

# PRACTICE OBSERVED

## General practitioners' referrals to specialist outpatient clinics

### I. Why general practitioners refer patients to specialist outpatient clinics

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#### Abstract

There has been much concern about the wide variations in general practitioners' referral rates and the consequent implications for cost and quality of care. This has led to a call to evaluate the appropriateness and effectiveness of referrals. A collaborative audit of referrals to outpatient clinics was conducted by 127 general practitioners in 33 practices in the Oxford region. Records were kept of 18 754 referrals, which included data on diagnoses and reasons for referral. Overall, 6553 (35.4%) of the referrals were for particular treatments or operations and a further 6475 (34.9%) were for specific investigation or diagnosis. Advice on management was the main reason for referral in 2656 (14.3%) cases, and in 1719 (9.3%) cases the general practitioners wanted the consultants to take over managing their patients. Reassurance of either the general practitioner or the patient was recorded as the main reason in only 762 (4.1%) referrals.

There seems to be scope for rationalising the referral process. A programme with three stages for evaluating referrals to outpatient clinics is recommended.

#### Introduction

One of the features of the British system of health care is the central role of the general practitioner as the patient's primary medical contact and decision maker for referral to specialist care. The referral process, variation in referral rates, and communication between general practitioners and consultants about referrals have all been studied.<sup>1-4</sup> In its white paper on primary care in 1987 the government expressed concern about wide variations in general practitioners' referral rates and stated that doctors with abnormally high or low rates of referral would be invited to assess their approach to making use of hospital resources.<sup>5</sup> This year the white paper on the government's plans for the future of the NHS reiterated the concern about variations in patterns of referral and urged general practitioners to participate in medical audit.<sup>6</sup> Concern about cost<sup>7</sup> and quality<sup>8</sup> of care have caused others to lend their voices to the call to evaluate referrals to outpatient clinics, though assessing the appropriateness and effectiveness of the referrals is by no means straightforward. Any assessment needs to take account of why general practitioners refer patients to specialist outpatient clinics and what the general practitioner expects from a referral. These objectives are diverse and differ widely according to the patient's problem. One of the aims of a large survey of general practitioners' referrals coordinated by the Oxford community health project was to determine and analyse general

practitioners' reasons for referring patients to outpatient clinics. We report the results here.

#### Methods

General practitioners were invited to record the details of all of their referrals to hospital outpatient clinics by using agreed definitions and protocols that were common to all practices. In all, 127 general practitioners in 33 practices with a total of 272 394 patients participated. Ten of the practices were in Oxfordshire, 11 in Milton Keynes (Buckinghamshire), seven in Northamptonshire, four in Berkshire, and one in Warwickshire. The study took place from October 1983 to December 1984, but not all of the practices participated for the whole period. An important aim was to obtain complete records for two particular periods of 11 weeks in 1983 and 1984.<sup>9</sup> Practices were encouraged to record the details of their referrals for longer periods or for the full time span if they wished to. Four practices recorded referrals for three months or less, 12 for three to six months, four for seven to 12 months, and 13 for the full period of one year and four months.

Data were collected on all referrals to outpatient clinics in any hospital specialty (both private and NHS) in any district by each general practitioner in each practice. Every time they made a referral the general practitioners completed a standard form that requested the patient's date of birth and sex; information about themselves and the specialty, hospital, and district to which they were making the referral; and their diagnosis and the reason for the referral. Each practice nominated a liaison general practitioner and an administrative member of staff to be responsible for supervising the collection of data. Secretaries in the practices made sure that a form was completed each time that they typed a referral letter. As all of the practices used typed referral letters we believe that our record was virtually complete.

Diagnoses were coded with the Oxford Medical Information System (OXMIS) classification, which was designed for use in general practice and is constructed around the International Classification of Diseases (eighth revision)<sup>10</sup> but allows for more detailed coding of diagnoses, symptoms, and patients' characteristics.<sup>11</sup> Coding was standardised by checking a random sample of 10% of the records.

The general practitioners were asked to record their main reason for each referral (according to an agreed set of definitions) out of the following possible reasons, which were agreed with them after a pilot study:

- To establish the diagnosis (the diagnosis was unclear)

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- For a specified investigation (the diagnosis was reasonably clear)
- For treatment or an operation (the diagnosis was known)
- For advice on management and referral back (the diagnosis was known)
- For a specialist to take over the management (the diagnosis was known)
- For a second opinion to reassure them (the general practitioners) that they had done all that was required
- For a second opinion to reassure patients or their families that they (the general practitioners) had done all that was required
- For other reasons.

