The process of outpatient referral and care: the experiences and views of patients, their general practitioners, and specialists

ANN BOWLING

JUDITH REDFERN

SUMMARY

Background. *The primary care system in the United Kingdom, involving the general practitioner (GP) as gatekeeper to further services, has helped to keep health care costs down. Despite this, unexplained variation in referral rates and increasing health care costs have led to the search for methods of improving efficiency. There is relatively little recent descriptive data on the processes of care at the primary–secondary care interface. The study reported here provides information about this.*

Aim. *To analyse the patterns and process of care for the referral of outpatients, together with the views of patients, their GPs, and specialists.*

Method. *A questionnaire survey of outpatients, their hospital specialists, and GPs in randomly sampled district health authorities in the North Thames Region. The measures included items and scales measuring satisfaction and processes.*

Results. *Almost all of the outpatients thought that their consultation with the specialist was 'necessary' and 'worthwhile'. Most of the GPs felt that they could not have given the study patients the care, treatment, and investigations they received in hospital, and most of the sampled patients' attendances were rated by the specialists as 'appropriate'. However, for just over one-fifth of new patients, the specialists reported that the GP could have done more tests and examinations prior to referring the study patient. Large proportions of GPs in this survey also reported having technical equipment in their practices, as well as direct access to a range of services and hospital-based facilities.*

Conclusion. *A large amount of work is carried out in general practice prior to the hospital referral of patients, and GPs have direct access to some technologies and services that can act to reduce the burden on hospitals. The discrepancy between GPs' and specialists' perceptions about the potential for further investigative work prior to patient referral merits further investigation.*

Keywords: *referral; patient satisfaction; general practitioners; hospital specialists.*

Introduction

NINETY-EIGHT per cent of the British population are registered with a National Health Service (NHS) general practitioner (GP), and 90% per cent of health care contact takes place in primary care. The well-developed primary care system, involving the general practitioner (GP) as gatekeeper to further services, has helped to keep health care costs in the United Kingdom down.[1] Despite this, unexplained variation in hospital referral rates[2-4] and increasing health care costs have led to a search for methods of improving efficiency and effectiveness, and of shifting the balance of care further to the primary care sector.[1,5-10] Policy makers have encouraged developments in primary care with the aim of increasing efficiency and curbing the increasing costs of health services, particularly in the secondary sector. The most recent example is the replacement of GP fundholding schemes with new local commissioning schemes within primary care groups.[11]

In England and Wales there are over 37 million recorded outpatient attendances in NHS hospital clinics per year, at an annual cost of around £2.5 billion. Therefore, even a small reduction in outpatient attendances has the potential to make substantial savings for the NHS. Over 8.5 million (23%) of outpatient attendances are new outpatient attendances and the remainder are follow-up visits.[12] Cartwright and Windsor[13] reported, on the basis of their national survey of outpatients in 1989, that 11% of all adults will have attended a hospital outpatient department within a three-month period. They concluded that there were too many continuing attendances over long periods. Others have estimated that around one-quarter of follow-up outpatient attendances are unnecessary, and could perhaps be avoided or managed in general practice by different methods of organising care,[6-8,14] although these schemes are largely unevaluated to date. Many studies have sought and failed to identify the reasons for variations in GPs' referral rates to outpatient departments. Faulkner *et al*[14] reported that 38% of surgical outpatient attendances in the southwest of England were still perceived by hospital doctors to have been manageable by GPs, and 45% of these attendances were judged to have been of marginal or little value. However, while it has been argued that primary care-based health systems have lower costs than others, for health care to be more 'primary care-led', greater investment and transfer of resources from the secondary to primary care sector is required, particularly in socially-deprived areas.[10,15-17] Despite ongoing debate, there is little consistent information on the extent to which organisational developments in primary health care have had an impact on the workload of GPs or hospital outpatient departments.[1]

Aims of the survey

This study aimed to describe the patterns and processes of care in general practice prior to patients' referral to hospital outpatient clinics, together with the views of patients, their GPs and specialists. A separate paper focuses on the characteristics of fundholding practices and is published elsewhere.[18]

Method

Eligible sample members were aged over 18 years and were current outpatient attenders. Both first and follow-up attenders were included in the study in order to be able to provide a profile on all attenders. The study was based in five, randomly sampled district health authorities in the North Thames Region, with stratifi-

A Bowling, MSc, PhD, Professor of Health Services Research; and J Redfern, BSc, Research fellow, CHIME/Primary Care and Population Studies, Royal Free and University College London Medical School, London.

