THE USE OF HOSPITAL LABORATORY FACILITIES BY GENERAL PRACTITIONERS *

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IT IS the official policy of the Ministry of Health that general practitioners shall have ready access to the facilities provided by hospital laboratories. The extent to which this policy has been implemented varies considerably throughout the country, and this aspect of hospital–general practice relationships has been the subject of several studies, notably by Macaulay (1962), Eimerl (1962) and Levitt (1964).

The findings of these authors are summarized in the upper part of table I. Taking the country as a whole, the average amount of work done for general practitioners, expressed as a percentage of all the investigations carried out, is six per cent, and this figure has remained constant during the last three years. The corresponding figure for the London teaching hospitals is 0.4 per cent; the majority of these hospitals offer no laboratory facilities at all, and of those that do, some place restrictions on the type of test and on the area which they are prepared to serve. The general practitioner working in the vicinity of a provincial teaching hospital fares little better than his metropolitan colleague; these hospitals perform laboratory tests for general practitioners to the extent of only two per cent of their total load. It is only fair to add that teaching hospitals carry out a very large volume of laboratory work of an investigational or research nature, and the figures quoted above should be interpreted in this light. Even so, the help given to general practitioners by most teaching hospital laboratories appears to be woefully inadequate.

When one examines the comparative figures for non-teaching hospitals a much more satisfactory picture emerges. Macaulay's survey included 13 non-teaching hospitals in the North-west Metropolitan Region, and he found that the proportion of work

*Address delivered at a general meeting of the South-east England Faculty of The College of General Practitioners during a symposium on *Pathological Investigations and their Value in General Practice* at Canterbury on 1 November 1964.

done for general practitioners ranged from 2.5 per cent to 15.7 per cent with an average of 9.5 per cent. In certain hospital areas where the family doctor is encouraged to make full use of the laboratory the figures are even higher. Published data for three such areas, Kingston-upon-Thames (Murray, 1962), Bromley (Fry *et al.*, 1964), and Canterbury are given in the lower half of table I. It will be seen that nearly one-fifth of the total work of these laboratories is done at the request of general practitioners.

TABLE I

Hospital	*Year*	*Percentage of work done for general practitioners*
All hospitals	1960—1963	6.0
London teaching	1960	0.4
Provincial teaching	1960	2.0
Non-teaching N.W.M.R. ..	1961	9.5
Kingston..	1959—61	18.0
Bromley	1962	20.0
Canterbury	1964	18.5

So much for the overall pattern. Now let us consider the use made by local family doctors of the service provided by the laboratory at the Kent and Canterbury Hospital. This laboratory is used to a greater or lesser extent by 72 doctors (I have excluded two or three doctors who work on the fringe of the catchment area and seldom send specimens to the laboratory). These 72 doctors can refer patients to the laboratory on any week-day, except Saturday, between 11 a.m. and 12 noon without appointment. In addition, a number of patients are seen by appointment at a small clinic held at Herne Bay one day a week. However, the majority of referrals take the form of specimens collected by the doctors themselves and delivered to the laboratory by bus, by hand and, occasionally, by post. We try to help in three ways: (1) all doctors have been given a printed card which gives guidance notes on the collection of specimens together with a list of normal values; (2) general practitioners can obtain disposable syringes, free of charge, on applying to the supplies department of the hospital management committee on the understanding that the syringes are used specifically for collecting blood samples; (3) the hospital pays bus delivery charges which amount to over £200 a year.

The data presented in table II are taken from our records for the month of April from 1960 to 1964 inclusive. It will be seen that the amount of work done for general practitioners has increased three-

fold during the five-year period, with a steep rise during the past two years. The proportion of work done for general practitioners in relation to the total load has also gone up, but less spectacularly because the volume of work carried out on hospital patients has increased at an even greater rate. It should be pointed out that the figures given in the second column of the table represent the number of requests received; the number of actual tests performed would be two or three times greater because several tests may be asked for on a single request. For example, a request for haemoglobin, report on blood film, erythrocyte sedimentation rate, and Paul Bunnell is recorded as only one request because all four tests are done on one sample and in one section of the department.

