

HOSPITAL USAGE BY A GROUP PRACTICE

A trainer-trainee study

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THIS project was originally designed as a trainee exercise. It was thought that a person working in general practice for the first time could learn a lot from studying why patients are referred to hospital. When the exercise was completed, however, some facts emerged of general interest. It then seemed worthwhile to make comparisons with other similar surveys, and in particular, as it had not been done before, to investigate the individual referring habits of doctors working from the same central surgery premises.

The practice

The partnership has operated from a central surgery in Stratford-upon-Avon for over 50 years. Although best known perhaps for its association with Shakespeare, Stratford-upon-Avon is basically a busy market town with some minor industry. It is also to some extent a dormitory town for the industrial Midlands, and is becoming an international holiday centre. In consequence, the patients seen are a widely diversified group from all social classes.

At the time of this survey, there were 8,100 N.H.S. patients of whom 13.8 per cent were over 65—a higher than average figure, and about 250 private patients on the doctors' lists. The presence of summer visitors tends to modify the work-load so that there is less difference than is usual between summer and winter work.

The practice is run by four principals who are separated in seniority by gaps of about ten, ten and seven years. Two full-time secretary-receptionists and a dispenser were employed at this time, and a caretaker lived over the premises. Several appointments were held by the partners, including some at the hospital, and all had full access to pathology, radiology and physiotherapy departments, and to beds at the local maternity home.

There are many definitions of 'group' practice. In this case although individually each partner has some special interests, no

attempt has been made to refer any type of case to a particular partner. There was no 'pooling' of visits or any similar device. Each partner has tried to provide a personal service to those patients who have chosen him.

As a result of changes, such as retirements, the name of the doctor on each patient's E.C.5 was not necessarily the one currently looking after him. It was difficult, therefore, to determine exactly for how many patients each partner was individually responsible. In order to make comparisons an estimate had to be made of the size of each doctor's list. After making such allowances as seemed appropriate for seniority, private work, other appointments held etc., the following figures were reached:

Dr A — 1,500 patients
Dr B — 1,800 patients
Dr C — 2,400 patients
Dr D — 2,100 patients

and these figures were used to calculate percentage referral rates of patients 'at risk'. They cannot be exactly accurate, but are probably accurate enough for this purpose.

Method of study

The trainee completed a detailed questionnaire for every patient referred to hospital between 1 March 1966 and 30 September 1966. Further details were added when the patient was referred back to the general practitioner.

This report consists of (1) a summary of the findings, (2) an attempt to analyse the findings and to discuss their significance and (3) comparisons with the findings in other similar investigations.

Outpatient consultation

1. *The general picture.* Table I gives a summary of all referrals for specialist opinion. The overall rate of referral of 6.2 per cent per annum is a little less than the average of 7.6 per cent found in the survey done in a group of 30 family doctors in the Thames Valley faculty of the Royal College of General Practitioners (Starey). The distribution of patients was very similar except that a much smaller number was sent to the E.N.T. department.

In view of the high percentage of affective disorder in all types of general practice it is worth noting that psychiatric clinics only claim three per cent of the total. This probably in part reflects the view held by all the partners that the disturbed patient has better prospects of long-term improvement when treated in his own environment.

2. *The consultants.* Relations between the partners and all the local consultants were extremely good. In general there was a choice as between two or three consultants in each specialty. Such