Submitted: 8 May 1998; final acceptance: 16 June 1999.

cation by area (the 15 district health authorities were divided into Greater London/outside London, and then West to East). The aims of the study were descriptive, and a minimum of 120 patients per specialty was aimed for in the sampling (720 in total across all specialties). This number was sufficient to permit analyses by specialty and was manageable within the study period. Within sampled districts, hospitals that included all of the common study specialties on site were included in the study. The study specialties (common specialty areas) were general medicine, general surgery, dermatology, orthopaedics, rheumatology, and respiratory medicine.

Two researchers attended each outpatient clinic and recruited all patients as they attended consecutively on the study visit date. The patients were informed about the study, given an explanatory leaflet, and asked to sign the consent form to participate. Those who consented were given a questionnaire to complete at home after the clinic, and were asked to return it in a pre-paid envelope. Questions for patients covered process, satisfaction, and attitudes in relation to outpatient care and the interface with primary care.[9,13,19] The satisfaction instrument (ratings on a five-point scale from 'excellent' to 'poor') covered satisfaction with waiting times for the appointment, convenience of the location, waiting times at the clinic, time spent with the specialist, explanations given, competence and personal manner of staff, and other items relating to facilities and convenience.[19] Patients were asked for their signed consent for us to contact their GPs and specialists with a questionnaire about their referral and for their GPs' names and addresses. The specialists were asked to complete a general attitude questionnaire about the organisation of outpatients and the relationship between specialists and GPs, and a questionnaire about the study patient (new attenders only). The GPs were asked to complete a general attitude questionnaire about the organisation of outpatients; the relationship between GPs and specialists; practice characteristics, facilities, and equipment; and a questionnaire about the study patient. The data were analysed using SPSS for Windows; statistical tests included chi-square tests and *t*-tests. Location of practice (Greater London or outside London) was controlled for in all analyses presented here. GPs' patient list size and the casemix of outpatients (measured by patients' ratings of effect of condition on their lives) was controlled for where appropriate.

Results

Response rates

The response rates to the study were: patients, 74% (982); specialists to the general questionnaire, 100% (34), and to the individual ('new' patients as defined by the hospital) patients' questionnaire, 91% (184); GPs to the general questionnaire, 64% (393), and to the individual (all) patients' questionnaires, 64% (552); and the outpatients' managers, 61% (27). The GPs' response rate was slightly higher for out of London than London GPs at a ratio of 66%:61% (n = 194:195 respectively). The professional and practice characteristics of the responding GPs were compared against national data from the Royal College of General Practitioners (RCGP)[20-22] (including practice size, membership of RCGP, percentage of fundholders, percentage of computerised practices), and no differences were found. However, our sample of GPs is not necessarily representative of all GPs because they were included in the study on the basis of their patients being included in our outpatient sample.

The patients and their views

Forty-one per cent (401) of the patients were male, and 59% (581) were female. Thirty-one per cent (313) were aged under 45 years, 34% (333) were aged 45 to 65, and 35% (336) were aged 65 or over. Eighty-eight per cent (847) were white and 12% (115) were in black and other ethnic minority groups. Table 1 shows the results of patients' reports of the referral and attendance. This shows that most patients reported that their GPs had examined them thoroughly before their referral to an outpatient department, and over one-quarter in each case reported having X-rays or other prior investigations. Almost three-quarters of patients had been referred to an outpatient department by their GPs. Table 1 also shows that most patients reported being seen in an outpatient department within three months of their referral, although 6% waited six months or more. Most (60%) patients were re-attenders at the time they were sampled for inclusion in the study, although just 10% of all patients were long-term attenders of five years or more.