TABLE II

GENERAL PRACTITIONERS REFERRALS APRIL 1960—1964

	Number of requests	*Average per doctor*	*Percentage of total work*
April 1960 ..	270	3.7	10.3
„ 1961 ..	352	4.9	13.9
„ 1962 ..	349	4.8	11.7
„ 1963 ..	520	7.2	14.6
„ 1964 ..	853	11.8	18.5

Table III shows the types of investigation asked for during April 1964. Over half of the requests were for haematological tests, mostly simple straightforward tests such as blood counts, antenatal haemoglobin estimations, blood groups, rhesus antibodies, erythrocyte sedimentation rates, and prothrombin times. Next in order of frequency came requests for bacteriological tests and the specimens received were urines, throat swabs, vaginal swabs, and faeces. We received relatively few requests for biochemical tests and again the tests were of a routine nature such as blood urea, blood sugar, occult blood in faeces, serum glutamic oxalacetic transaminase, blood uric acid, and blood cholesterol. Since introducing a simple diagnostic test for pregnancy, the Gravindex test, we have had a steady increase in the number of requests for pregnancy tests during the past year. We received 36 requests for this test from general practitioners during the month chosen for the survey (April), but by the end of the year the monthly total will be more than twice this figure. Requests for histological examinations are very infrequent at the present time; however, there will be a very substantial increase in referrals to the histology department when the cytology service for the detection of cervical carcinoma is made available to general practitioners in about 12 months' time.

TABLE III

APRIL 1964 — TYPES OF INVESTIGATION

Type	*Number of requests*	*Percentage of requests*
Haematology	499	58.5
Bacteriology	261	30.6
Biochemistry	55	6.4
Pregnancy tests	36	4.2
Histology	2	—
Postmortems	2	—

The referral rates for individual general practitioners are summarized in table IV. Of the 72 doctors exactly half qualified before and half after 1945, and the table is designed to show the comparative referral rates for what one might call the older and the younger practitioners. You will notice that there is a bias towards the lower figures for doctors who qualified before 1945 and towards the higher figures for those who qualified since the war. In fact nearly two-thirds of the requests (64 per cent) were made by the younger doctors. This one would expect but it is interesting to note that this ratio was reversed in the Bromley survey referred to earlier; there they found that the older doctors made twice as many referrals as the younger doctors. Another interesting, but not altogether surprising, feature is that of the nine post-war doctors who made 20 or more requests during the month four of them had been on the house-staff of the Kent and Canterbury Hospital before going into general practice.

TABLE IV

REFERRALS BY INDIVIDUAL GENERAL PRACTITIONERS — APRIL 1964

Number of referrals	*0*	*1–10*	*11–20*	*21–30*	*31–40*	*41–50*	*Number of doctors*	*Percentage of referrals*
Pre-1945 general practitioners ..	5	24	5	2	0	0	36	36
Post-1945 general practitioners ..	1	20	6	6	2	1	36	64
Totals	6	44	11	8	2	1	72	100

Table V shows the referral rates according to locality and here again one finds quite a marked variation from area to area. For example, the average number of referrals per Whitstable doctor (21.2) was more than twice the corresponding average for Canterbury (9.5) and Herne Bay (9.8), with Faversham coming mid-way

between (14.2). Why should there be these local variations? I said earlier that younger doctors on the whole make more referrals than older doctors, but this is not the only explanation. For example, Canterbury and Herne Bay doctors use the laboratory roughly to the same extent yet there is a preponderance of younger doctors in Canterbury and older doctors in Herne Bay, and in the

TABLE V

GENERAL PRACTITIONER REFERRALS (APRIL 1964) ACCORDING TO LOCALITY

Town	*Population*	*Distance from lab. (miles)*	*Number of general practitioners*			*Referrals*		
			Total	*Pre-1945*	*Post-1945*	*Total*	*Per doctor*	*OPs/ Specimens*
Canterbury ..	31,000	0	16	7	9	153	9.5	38/115
Whitstable and Tankerton ..	22,000	7	8	4	4	170	21.2	1/169
Herne Bay	21,000	0*	14	9	5	138	9.8	49/89
Faversham ..	13,000	9	8	4	4	114	14.2	4/110

