

HOSPITALIZATION AND SPECIALIST NEEDS OF A GENERAL PRACTICE

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THE onset of the National Health Service in July 1948 sharply divided the practice of medicine in this country into the three divisions of General Practice, Hospital Services and Public Health. Time is proving that the lack of correlation of these services was probably unfortunate, and various reports published in recent years have suggested methods of improvement.

One important consequence of this division was that in many areas the family doctor was not only dissociated from hospital practice, but was also deprived of all forms of diagnostic aid. This state of affairs is being remedied in most areas, but progress is slow. The reason for this tardy progress is not infrequently reluctance on the part of hospital technical departments to accept further commitments. It must be realized, however, that without reasonable facilities for diagnosis, it is not possible for the family doctor to practise modern medicine. It is not only the family doctor who requires x-ray and pathological facilities, but the average patient is sufficiently enlightened to know that these ancillary services are necessary for the elucidation of many of his or her clinical problems.

Hospital beds are a scarce and expensive commodity. It is but natural that the hospital clinicians will keep a firm grip on all the beds they already have, and will lay claim to as many as possible of any new beds that are created. It is well known, however, that a considerable proportion of acute illness requires hospitalization for medical and even social reasons, but the diagnosis and treatment does not require the full regalia of elaborate equipment that is the pre-requisite of a specialist hospital. In cities and suburban areas, intermediate or sorting-out hospitals could perform a purpose similar to that of a cottage hospital in the rural areas.

In the belief that such is possible, it is thought that it might prove

of value to any investigating committee to have knowledge of the hospitalization that has proved necessary in a family practice where sympathetic administrators and specialists have not deprived the family doctor of hospital beds and reasonable diagnostic facilities.

This practice is located in a small town in the Scottish Borders. There is a population of 16,500 in the town and a further 3,000 in the surrounding rural areas. There are 11 doctors practising in the town and all share the same facilities.

There is a cottage hospital of 30 beds which admits acute surgical and medical patients under the care of their own family doctor. Visiting surgical, medical, orthopaedic, gynaecological, and ear, nose and throat specialists attend regularly every 14 days. A sick children's specialist comes each month and a dermatologist at two-monthly intervals. The visiting general surgeon has in addition a fortnightly operating list when he is prepared to operate on hernias, interval appendices, haemorrhoids, varicose veins, and other selective conditions. There is an x-ray department and a radiographer is on the staff. A radiologist visits the hospital each week to do barium meals and enemas. He reports on all x-rays twice weekly and between times the reading is the personal affair of the family doctor but confirmed by the radiologist on his twice-weekly visit. Pathological facilities are available at Peel Hospital some 20 miles away, and a collecting van takes specimens away on Mondays, Wednesdays and Thursdays. Prothrombin estimations and blood sugars are confined to twice weekly. The pathologist visits the cottage hospital every 28 days, and during these visits difficulties and further aids to diagnosis can be discussed. Finally, there is a physiotherapy department with a physiotherapist on the staff. She is under the control of the visiting orthopaedic surgeon.

There is also a separate maternity home of 13 beds which is entirely under the control of the family doctor. Maternity emergencies requiring hospital facilities are transferred to Edinburgh. A well-equipped hospital for the aged sick of 48 beds is supervised by the family doctors. This is done in rotation for one year at a time. Another hospital for the aged sick, which admits female patients only, is run by a branch of the Catholic Church and each doctor looks after his own patients. This hospital has 46 beds.

Peel Hospital, situated some 20 miles distant, has 200 beds and receives patients from the whole borders area. This hospital has a full specialist staff for medical, surgical and orthopaedic patients. The Edinburgh hospitals, some 50 miles away, provide all other

specialist services such as neurology, deep x-ray therapy, operative gynaecology and complicated midwifery. A variety of hospitals is therefore available to evacuate patients who require technical and nursing care beyond that which is possible in a cottage hospital or maternity homes.

The period under review extends from 5 July 1948 until 5 January 1960. During these 11½ years this was a single-handed practice. By carefully recording the date of admission to the list and, where necessary, the date of exit, the average number of patients at risk each year is known to have been 2,441.

Table I has been calculated with statistical accuracy and shows these patients divided up into their various age groups.

TABLE I
TOWN AND COUNTRY—ANNUAL AVERAGE OVER 11½ YEARS.