The average number of attendances for all patients was 4.8 (including the sampled attendance). The average waiting time in the clinic was 36.12 minutes: mean waiting times were longest in London at 41.3 minutes (SD = 41.70) in comparison with 31.6 minutes (SD = 29.37) outside London (P<0.001).

Over two-thirds of patients were retained for outpatient follow-up after the sampled consultation, and 36% of new attenders and 52% of follow-up attenders reported that their condition had 'improved' or 'cleared up altogether' after the sampled consultation (Table 1).

Patients' and doctors' views of the appropriateness of the outpatient attendance

Almost all (95%; 800 out of 842 responders) patients thought that their consultation with the specialist was 'necessary', and 89% (851 out of 857 responders) rated it as 'worthwhile'. Consistent with this, of the 540 patients for whom GPs completed the individual patient questionnaire item, 89% (481) were rated by GPs as 'GP not able to give the care, treatment and investigations received in the hospital', although 10% (56) felt that they could have done; 1% (3) were uncertain.

General practitioners were asked to rate their level of agreement with the hospital doctor's decision to retain, discharge, admit, or refer their patient. GPs reported that they 'definitely agreed' with the decision for 77% (406) of the patients and 'probably agreed' for 14% (74) of the 525 patients they completed the question for; 6% (29) were rated as 'uncertain' and 3% (14) were rated as 'disagreed'. Most attendances were rated by specialists as appropriate (90%; 103 out of 115 attendances rated). However, for over one-fifth of the new attenders (22%; 39 out of 178 rated), the specialists reported that the GP could have done more (tests, examinations) prior to referring the study patient.

General practitioners' views

Table 2 shows that a substantial minority of study patients was reported by their GPs to have had tests and X-rays prior to their referral. The main reasons for the referral were diagnosis and treatment. A relatively large proportion of GPs, in response to a general question, reported that they were given inadequate information about patients from specialists. In addition, most GPs reported, in response to general questions, unduly long delays 'very' or 'fairly' often before referred patients were seen in outpatient departments, and sizeable proportions reported problems with the grade of hospital doctor (too junior) seeing their patients and long delays in communications from hospitals. There were substantial numbers of practices with specialist outreach clinics, shared hospital–GP patient care schemes (mainly for diabetes), access to consultant-only clinics, locality outpatient clinics (e.g. in community or cottage hospitals), and one-stop hospital clinics.

Table 1. Processes of outpatient care. Patients' reports.

Patient reported items	1995–1996 % (n)
Action taken by GPs before referral	
Examined thoroughly	75 (534)
Do/arrange X-rays	28 (197)
Do/arrange other investigations	29 (207)
Total	712
How the patient was referred to the outpatient department	
Referred by GP	75 (737)
Referred after being inpatient	12 (122)
Referred from other hospital clinic/A&E	9 (92)
Self-referred	2 (20)
Other	1 (6)
Total	977
Interval between referral and being seen in the outpatient department	
Less than one month	35 (245)
One month but less than three months	43 (301)
Three months but less than six months	16 (111)
Six months or more	6 (41)
Total	698
New patient status	40 (354)
Follow-up patient status	
Followed up for fewer than 12 months	31 (280)
Followed up fewer than five years	19 (171)
Followed up for five years or more	10 (91)
Total	896
Process outcome of consultation	
Discharged	29 (254)
Retained for follow-up in outpatient department	69 (609)
Follow-up in GP's surgery	2 (19)
Other	0 (0)
Total	882
Clinical outcome of consultation	
New attender	
Cleared up altogether	8 (26)
Improved	28 (93)
No change	56 (188)
Got worse	3 (9)
Other	5 (18)
Total clinical outcome of consultation	334
Follow-up attenders	
Cleared up altogether	9 (46)
Improved	43 (226)
No change	38 (201)
Got worse	5 (28)
Other	5 (28)
Total	529
Average number of attendances	n (SD)
All patients (new and follow-up)	4.8 (8.17)
Follow-up patients	7.3 (9.78)
Total	880
Average waiting time in clinic in minutes	36.12 (36.23)
Total	857

Table 2. GPs' reports of process of care and facilities.