TABLE I
OUTPATIENT CONSULTATIONS

	Dr A		Dr B		Dr C		Dr D		Trainee	Totals			
	N.H.S.	Private patient N.H.S. patients referred privately	N.H.S.	Private patient N.H.S. patients referred privately	N.H.S.	Private patient N.H.S. patients referred privately	N.H.S.	Private patient N.H.S. patients referred privately		N.H.S.	N.H.S. patients	Private patients	N.H.S. patients referred privately
Surgeon A	6		11	1	1	14		11		7	49	1	1
Surgeon B			1			1	2	1	7	2	11	2	1
Others	1		1			2	1	1		1	6	1	1
TOTAL SURGICAL ..	7		13	1	1	17	3	2	19	10	66	4	3
TOTAL ORTHOPAEDIC	3		5	1		8			10	4	30	1	
Physician A	3		1			2		5		2	13		
Physician B				1		2				2	4	1	
Physician (rheumatologist)			2	1				1			3	1	
Chest physician			2					2			4		
Others					1		2						3
TOTAL MEDICAL ..	3		5	2	1	4	2	8		4	24	2	3
TOTAL DERMATOLOGIST	3					1		11		8	23		
Gynaecologist (local)	3	1		2		9		11		3	28	1	
Gynaecologist (others)	2	1					1	1	1	2	5	2	1
TOTAL GYNAECOLOGY	5	2	2			9	1	1	12	5	33	3	1
E.N.T. surgeon A ..	3		11		2	4	1	2	7	4	29	1	4
E.N.T. surgeon B ..			2			3			3		8		
TOTAL E.N.T. . . .	3		13		2	7	1	2	10	4	37	1	4
Ophth. surgeon A ..	3	1		1		1	9		3		16		1
Ophth. surgeon B ..	4					5		1	3		12	1	1
TOTAL OPHTHALMIC	7	1	1		1	14		1	6		28	1	2
Psychiatrist (local) ..	1		1					1		1	4		
Psychiatrist (others)				1	1			2	1			2	3
TOTAL PSYCHIATRIC	1		1	1	1			2	1	1	4	2	3

TABLE I—continued

	Dr A		Dr B			Dr C			Dr D			Trainee	Totals			
	N.H.S.	Private patient	N.H.S. patients referred privately	N.H.S.	Private patient	N.H.S. patients referred privately	N.H.S.	Private patient	N.H.S. patients referred privately	N.H.S.	Private patient		N.H.S. patients referred privately	N.H.S.	N.H.S. patients	Private patients	N.H.S. patients referred privately
Paediatrician (local)									8			1	9			
X-ray therapy ..	1												1			
Antenatal opinion ..						1			5			1	7			
TOTALS	33	3		40	5	6	61	5	10	91	1		40	265	14	16
Arranged by trainee	7			6			15			11						
GRAND TOTALS ..	40	3		46	5	6	76	5	10	101	1		262	14	16	

choice was usually made for some technical reason such as special interests or personal contacts or the availability of beds. However, it is worth recording that there was a fall in the ‘popularity’ of any consultant who tended to hang on to patients rather than return them immediately to the care of the general practitioner.

Criticisms are sometimes made of patients only being seen by junior hospital staff when referred by general practitioners for specialist opinion. This occurred in 16 instances (i.e. six per cent) in our series of 265 referrals. Of these two each referred to the physicians and the paediatricians respectively were seen later by the consultant whose opinion was originally sought. The remaining 12 cases were all surgical ones. An attempt was made in the original questionnaire to determine *why* patients are referred to consultants, but owing to some differences in the interpretation of the questions asked, no realistic conclusions could be drawn. Clearly, however, in the great majority of surgical cases, the general practitioner refers patients for a specific treatment which he cannot carry out himself (e.g. the repair of a hernia, or the removal of varicose veins etc.) rather than for ‘advice’. It is apparent, therefore, that whilst this is falling short of an ideal and is contrary to the principle of consultant responsibility (the Platt report 1961) it is not so serious a defect as it would be if it had occurred in, for example, the medical outpatients.

3. *The time factor in consultation (table II).* No instance was

recorded of any serious difficulty in getting a truly urgent case seen within a few days. But this also meant that the 'average' figures quoted in table II were seldom achieved in the non-urgent cases. In our practice patients can usually see the doctor of their choice 'by appointment' in from one to three days. Alternatively, they can see one of the partners 'on demand' by simply attending at the surgery. This is in very great contrast with the long waits involved in seeing a consultant. It is surely a nonsense that a patient who is so disturbed that specialist psychiatric advice is needed, should have to wait anything up to 27 days to receive it, or that someone with a bad and intractable skin condition should wait up to 37 days for a dermatologist's opinion (by this time some have already resolved). It may be that some cases are truly non-urgent in the strict medical sense. But consider the patient with a simple inguinal hernia. He may have to wait up to 60 days to know whether an operation is going to be advised, let alone the time which must lapse before such an operation can be done if it is advised.

