is room for further improvement.[3,4]

The doctors referring patients to the Free University hospital may not be typical of all general practitioners in the Netherlands but like other general practitioners they are frequently single handed with little secretarial support. This may account for the scrappy, illegible quality of some letters and the judges' frequent difficulty in deciding why the patient had been referred.

Most British general practitioners would envy the short waiting time for outpatient appointments experienced by Dutch patients but would be less than happy at the delays in getting information back from the hospital. This is a regular cause of complaint among referring doctors in many different health care systems.[20-24] However, once letters do return from the Free University hospital they tend to be of much higher quality as judged by the criteria of this study than referral letters sent by general practitioners. Although letters of referral and the specialists' replies serve different functions and are not directly comparable the quality of each may be judged against set criteria and the degree of shortfall may be compared. A minority of specialists' letters were judged as substandard. Some specialists deal poorly with doctors' specific requests and this may account for the belief that referral letters are not read.

Doctors rarely ask that patients be returned to primary care and under these circumstances it is hardly surprising that the hospital retains care. However, in this study, where doctors specifically asked that patients should be returned this often failed to happen without adequate reason. General practitioners expect high standards of hospital letters but in as many as a quarter of such letters the reporting of subjective and objective findings, patient assessment and a management plan were regarded as poor. Specialists may perhaps be forgiven for failing to appreciate the patient's psychosocial background if the family doctor has not supplied it but the finding that letters did not indicate awareness of these factors in many cases is worrying.

Specialists are seldom considered discourteous, but in this study a small number of letters were thought to show some degree of discourtesy. The perception of discourtesy is subjective, varying between individuals and within the same individual at different times. Interestingly specialists detected discourtesy in letters more frequently than did general practitioners. Since one may remember occasional rudeness more than frequent politeness these rare lapses are perhaps seen as being more common than they really are but such perception does nothing to enhance communication.

Finally, this exchange of information is a potent means of teaching. The exchange of letters between doctors has replaced joint consultation at the patient's bedside. Such consultations between doctors with differing knowledge and skills relating to individual patients and the disease they suffer from offered the best platform on which to build management plans for each case. They also provide excellent learning experience for both doctors. Though this learning experience is less marked when the contact between the doctors is reduced to an exchange of letters the chance for each to teach the other is still present. Generalists and specialists with their different fields of expertise have much to teach each other. This seems to be underestimated by generalists but in a good working relationship both doctors involved in consultation can learn. When referral letters are poor this opportunity is reduced. It was found that more education was derived from specialist's letters to general practitioners than vice versa but here again opportunities may be reduced through poor communication. Correspondence also forms an extremely important part of the patient's record. It is unsatisfactory that in about a sixth of records non-involved

readers felt that they had no clear understanding of the patient's problem, diagnosis and management.

Communication can always be improved and a good way to start is by measuring its deficiencies. Questions relating to the quantity and quality of referrals can no longer be avoided[26] and this method of audit is a means of asking such questions which may ultimately lead to the development of protocols for improved communication between primary and secondary care.[25,27-29]

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