<i>Age group</i>	<i>Females</i>	<i>Males</i>	<i>Totals</i>
0—4 ..	74	96	170
5—14 ..	137	163	300
15—44 ..	462	482	944
45—64 ..	366	294	660
65—over ..	210	157	367
	1,249	1,192	2,441

During this period of time it has been found necessary to hospitalize 1,522 patients, 603 of whom were males and 919 were females. These patients had 1,980 separate hospital episodes, thus indicating that a proportion of these patients had more than one stay in hospital. The total number of days stay in hospital reached the astronomical figure of 75,364½ days, or 206.5 years. In mitigation, it must be realized that this includes patients in long-stay establishments such as hospitals for the elderly sick, mental hospitals and sanatoria. The stay in mental hospitals and sanatoria is now much reduced to what it was in the early years of this review, and in the later years fever hospitals were seldom utilized. While these figures appear large the annual average of 132.3 patients hospitalized, or 5.4 per cent of the population at risk is well below the figures quoted by Ferguson and MacPhail in their Scottish studies of *Hospital and community*. The 172.17 hospital episodes, however, have an average patient-bed days somewhat larger but this is under-

standable in a rural area where facilities for reporting as outpatients are not always convenient.

The complete table of all hospitals which admitted these patients is cumbersome and unnecessarily lengthy since some had taken ill while on holiday in distant places. Table II consolidates all these hospitals and contains the relevant data for forming a judgment on what has been the hospitalization needs of this practice. The figures for the cottage hospital and the Haig Maternity Home are given precedence since the care of these patients was a personal responsibility. The same could be said for those admitted to the hospital for the aged sick for at least part of the time. The remaining hospitalization was outwith my jurisdiction since they were under the control of the consultants or specialists of these hospitals.

TABLE II

	<i>Number of episodes</i>	<i>Days in hospital</i>	<i>Number of patients</i>	
			<i>Male</i>	<i>Female</i>
Cottage hospital	966	17,478	314	403
Haig Maternity Home	364	3,761	1*	230
Maternity hospitals	16	516	1*	14
Hospitals for aged sick	27	18,808	5	16
Peel Hospital	272	8,697½	131	107
Edinburgh and other general hospitals	254	7,702	127	102
Mental hospitals	42	13,969	11	24
Sanatoria	18	3,988	3	12
Fever hospitals	21	445	10	11
	1,980	75,364½	603	919
			1,522	

*The two male patients were premature infants retained after the discharge of the mothers.

This table shows that the admissions to the cottage hospital and the Haig Maternity Home, which were a personal responsibility, amounted to 1,330 of the episodes. This represents 67.17 per cent of all hospitalization and 62.28 per cent of all patients in hospital. The admissions to the Haig Maternity Home were a matter of "all mine own work". In regard to the admissions to the cottage hospital, however, specialist advice or operative help was obtained in 362 of these episodes. The more major of the operative procedures were

performed by the visiting surgeon, gynaecologist, or the ear, nose and throat surgeon, and in the case of conditions such as coronary thrombosis, advice was obtained from the visiting physician who brings with him an electrocardiograph apparatus. Treated fractures were sometimes shown to the visiting orthopaedic surgeon for advice on the efficacy of the treatment or for recommendation for physiotherapy. By deduction, therefore, it will be seen that 48.88 per cent of all hospitalization was possible without consultant or specialist advice. Since this does not take into consideration the admissions to the elderly sick hospitals, some of which were under personal supervision and others, i.e. the admissions to the Drumlanrig Hospital, were supervised for only part of the time, it could be stated that a little over half of all hospitalizations could be and were accepted as a personal responsibility over a period of 11½ years.

The remaining 623 hospital episodes took place in hospitals staffed by consultants or specialists. Table II shows how these were distributed. The general hospital cases consisted mainly of surgical emergencies; cancers, gall bladders, prostates, diseases of the thyroid, and medical cases which were unduly complicated. Conditions such as cancers of the breast received their operative treatment in Peel Hospital and were later transferred to Edinburgh for deep x-ray therapy. Conditions such as cerebral tumours were usually sent direct to the neurological centre in Edinburgh.

Age groups requiring hospitalization

Statistical studies of medical needs in general practice reveal the fact that it is the very young and the old who make most frequent claims for medical attention. The same can be said for hospitalization and this is shown in table III.

TABLE III
HOSPITALIZATION—AGE GROUP

	<i>Male</i>		<i>Female</i>	
	<i>Number of episodes</i>	<i>Percentage of population at risk</i>	<i>Number of episodes</i>	<i>Percentage of population at risk</i>
0—4 ..	69	6.27	34	4.01
5—14 ..	114	6.09	57	3.62
15—44 ..	165	2.97	577	10.85
45—64 ..	206	6.08	271	6.44
65 and over ..	185	10.29	302	12.47
	739		1,241	

This table shows the hospitalization episodes placed in the age group in which they occurred. The percentages of the number at risk in each age group are calculated since this gives a more realistic picture of the incidence. The special needs of the aged for hospitalization is made manifest. This is particularly obvious among females where the 65-and-over age group has had a greater hospital need than the childbearing age period of 15 to 44. This seems surprising when it is realized that 97 per cent of all midwifery cases were confined in the Haig Maternity Home or in a maternity hospital. The male child has surpassed the female in his hospital needs by a considerable margin. This is due to young boys being more frequently involved in accidents; having had tonsils and adenoid operations more frequently than girls; and operations for such things as undescended testicles and circumcision.