TABLE II
TIME TAKEN TO OBTAIN CONSULTANT APPOINTMENTS

	<i>Average</i>	<i>Range</i>
1. Medical	9.2 days	3-18 days
2. Gynaecological	11.8 "	5-21 "
3. Psychiatric	17.7 "	11-27 "
4. Paediatric	21.2 "	12-33 "
5. Ophthalmic	23.6 "	1-28 "
6. Orthopaedic	25.4 "	9-55 "
7. Dermatological	29.0 "	15-37 "
8. E.N.T.	30.0 "	1-58 "
9. General surgery	33.7 "	5-60 "
10. (All) private patient consultations ..	4.2 "	1- 9 "

These waits seem bad enough, but, from such figures as we have been able to obtain, Stratford-upon-Avon Hospital is relatively favoured. Figures of up to four months are quoted elsewhere. This is a cause of great anxiety to patients who do not readily accept the description of 'non-urgent' when it is applied to their complaints. In short it must be admitted that this is a shocking failure in one aspect of our National Health Service.

4. *Letters.* The average time taken for consultant's reports to arrive after appointments was 2.2 days—allowing for weekend etc., this is virtually a by return-of-post service and is very creditable.

5. *Private consultations.* The practice retains a few, but not a decreasing number of private patients. Private consultations with specialists have been included in table I for convenience. Sur-

prisingly, it shows that over half of those who sought private specialist advice were National Health Service patients of the partners. Enquiry revealed that three main reasons why patients sought private specialist appointments were (1) to save time, (2) privacy of the consultant's room, and (3) preference for a particular consultant, advantages which, be it noted, the National Health Service patient already has in the much maligned 'cottage industry' of general practice. With an average wait of only 4.2 days for private specialist opinion, clearly consultants have a vested interest in the hospital waiting list, but no evidence was found that patients were trying to use this as a way of jumping the queue for a hospital bed.

6. *Use of x-ray services (table III).* The practice has always had full access to the x-ray department. The consultant radiologist and his staff have throughout given the greatest possible co-operation to general practitioners.

TABLE III
USE OF X-RAY DEPARTMENT

	'Positive' reports	'Negative' reports	<i>Referred rate as percentage of those 'at risk'</i>
Dr A	11	8	2.0
Dr B	14	7	2.0
Dr C	34	29	4.5
Dr D	9	19	2.3
Trainee	9	13	
TOTAL	78	76	

Practice annual rate of referral (calculated) = 239
As percentage of those 'at risk' 2.9 per annum

Reports received in this seven-month period were analysed on the simple basis of whether any abnormality was detected. Clearly many 'negative' results were of great importance whilst some 'positive' findings were of no very great significance. Nonetheless, this simple form of analysis does give some idea of the sense of responsibility with which the department has been used. As table III shows, there were 78 'positives' out of 154 cases. A similar result was found by Davidson (1965) in his analysis of the use of the x-ray department by general practitioners at the Dundee Royal Infirmary. The overall rate of referral seems to be rather less than usual. The figure of 2.9 per cent of patients at risk per annum compares for example with Fry's (1959) figure of six per cent. However, this was in part because of the policy of sending all trauma to the casualty department rather than direct to the x-ray department and hence such x-ray work as was subsequently performed was not included.

The practice has been doubly fortunate in having access to a department which was always co-operative, lively and intelligent. The results have been excellent always. All four partners are convinced of the great value of this department. It increases the scope and interest of general practice. It reduces the need for referral to other departments. It has been greatly appreciated by the patients.

The different attitudes of the partners discussed

The average age of the patients referred to hospital increases with the age of the practitioner (see table IV) thus confirming the popular notion that within a partnership the doctor grows old with his patients. But this also means that their lists of patients are not strictly comparable. The younger doctor tends to have younger patients, to do more midwifery and to look after more children. The older practitioner has more geriatric problems and sees more private patients.

TABLE IV
AGE OF PATIENTS REFERRED

	<i>Range</i>	<i>Average age</i>
Surgical	1-74	42.8
Medical	20-72	48.5
Orthopaedic	10-69	39.2
Ophthalmic	1-98	37.6
E.N.T.	3-76	30.5
Gynaecological	20-68	34.8
Paediatric	3 mths-14	2.9
Psychiatric	20-75	38.0
Dermatological	25-75	49.5
<i>Years</i>		
Average age of all patients referred by Dr A		48.3
" " " " " " " Dr B		48.2
" " " " " " " Dr C		36.3
" " " " " " " Dr D		31.9

Amongst the apparent anomalies in table I it is worth commenting that Dr D is interested in children and holds the D.C.H. Even so his referral rate to the paediatrician is higher than might be expected. Perhaps a special interest can lead to a greater awareness of possible pathologies, and hence increase the desire for consultation rather than the opposite. This may also account for his high referral rate to the dermatological clinic. At the time he was preparing a paper on skin disease in general practice. Dr B's high rate of referral to the E.N.T. clinic was due to the tendency of nurses to need attention to their tonsils (Dr B holds an appointment for the care of nursing staff of the local hospital). On the other hand no special reasons

were found for the great variations in the rate of referral to the ophthalmic clinic.