Reported process in relation to study patients	% (n)
Tests carried out	
Physical examination	81 (291)
Prescribed medicine	41 (149)
Laboratory tests	40 (145)
X-rays	33 (120)
Other	7 (24)
Total	360
Reasons for referral	
Diagnosis	52 (174)
Treatment	48 (162)
Tests/investigations	33 (110)
Advice on management	32 (108)
Second opinion	17 (56)
Other	11 (37)
Patient reassurance	7 (25)
Total	336
GP reported 'very'/'fairly often'	
Inadequate information being given to GPs by specialists about outpatients	83 (320)
Unduly long delays between referral and outpatient appointment	57 (220)
Unduly long delays from hospitals in getting information about patients	57 (220)
Patients been seen by insufficiently senior/experienced staff	49 (192)
Total	389
GP has access to	
Shared GP–hospital care (e.g. for diabetes, asthma, hypertension)	80 (309/384)
One-stop hospital outpatient clinics	55 (206/375)
Specialist outreach clinics	29 (105/360)
Locality outpatient clinics	27 (102/379)
Consultant-only outpatient clinics	22 (84/379)
GP has the following equipment in practice	
Computer	96 (370)
Nebuliser	92 (356)
ECG machine	67 (261)
Proctoscope	63 (243)
Vitalograph	21 (82)
Total	386
GP has direct access to	
Ultrasound	96 (369)
Physiotherapy	94 (361)
Endoscopy	81 (313)
CT scan	29 (112)
Total	385
GP carries out minor surgery in the practice for	
Warts	81 (311)
Joint injections	72 (277)
Cutting out cyst	69 (266)
Other excisions	58 (233)
Cuts that need stitching	48 (182)
Total	383

Large proportions reported having specific equipment in the practices, carrying out minor surgical procedures, and having direct access to services.

Specialists' views

Specialists rarely reported receiving inappropriate referrals from GPs (6%, two out of 34, reported this 'fairly' or 'very' often), although 38% (13 out of 34) reported that they had been provided with inadequate information by GPs 'fairly' or 'very' often, and 42% (14 out of 33) reported inadequate investigations/treatment were carried out by GPs prior to referral 'fairly' or 'very' often. Specialists were asked about whether there had been any innovations in their departments that aimed to shift the balance of care from secondary to primary care. They were given a

checklist to tick, with provision for other responses. The most commonly reported innovations are reported here (the item response ranged between 31 and 33 doctors). Sixty-six per cent (21 out of 32 responders to this item) reported having written guidelines for GPs for complex cases, 64% (21 out of 33) reported having consultant-only clinics, 47% (15 out of 32) had locality outpatient clinics, 42% (14 out of 33) had shared-care schemes with GPs, 30% (10 out of 33) reported having one-stop clinics, 15% (five out of 33) had outreach clinics in GPs' surgeries, and 10% (three out of 31) reported having community-based follow-up schemes.

Comparisons between surveys

Table 3 makes cautious comparisons between some of the survey data reported here and Cartwright and Windsor's 1989 national survey of outpatients.[13] Although the study reported here used questions from this 1989 survey, comparisons can only be tentative because of differences in methodology and areas studied (the latter was based on a national population screen to identify outpatients). Bearing this caution in mind, Table 3 does suggest large increases in the proportions of GPs who have equipment in their surgeries, direct access to facilities, and an increase in the investigations performed (e.g. X-rays) before the referral of patients to outpatient clinics.

Discussion

Before interpreting the results presented here, some caution should be taken. This was a cross-sectional study and can therefore only demonstrate associations rather than impute causality. This survey was also limited to sampling GPs via their referred outpatients, suggesting potential for sampling bias, and was limited to one geographical region. However, there were no differences in the characteristics of GPs who responded and those who did not, and in the characteristics of GPs nationally. This enhances confidence in the findings reported here — although the response rate was slightly higher for out-of-London GPs (by 5%), area was controlled for in all analyses.