Consultant needs

Having access to hospital beds and reasonable diagnostic facilities makes it possible for the family doctor to present the patient at a consultation with the diagnosis already established or with a request for an interpretation of the investigations already made. It may seem paradoxical, but the more responsibility the family doctor accepts, the more need has he or she of support from the consultant or specialist. This is not because of the numerical frequency with which requests for help are made, but because of the severity or unusual nature of the condition. Simple procedures can go wrong or the patient and sometimes also the doctor desires assurance that everything possible is being done.

In this area fortune favours us with a variety of visiting consultants and specialists. The frequency that requests have been made for their help is made difficult to display by the fact that in the notes all patients admitted to hospitals away from this area have been classified as having received consultant advice. Furthermore, if patients were seen before being admitted to such a hospital, specialist aid has been recorded for a second time and also on each occasion the patient was seen for a follow-up following operations for cancer, etc., again it is recorded as a need for consultant opinion.

Bearing in mind this duplication, table IV shows that consultant or specialist assistance was obtained on 1,793 occasions. From this total there can be deducted the 362 occasions where help was obtained for patients who were admitted to the cottage hospital. A further reduction of 623 can be made for the patients admitted to

hospitals away from this area. This leaves a total of 808 occasions when consultant or specialist advice was received as outpatients during the 11½ years. This figure includes, of course, follow-up patients, the number of which it is not possible to give an exact figure, but it can be assumed to be fairly large and probably amounts to 40 per cent of the 808 occasions.

TABLE IV
CONSULTANT OPINION

Surgical	..	..	..	..	462
Orthopaedic	..	..	..	..	319
Medical	..	..	..	..	241
Ear, nose and throat	..	..	..	..	218
Ophthalmology	..	..	..	..	150
Gynaecology	..	..	..	..	122
Dermatology	..	..	..	..	113
Mental specialist	..	..	..	..	45
Chest physician	..	..	..	..	39
Children's specialist	..	..	..	..	26
Epidemiology	..	..	..	..	23
Syphilology	..	..	..	..	20
Neurological surgeon	..	..	..	..	15
					1,793

Surgical opinion appears to be that most frequently requested; conditions such as hernias were seen before operation and it was regarded as a consultation again if the patient had an operation. All cancer cases continue to be seen at three-monthly intervals after operation. Orthopaedic consultations are numerous, since patients in need of physiotherapy for conditions such as lumbago, fibrositis, etc., and for recommendations for surgical appliances are seen by the orthopaedic surgeon. Medical outpatients include a considerable number where an electrocardiograph was desirable to decide if there was evidence of infarction. Opinion was also requested to get guidance on or suggestions for further treatment, or where admission to Peel or an Edinburgh hospital was thought necessary. In the latter cases, of course, there is again duplication. Ear, nose and throat consultations were mainly concerned with tonsils and adenoids and the supply of hearing aids. The need of ophthalmological opinion was for cataract conditions, glaucomas and squint in children. The 150 consultations include a considerable number where spectacles supplied by the oculist had proved unsatisfactory. Gynaecological conditions included all cases requiring

operative treatment greater than a diagnostic curettage which was usually accepted as a personal responsibility. The remainder of the specialist conditions are self-evident. Epidemiology were all cases sent to a fever hospital in the early years of recording, and the 20 consultations of the syphilologist involved only five patients.

Summary

This paper shows the amount of hospital care required by the patient of one family doctor over a period of $11\frac{1}{2}$ years with an average list of 2,441. This amounted in days to a total of $75,364\frac{1}{2}$ days.

Distinction is drawn between where the hospitalization was under the direct supervision of the family doctor with access to hospital beds and diagnostic facilities, and where the patient was transferred to hospitals under specialist control.

It is shown that half of all hospital patients were treated without specialist help.

The total of 1,739 occasions when consultant advice was required is shown to be an exaggerated figure, and the reasons for this are given.

REFERENCES

- Ferguson, T. and MacPhail, A. N. (1954). *Hospital and Community*. London. Oxford University Press.
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No Thanks: I'd Rather Stay at Home. S. R. MEADOWS. *Brit. med. J.* 1964. 2, 813.

Four hundred mothers with a sick child under five were asked for their views about accompanying the child into hospital—a hypothetical question in the majority of cases as accommodation was very limited. Less than half the mothers would have been willing to accept an offer of hospital accommodation, but mothers with only one child were more likely to accept than those with larger families. The most striking correlation was that mothers who read the *Observer* or *Sunday Times* were far more likely to accompany their child to hospital than readers of any other group of newspapers. Both these papers have been prominent in publishing articles advocating this type of arrangement.