Table V expresses average referral rates as a percentage of patients 'at risk'. Here the striking thing is the way in which the referral rate is clearly related to the age of the practitioner, Dr D for example has a referral rate nearly double that of Dr A, whilst Drs B and C's rates fit neatly in between. Starey (1961) found that referral rates in his series varied as much as from 3.3 to 17.3 per cent of patients at risk per annum. In a closely knit partnership working from a central surgery conditions are as near alike as possible. Whilst the different attitudes of the doctors must still play some part in determining their referral rates, it is clear that the length of time they have been practising is an important factor.

TABLE V
OUTPATIENT CONSULTATIONS
ADJUSTED ANNUAL RATES EXPRESSED AS PERCENTAGE REFERRED RATE OF THOSE
'AT RISK'

<i>Dr A</i>	<i>Dr B</i>	<i>Dr C</i>	<i>Dr D</i>	<i>Average</i>
4.8	5.3	6.5	8.5	6.2

Table III shows that a similar state of affairs exists in the use of the x-ray department—the figures suggest that the older doctors use the x-ray form of investigation with greater economy—all three of the more senior doctors had substantially more 'positive' than 'negative' reports.

In the use of the pathology services, a somewhat different picture emerges. Clearly, the younger doctors make much more use of these services. They are perhaps more laboratory minded and more laboratory dependent. Certainly, the more senior doctors are more 'independent'—tending for example upon occasion to treat a patient for anaemia on clinical grounds and having recourse to laboratory tests only if the treatment is clinically unsuccessful.

Previous reports on the use of laboratory services by general practitioners have shown great variations, e.g. Forbes (1966) who found greater variability as between different areas than between different age groups. In this series a group of doctors are being considered whose conditions of work are identical and here the age or experience factor is dominant. But the younger doctors not only made more use of the pathological services in general but also more use of the more sophisticated tests in particular.

Fry (1959) noting these wide variations in the use of hospital facilities asks whether general practitioners who qualified more than 20 years ago really know how to make the best use of the departments.

This practice has always enjoyed the two essential prerequisites for the best use of all hospital facilities, i.e. excellent co-operation with the consultant staff concerned and continued freedom to use the facilities without restriction. It is probably thanks to this liaison with the consultant radiologist that good and economical use of the x-ray facilities is indicated by all four principals in the practice. In the field of pathology, however, changes have been more rapid and fundamental. The evidence here suggests that there is a definite place for refresher courses in the use of the pathological services and that the more senior doctors would benefit most.

Summarizing, the figures suggest that in a group practice the more senior doctors use the hospital departments less often and more economically. It is reasonable to assume that this is in general due to the greater self-confidence which comes from experience. But in the case of the pathological services a fuller appreciation of the extent and value of the tests now available may also be a factor in their greater use by the younger doctors.

Hospital admissions

Full details of hospital admissions are given in table VI. Fortunately admission to the hospital has never been so difficult in this area as in some others. Indeed, admission on social grounds apart, difficulty was only experienced in the case of two medical admissions in this series.

The annual admission rate expressed as a percentage of patients 'at risk' is exceptionally low—lower indeed than in any practice investigated by Logan and Forsythe (1960). A low admission rate in an area where admission is not difficult is an interesting combination.

More figures will be needed to prove the point, but all the partners are convinced that the combination of free access to x-ray, pathology and physiotherapy departments of the hospital, with facilities of a good central surgery (which included in this case a portable electrocardiogram) must play a significant part in reducing the need for hospital admissions. The report of a Survey of Hospital admissions by the S.E. England faculty of the Royal College of General Practitioners (1967) seems to support this view.

Comparisons between the partners' attitudes to admission

There is here further confirmation of the tendency of the more senior doctors to look after the older patients. But there was no evidence of any significant variation in the admission rates of the four principals. This lends further significance to the marked variations reported in the use of the outpatient and ancillary departments of the hospital.