## Results

Records were kept of 18 754 referrals to outpatient clinics (table I). About three quarters of these were to clinics in the five specialties: general surgery; gynaecology; ear, nose, and throat surgery; general medicine and trauma; and orthopaedics. Referrals to clinics in obstetrics, paramedical specialties, and dentistry were excluded. The referrals covered virtually the whole range of categories of the International Classification of Diseases. The groups of disorders that occurred most commonly included deafness, pain in legs and arms and joints, menstrual disorders, eye disorders, lower gastrointestinal tract disorders, neuroses, respiratory system disorders, nervous system disorders, varicose veins, back pain, breast lumps, genitourinary disorders, otitis media, and warts. Requests for abortion, vasectomy, and sterilisation of women were also common.

Table II gives the reasons for referral recorded by the general practitioners at the time of the referral. Overall, patients were referred most commonly for a particular treatment or operation (35.4% of all referrals), reflecting the large part of the workload in

outpatient clinics that operations comprise. Specific requests for operations for patients presenting with disorders that were not a problem to diagnose constituted a large part of the workload—for example, 861 (21%) referrals to general surgery were for operations for varicose veins, haemorrhoids, and hernias; 503 (20%) referrals to gynaecology were for abortion or sterilisation; and 270 (19%) referrals to dermatology were for removal of warts.

Requests for the specialist to establish a diagnosis (28.0% referrals) or to confirm a diagnosis after a specific test or investigation (6.9% referrals) were the main reasons for referral of a third of the patients and of more than half of the patients referred to general medicine and paediatrics. Advice on management and referral back to the general practitioner was sought in 14.3% of all referrals. Referrals of this type were particularly common in general medicine, dermatology, physical medicine, geriatrics, paediatrics, and psychiatry. Requests for specialists to take over management (other than to perform operations) were fairly uncommon except in psychiatry, in which 46.6% of the referrals were in this category. Reassurance of the patient or the patient's family or the general practitioner was not given commonly as the main reason for referral to most of the specialties. The notable exceptions were paediatrics and geriatrics, in which more than 10% of referrals were made for this purpose.

Table III gives the general practitioners' reasons for referring patients with some of the most common disorders; as expected, these varied considerably according to the disorder. The data also illustrate some of the limitations of the classification of the reasons for referral we used in the study. Even though we discussed the categories with the general practitioners before and at the pilot stage of the study, some of them sometimes found it difficult to restrict their choice to one reason. Occasionally, for a particular disorder more than one option could have described the reason for referral equally well—for example, of

TABLE I—Distribution of outpatient referrals made by 127 general practitioners according to specialty clinic

Specialty	No (%) of referrals
General surgery and urology	4 098 (21.9)
Gynaecology	2 513 (13.4)
Ear, nose, and throat surgery	2 417 (12.9)
General medicine	2 379 (12.7)
Trauma and orthopaedics	2 295 (12.2)
Ophthalmology	1 470 (7.8)
Dermatology	1 419 (7.6)
Psychiatry	684 (3.6)
Paediatrics	506 (2.7)
Physical medicine	474 (2.5)
Plastic surgery	271 (1.4)
Geriatrics	94 (0.5)
Radiotherapy	62 (0.3)
Genitourinary medicine	58 (0.3)
Thoracic surgery	14 (0.1)
Total	18 754 (100.0)

TABLE II—Number (percentage) of outpatient referrals to specialty clinics according to reasons general practitioners gave for referrals