The survey provided evidence that GPs are undertaking investigations for a sizeable proportion of their patients prior to referral, and most referred patients regarded the pre-referral examination by their GPs as thorough. Large proportions of GPs in this survey also reported having technical equipment in their practices, performing minor surgery, and having direct access to services and hospital facilities, including specialist outreach clinics. These developments were all designed to improve patient access and develop closer relationships between GPs and specialists, as well as to discourage the number of reattendances by outpatients. However, for over one-fifth of the new attenders the specialists reported that the GP could have done more (tests, examinations) prior to referring the study patient. In addition, a sizeable proportion of specialists reported that GPs (in general) carried out inadequate investigations/treatment prior to referring patients 'very' or 'fairly often'.

Almost all patients thought their outpatient consultation was 'necessary' and 'worthwhile', and most of their GPs felt that, in retrospect, they could not have given the study patients the care, treatment, and investigations that they received in the hospital. In contrast to the literature cited earlier,[6-8,14] most outpatient attendances were rated by specialists as appropriate, and less than one-third of patients were discharged from outpatient clinics after the sampled attendance. Most of the GPs agreed with the decision of the hospital doctor to retain, discharge, admit, or re-refer the study patient.

Although the indication is that the balance of care is shifting from the secondary to the primary care sector, there is scope for further development; e.g. possibly more investigations should be carried out in general practice prior to a patient's referral. Two-thirds of specialists reported having developed guidelines for use in general practice that could lead to shifts in the balance of care. Evaluative research on the uptake and effectiveness of guidelines in routine practice, and on other innovations such as one-stop clinics, outreach clinics, telemedicine, and telephone consultations with specialists, is gradually being published.[6-9] There is likely to be scope for the new primary care group commissioning schemes[11] to influence criteria for outpatient referrals and effi-

Table 3. A comparison of North Thames Regional Health Authority (NTRHA) survey data (1995–1996) with Cartwright and Windsor's[13] national survey data (1989).

GP reported	NTRHA data 1995–1996 % (n)	National data 1989 % (n)
Availability of equipment and services in their surgeries		
Nebuliser — yes	92 (356)	78 (188)
Computer — yes	96 (370)	61 (147)
Total	386	242
Direct access to		
Physiotherapy	94 (361)	76 (185)
Ultrasound	96 (369)	63 (152)
Endoscopy	81 (313)	24 (59)
Total	385	242
Minor surgery performed in the practice		
Wart removal	81 (311)	63 (154)
Cyst removal	69 (266)	51 (123)
Total	385	242
Carried out investigations of study patient prior to referral to hospital outpatient clinic		
Physical examination	81 (291)	75 (100)
Laboratory test(s)	40 (145)	31 (42)
X-rays	33 (120)	17 (23)
Total	360	134

NB: Significance testing was not performed as the surveys are not strictly comparable; totals do not equal 100% as all items were multicoded.

Key points

- Most patients felt their outpatient attendance was 'necessary' and 'worthwhile'; most of their GPs felt that, in retrospect, they could not have given the study patients the care, treatment, and investigations they received in the hospital; most attendances were rated by specialists as appropriate.
- Just 29% of patients were discharged from outpatient departments after the sampled attendance. However, most of the GPs agreed with the decision of the hospital doctor to retain, discharge, admit, or re-refer the study patient.
- Large proportions of GPs in this survey also reported having technical equipment and computers in their practices, as well as direct access to services such as physiotherapy.
- Between around one-fifth and just over one-half of GPs reported having access to specialist outreach clinics in general practice, consultant-only clinics, locality out-patient clinics, and one-stop hospital outpatient clinics.
- There was a difference of opinion between GPs and specialists about whether much more preliminary investigation could be carried out by GPs prior to referral of patients to hospital.

ciency targets for hospitals.