TABLE VI
HOSPITAL ADMISSIONS

	<i>Dr A</i>	<i>Dr B</i>	<i>Dr C</i>	<i>Dr D</i>	<i>Totals</i>
Acute (immediate) admissions	15	17	23	12	67
Average age	63.1 yrs	59.1 yrs	39.0 yrs	32.0 yrs	48.2 yrs
Chronic or w.l. admissions	15	20	20	23	78
Average age	69.0 yrs	46.9 yrs	37.5 yrs	37.8 yrs	46.1 yrs
Sex of admissions Male ..	14	13	15	18	60
Female	16	24	28	17	85
TOTALS	30	37	43	35	145
Acute medical	8	10	11	9	38
Acute surgical	4	3	7	4	18
Acute gynaecological ..	1	1	3	3	8
Emergency midwifery ..	0	0	2	2	4
Acute orthopaedic	1	0	0	0	1
Others (acute)	1	3	0	1	5
Waiting list medical ..	2	0	4	2	8
Waiting list surgical ..	12	8	10	5	35
Waiting list gynaecological	0	1	1	2	4
Waiting list orthopaedic ..	0	0	3	6	9
Waiting list Ts and As ..	0	7	1	4	12
Waiting list others	1	2	1	0	4
Private patients to paying beds	1	3	0	0	4
NHS difficulty in admissions	0	0	2	0	2
Private bed wanted but not obtainable	1	3	1	0	5
Percentage of patients 'at risk' (per annum) (adjusted) ..	3.4	3.3	3.0	2.9	3.1

The use of private wards

There are two private wards in the local hospital. Even this small number has been threatened on the grounds that their 'occupancy' is inadequate. However, statistics relating to 'occupancy' need careful interpretation. As general practitioners it has always been apparent that the demand for private beds has exceeded the supply. In this series only four out of nine patients who sought a private bed were able to get one. The chances of admission to the private beds in an emergency were very small indeed.

Communications

Sometimes it was necessary to seek admission to a hospital bed at night or from a remote country callbox. It is not surprising to find, therefore, that eight patients were admitted without a letter from the general practitioner. But in every case some form of immediate communication took place—indeed admission cannot be achieved without. It is difficult to see why the same should not

apply when the patient is returned to the care of the general practitioner.

Letters to general practitioners on the discharge of patients from hospital were of a high standard, but the delay in their arrival was, and has for some long time been a source of dissatisfaction.

Discharge letters were of two types—a short ‘form’ giving modest, but usually sufficient, information and a ‘full report’ usually very full. Sometimes only the first kind was sent, sometimes both kinds.

When only one letter was sent it arrived on average 5.9 days (range 1–14 days) after the discharge of the patient.

When both short and full letters were sent the short form arrived on average 3.7 days (range 1–8 days) and the full report in 15.2 days (range 7–25 days).

The discharge letter contains information of great value to the general practitioner, and delay in its receipt can cause great risk and inconvenience. In only ten per cent of cases were discharge letters received the day after the patient’s discharge—and this is the only acceptable arrangement.

In two cases the resident medical staff made use of the telephone following this with a written report at a later date. This is an acceptable and sensible answer to the problem when special difficulties exist.

The amount of midwifery done by the partners was assessed by the returns of claim forms. For simplicity two ‘partial-care’ patients were recorded as one case. About half the patients were delivered in hospital. On this basis the share of the practice’s midwifery was as follows in the seven months under review:

Dr A	..	..	..	..	..	..	..	5
Dr B	..	..	..	..	..	..	..	11
Dr C	..	..	..	..	..	..	..	22
Dr D	..	..	..	..	..	..	..	33

This differential has come about without any conscious intention on the part of the partners, and indeed reflects again the different age groups cared for by each.

Summary

1. An account is given of all aspects of hospital usage by a group practice over a period of seven months.
2. Attention is drawn to some good and some bad features of the hospital service as seen from the general practitioner’s point of view.
3. An attempt is made to analyze the different attitudes of the doctors within the group.

It was found that

- (a) General practitioners practising in a group grow old with their patients.
- (b) The more senior doctors are less dependent on and (or) more economical in the use of the hospital facilities.
- (c) In the case of the outpatient clinics and the x-ray department, it is suggested that this is principally a result of the greater self-reliance that comes from experience. In the case of the pathology services, it is suggested that a lesser appreciation of what modern pathological tests can offer may also be a factor.

Acknowledgements

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