Specialty	To establish diagnosis	For specific investigation	For treatment or operation	For advice on management	To take over management	To reassure general practitioner	To reassure patient	Other
General surgery	1021 (25.2)	303 (7.5)	2195 (54.3)	236 (5.8)	171 (4.2)	40 (1.0)	52 (1.3)	27 (0.7)
Gynaecology	574 (23.1)	232 (9.3)	1217 (48.9)	190 (7.6)	198 (8.0)	20 (0.8)	20 (0.8)	38 (1.5)
Ear, nose, and throat	609 (25.5)	204 (8.5)	876 (36.7)	331 (13.9)	198 (8.3)	39 (1.6)	51 (2.1)	78 (3.3)
General medicine	986 (42.0)	277 (11.8)	134 (5.7)	535 (22.8)	186 (7.9)	86 (3.7)	86 (3.7)	55 (2.3)
Trauma and orthopaedics	586 (25.8)	53 (2.3)	785 (34.6)	423 (18.7)	249 (11.0)	47 (2.1)	69 (3.0)	56 (2.5)
Ophthalmology	524 (36.1)	75 (5.2)	423 (29.1)	184 (12.7)	143 (9.8)	29 (2.0)	46 (3.2)	28 (1.9)
Dermatology	411 (29.3)	51 (3.6)	489 (34.9)	289 (20.6)	101 (7.2)	12 (0.9)	43 (3.1)	6 (0.4)
Psychiatry	48 (7.1)	10 (1.5)	70 (10.4)	191 (28.3)	314 (46.6)	11 (1.6)	5 (0.7)	25 (3.7)
Paediatrics	209 (42.1)	47 (9.5)	27 (5.4)	111 (22.3)	41 (8.2)	17 (3.4)	34 (6.8)	11 (2.2)
Physical medicine	136 (29.1)	9 (1.9)	78 (16.7)	116 (24.8)	76 (16.2)	22 (4.7)	16 (3.4)	15 (3.2)
Plastic surgery	13 (4.9)	5 (1.9)	222 (83.1)	10 (3.7)	13 (4.9)	2 (0.7)	1 (0.4)	1 (0.4)
Geriatrics	25 (26.9)	2 (2.2)	3 (3.2)	21 (22.6)	17 (18.3)	5 (5.4)	7 (7.5)	13 (14.0)
Radiotherapy	22 (35.5)	8 (12.9)	20 (32.3)	4 (6.5)	7 (11.3)			1 (1.6)
Genitourinary medicine	21 (36.2)	10 (17.2)	11 (19.0)	9 (15.5)	4 (6.9)	2 (3.4)		1 (1.7)
Thoracic surgery	3 (21.4)	1 (7.1)	3 (21.4)	6 (42.9)	1 (7.1)			
Total*	5188 (28.0)	1287 (6.9)	6553 (35.4)	2656 (14.3)	1719 (9.3)	332 (1.8)	430 (2.3)	355 (1.9)

\*234 Cases have been excluded because part of the record was incomplete.

TABLE III—Number (percentage) of outpatient referrals for some common disorders according to reasons general practitioners gave for referral

Disorder	To establish diagnosis	For specific investigation	For treatment or operation	For advice on management	To take over management	To reassure general practitioner	To reassure patient	Other
Deafness	162 (24.2)	112 (16.7)	195 (29.1)	87 (13.0)	49 (7.3)	6 (0.9)	5 (0.7)	54 (8.1)
Menstrual disorders	208 (38.6)	73 (13.5)	144 (26.7)	61 (11.3)	36 (6.7)	4 (0.7)	5 (0.9)	8 (1.5)
Back pain	123 (24.5)	15 (3.0)	92 (18.3)	146 (29.1)	71 (14.1)	14 (2.8)	15 (3.0)	26 (5.2)
Neuroses	28 (7.5)	5 (1.3)	35 (9.4)	104 (28)	161 (43.3)	8 (2.2)	15 (4.0)	16 (4.3)
Varicose veins	7 (1.9)	4 (1.1)	315 (87.3)	17 (4.7)	12 (3.3)	2 (0.6)	4 (1.1)	
Hernia	12 (3.5)	12 (3.5)	291 (84.6)	17 (4.9)	7 (2.0)	1 (0.3)	2 (0.6)	2 (0.6)
Abdominal pain	148 (45.7)	48 (14.8)	80 (24.7)	20 (6.2)	11 (3.4)	4 (1.2)	11 (3.4)	2 (0.6)
Otitis media	46 (14.6)	23 (7.3)	120 (38.0)	69 (21.8)	47 (14.9)	5 (1.6)	4 (1.3)	2 (0.6)

the 539 patients referred with menstrual disorders, 210 were referred for diagnosis, 75 for a specific investigation, and 146 for an operation. The investigation and the operation probably both entailed a request for dilatation and curettage for diagnosis. Referrals for deafness seemed to be similarly diverse: the reason for referral could have been for diagnosis (of the cause of the deafness), specific investigation (audiometry), or an operation (for example, if the deafness was attributable to otitis media); in some cases the general practitioners could have had all three objectives. For other disorders—for example, varicose veins and hernia—the reasons for referral were generally uniform, as expected, although surprisingly a small number of referrals for these disorders were for diagnosis.