*Herne Bay Clinic

areas which make the greatest use of the laboratory service there is an equal division of young and old. Distance from the laboratory is not the explanation as the two areas with laboratory facilities more or less on their doorsteps have the lowest referral rates. There is a difference in the mode of referral according to distance from the laboratory. As one would expect local doctors frequently send the patient to the laboratory; doctors at a distance save the patient a journey by taking the specimen themselves. It might be thought that local doctors make less frequent use of laboratory facilities because it is more convenient to send their patients directly to one of the outpatient clinics for the opinion of a consultant physician or surgeon. But this is not borne out by the result of a short-term investigation into this aspect of the referral rate. Table VI gives the comparative rates for outpatient, x-ray, and laboratory referrals in respect of 23 doctors divided into two groups. The figures were compiled from hospital records for the two-week period from 23 September 1964 to 6 October 1964, and it will be seen that the group of doctors who made the greater number of laboratory referrals also sent a greater number of patients to the outpatient and radiological departments. It is generally believed that the provision of direct-access facilities effects a reduction of new-patient attendance at medical outpatient clinics by at least 15 per cent (Levitt 1964)

and in the Portsmouth area Darmady (1964) found that the number of referrals by general practitioners to outpatient clinics was in inverse proportion to the number of laboratory requests by the same general practitioners. On the other hand, Forsyth and Logan (1960) were unable to demonstrate either a positive or inverse correlation between direct-access facilities and referrals to hospital. My own results are based on rather limited material and it would be unwise to draw too firm a conclusion, but it would seem that, in this area at any rate, frequent use of diagnostic facilities by general practitioners does not lead to a reduction in the number of referrals to outpatient clinics.

TABLE VI

REFERRALS FROM 23 SEPTEMBER 1964 TO 6 OCTOBER 1964 EXPRESSED AS AVERAGE PER DOCTOR

	O.P. clinics	*X-ray*	*Laboratory*
Group I	6.6	3.0	4.4
Group II	12.5	5.0	11.4

We have seen that the usage of the laboratory varies from doctor to doctor to quite a remarkable degree. That there should be a difference in the extent to which doctors make use of laboratory aids is understandable but, in an area where facilities are readily and almost equally available to all doctors, it is surprising to find that the number of referrals in a month ranges from none at all to 48. In this part of Kent younger doctors make heavier demands on the laboratory service than older doctors. This again is understandable; clinical pathology is a comparatively new and rapidly developing speciality, and the emphasis (perhaps over-emphasis) placed on this aspect of clinical practice both in medical schools and hospitals has produced a new generation of laboratory-minded, even laboratory-dependent, medical practitioners. Although frequent laboratory usage may reflect keenness on the part of a doctor, keenness and competence do not necessarily go together, and it would be wrong to regard the frequency with which a doctor uses the laboratory as an index of his competence or otherwise as a clinician. Many doctors, especially older doctors, prefer to rely on their long experience and clinical acumen, and probably with as good results.

There are no doubt several other factors which exert an influence on the readiness or reluctance on the part of a general practitioner to use the laboratory. I am quite sure that one restraining factor is consideration for the over-worked laboratory staff. I have been told by more than one general practitioner that he refrains from asking for certain tests because he does not wish to burden the laboratory with extra work. For my part, I can say with all sincerity that the

requests which we receive from doctors in this area are, almost without exception, reasonable and sensible, and at no time has the service been abused by any general practitioner, whether he be a frequent, average or infrequent user.

Finally, lack of awareness of the scope of the service we offer, or lack of knowledge in regard to the appropriate tests to ask for and the interpretation of reports, may occasionally deter doctors from using the laboratory as much as they might wish. If this criticism is valid the fault is probably ours as much as yours and the obvious remedy lies in closer and more frequent liaison between pathologists and their colleagues in general practice.

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THE MIDWIVES LAMENT

"Humbly shewing, That whereas many miseries doe attend upon civill war, etc. We were formerly well paid and highly respected in our parishes for our great skil and midnight industry; but now our art doth fail us, and little gettings have we in this age, barren of all natural joyes, and only fruitful in bloudy calamities. We desire, therefore, for the better propagation of our owne benefit, and the general good of all women, wives may no longer spare their husbands to be devoured by the sword. We have with much horror and astonishment heard of Kenton Bataille, the Batailles at Newbury, the Battle of Marston-more, the Battle of Naseby, wherein many worthy members and men of great ability were lost to the number of many thousands, which doth make us humbly to complain that blood may not hereafter be shed in such manner, for many men, hopeful to have begot a race of soldiers, were there killed on a sudden, before they had performed anything to the benefit of midwives."

English Midwives, their History and Prospects.
J. H. Aveling, M.D. London. J. & A. Churchill.
1872. p. 30.