References

1. Coulter A. Evaluating general practice fundholding in the United Kingdom. *Eur J Pub Health* 1995a; **5:** 233-239.
2. Hippisley-Cox J, Hardy C, Pringle M, *et al*. The effect of deprivation on variations in general practitioners' referral rates: a cross-sectional study of computerised data on new medical and surgical outpatient referrals in Nottinghamshire. *BMJ* 1997; **314:** 1458-1461.
3. Surrender R, Bradlow J, Coulter A, *et al*. Trends in referral patterns in fundholding and non-fundholding practices in the Oxford Region, 1990-4. *BMJ* 1995; **311:** 1205-1208.
4. Coulter A, Bradlow J. Effect of NHS reforms on general practitioners' referral patterns. *BMJ* 1993; **306:** 433-437.
5. Coulter A. Shifting the balance from secondary to primary care. *BMJ* 1995b; **311:** 1447-1448.
6. Weingarten MA. Telephone consultations with patients: a brief study and review of the literature. *J R Coll Gen Pract* 1982; **32:** 766-770.
7. Harrison R, Clayton W, Wallace P. Can telemedicine be used to improve communication between primary and secondary care? *BMJ* 1996; **313:** 1377-1381.
8. Grimshaw JM, Russell IT. Effect of clinical guidelines on medical practice: a systematic review of rigorous evaluations. *Lancet* 1993; **342:** 1317-1320.
9. Bowling A, Stramer K, Dickinson E, *et al*. Evaluation of specialists' outreach clinics in general practice in England: process and acceptability to patients, specialists, and general practitioners. *J Epidemiol Community Health* 1997; **51:** 52-61.
10. Hughes J, Gordon P. *An optimal balance? Primary health care and acute hospital services in London.* [King's Fund London Acute Services Initiative. Working Paper No. 11.] London: King's Fund, 1992.
11. Department of Health. *The New NHS*. [Cm. 3807.] London: HMSO, 1997.
12. Department of Health. *Health and personal social services statistics for England*. London: HMSO, 1992.
13. Cartwright A, Windsor J. *Outpatients and their doctors. A study of patients, potential patients, general practitioners and hospital doctors*. London: HMSO, 1993.
14. Faulkner A, Saltrese-Taylor A, O'Brien J, *et al*. Outpatients revisited: subjective views and clinical decisions in the management of general surgical outpatients in South West England. *J Epidemiol Community Health* 1995; **49:** 599-605.
15. Jarman B, Bosanquet N. Primary health care in London. Changes since the Acheson Report. *BMJ* 1992; **305:** 30-36.
16. Leese B, Bosanquet N. Family doctors and change in practice strategy since 1986. *BMJ* 1995; **310:** 705-708.
17. Starfield B. Is primary care essential? *Lancet* 1994; **344:** 1129-1233.
18. Redfern J, Bowling A. Efficiency of care at the primary-secondary interface: variations with fundholding status. *Health and Place* (in press).
19. Davies AR, Ware JE. *GHAA's consumer satisfaction survey and manual*. Washington: Washington Group Health Association of America, 1991.
20. Royal College of General Practitioners. *General practice computerisation.* [RCGP Information Sheet No. 7.] London: RCGP, 1995.
21. Royal College of General Practitioners. *Profile of UK Practices*. [RCGP Information Sheet No. 2.] London: RCGP, 1996.
22. Royal College of General Practitioners. *Fundholding*. [RCGP Information Sheet No. 6.] London: RCGP, 1997.

Acknowledgements

We are grateful to Sally Anne Francis, Lesley Marriott, Orla Murphy, and Maria Clement for their assistance with setting up this project; to Joy Windsor and Ann Cartwright for permission to use questions from their survey of outpatients and access to their original dataset, and for their valuable advice; and to the patients, doctors, and managers who gave up their time for this study. The study was funded by the Organisation and Management Group, Research and Development, North Thames Regional Health Authority (grant no. P/95/202), and the authors thank the members of the committee. Crown Copyright reserved, 1995. The views reported do not necessarily represent those of the funding body.

Address for correspondence

Professor A Bowling, CHIME, Royal Free and University College London Medical School, 4th floor Archway Wing, Whittington Hospital, Highgate Hill, London N19 5NF.