### Discussion

The advantage of this type of large scale collaborative study is that it permits analysis of patterns of referral across several different health districts and general practices. It can therefore provide a large, fairly representative picture of referrals. Depending on the specialty between 60% and 80% of new appointments in outpatient clinics originate from general practice,<sup>12,13</sup> so these referrals constitute a major proportion of the workload of outpatient departments.

Our findings underline the diversity of outpatient referrals and the considerable differences in the reasons for referral and general practitioners' expectations, which vary according to the patient's disorder. The range of factors that influence the decisions to refer, some of which were explored by Dowie in her qualitative study of general medicine referrals,<sup>13</sup> indicates the complexity of assessing the appropriateness of referrals. Numerical monitoring that treats all decisions on referrals as essentially similar is too simplistic.

We suggest that programmes designed to monitor and evaluate general practitioners' patterns of referral to outpatient clinics might have three main stages. The first would entail collecting descriptive data (as in this study) to indicate the scale, nature, diversity, and objectives of referrals and which particular disorders or reasons for referral are worth following up in more detailed studies. A second stage would entail monitoring the outcomes of referrals for particular disorders

against stated objectives; we are now conducting such a follow up study, in collaboration with the general practitioners, that is designed to identify the outcomes of the referrals for some of the disorders recorded in this study by an audit of general practice records. We will examine whether, for example, specialist departments provided the treatments and did the investigations that the general practitioners expected and whether they provided advice and referred the patients back to the general practitioners or took over management as expected. A third and more complex stage would assess the extent to which the expectations of all three parties who participate in a referral—the patient, the general practitioner, and the specialist—were satisfied with the outcome of the referral. As Grace and Armstrong showed, patients, general practitioners, and consultants differ commonly in their expectations of the visit to the outpatient clinic.<sup>15</sup> Such evaluations could not be conducted by using routine sources of data and would require specially designed prospective studies. They may, none the less, be important in assessing and improving the referral process.

Examining patterns of use of outpatient departments raises questions of whether more efficient support could be provided for general practitioners and their patients and whether more treatment could be contained in general practice without referral. Possible improvements might include collaboration between general practitioners and specialists to develop protocols for managing specific common disorders to reduce the need for referral for advice; extension of training for general practitioners in using minor procedures, such as treating varicose veins by injection or removing warts<sup>16</sup>; direct booking to inpatient or day case care for some common operations, by consent between general practitioners and consultants, to obviate the need for an intervening outpatient appointment; and increasing direct access to tests and investigations and for appliances such as hearing aids.<sup>17</sup> Such changes could be introduced, possibly in controlled experimental ways, and their impact on patient care and the economics of using the services evaluated. In view of the huge number of outpatient appointments (nearly 40 million a year in England and Wales) and the often long waiting times for appointments with specialists such approaches are worth exploring.

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## II. Locations of specialist outpatient clinics to which general practitioners refer patients

### Abstract

Although linkage by computer of hospital administration systems across all clinics in a health district is becoming a practical possibility, complete records of general practitioners' referrals to outpatient clinics will be difficult to achieve. Data from a large study of general practitioners' referrals to such clinics were used to calculate the proportion of referrals that crossed district boundaries, the proportion that were made to the private sector; and the number of locations that each practice referred patients to. Of the 17 601 referrals from practices in Oxford Regional Health Authority, 13 857 (78.7%) were made to NHS outpatient clinics within practices' own districts, 1524 (8.7%) to clinics in other districts in the same region, 420 (2.4%) to NHS clinics in other regions, and 1800 (10.2%) to the private sector; but these proportions varied considerably among the practices. The mean number of different NHS hospitals or clinics that each practice referred patients to was 15.8 (range 4-42).

These findings have important implications for implementing systems to monitor patterns of referral and establishing service contracts among districts, general practitioners, and hospitals.

### Introduction

The concern to monitor patterns of care in the health service has developed ahead of the technical capacity to do so routinely. This is particularly so in general practice and at the interface between primary and secondary care. Systems capable of monitoring the complete range of general practitioners' referrals to outpatient clinics have not yet been implemented widely. Although computerised hospital administration systems are being installed in health districts and linkage across all clinics within a district is gradually becoming possible, complete records of referrals that include those that cross district and regional boundaries and those made to the private sector will not be achieved easily.<sup>18</sup>