General Practice Observed

Contribution of general practitioner hospitals in England and Wales

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Summary and conclusions

A survey of a one-in-seven sample of general practitioner hospitals in England and Wales, performed to determine the contribution they make to overall hospital work load and the attitudes of the general practitioners working in them, showed that 3% of acute hospital beds in England and Wales were in general practitioner hospitals, which provided initial hospital care for up to 20% of the population. Altogether 16% of general practitioners and 22% of consultants were on the staffs, and they coped with more than 13% of all casualties, 6% of operations, and 4% of *x*-ray examinations. Nearly a million casualties were treated at no cost to the National Health Service.

Twenty new district general hospitals would be needed to cope with the work load currently dealt with by general practitioner hospitals. The results of this survey indicate that these smaller hospitals deal efficiently and cheaply with their work load, and that morale is high. General practitioner hospitals could have an important part to play in providing certain types of care, but there are no financial incentives to enable general practitioners to realise this potential fully.

Introduction

Three hundred and fifty general practitioner hospitals[1-4] in England and Wales are the residue of over 400 cottage hospitals that developed between 1850 and 1930. In these hospitals general practitioners are primarily responsible for admission and discharge of patients, though there is much collaboration with specialists. The 1962 hospital plan foresaw the abolition of most of these hospitals and assumed that their function would be taken on by district general hospitals with over 300 beds. It is now thought, however, that community hospitals will play a prominent part in the hospital building programme over the next 25 years. Hospital junior staff will be recruited in diminishing proportions from overseas, and further reintegration of general practitioners into hospital staffing structures is inevitable. Since there has been no statistical analysis of the activities of these hospitals, I undertook a survey of their contribution to hospital work load generally and of the attitudes of staffs working in them.

Brecon
A J M CAVENAGH, BM, BCH, general practitioner

Method

A stratified random sample of one hospital in seven from each region was selected—53 hospitals in all. The numbers of general practitioners on the staff of each were ascertained after permission had been obtained from the area health authority chairmen for the survey to proceed. I then telephoned one general practitioner in each hospital, who undertook to pass on a questionnaire on hospital statistics to the hospital secretary or nursing officer responsible and a questionnaire to each general practitioner on the staff for details of his work, remuneration, and attitudes. I arranged to visit the hospitals during the next six weeks to retrieve the questionnaires and amplify data when necessary.

The selected hospitals were widely scattered, and I travelled about 8050 km (5000 miles), made about 300 telephone calls, and wrote 150 letters in the course of the survey.

Results and comment

HOSPITALS

The response rate was 100% for the hospital statistic questionnaires and 54% for general practitioner questionnaires. A random sample of non-responders from five hospitals showed no distinguishing characteristics save that non-responders tended to live further from the hospital concerned than responders. This pattern was borne out by personal inquiry during the survey. The total staff in any general practitioner hospital seemed to divide naturally into two groups, one of which made considerable use of the hospital and spent an appreciable proportion of working time in it, whereas the other group used the hospital only sporadically.

Each hospital is as unique as the community it serves, and tables giving average figures should be interpreted in this light. Table I gives the essential statistics and facilities of the hospitals. The "population served" was the sum of the figures in all the questionnaires returned and inevitably represented considerable overlap with adjoining hospitals and district general hospitals, especially in metropolitan areas, where some of the populations served were over 100 000.

Since only six hospitals had assigned geriatric beds and 12 hospitals had assigned maternity beds, these were not averaged. Medical staffs totalled 564 general practitioners (304 responders) and 380 visiting consultants. All specialties were represented by visiting consultants, general surgery, orthopaedics, medicine, and obstetrics being the commonest. Fifty hospitals (94%) treated casualties; 34 had an *x*-ray department; 42 possessed an electrocardiograph, and 41 had a physiotherapy department. Ten hospitals had no visiting consultants service.

Table I also shows the wide divergence in numbers of admissions, length of stay, and occupancy. Fifty hospitals admitted cases of pneumonia, 41 took in patients aged under 65 with coronary thrombosis, 26 performed surgery, 21 did "cold" herniorrhaphies and 23 varicose veins and haemorrhoidectomies, 19 took in patients who had attempted suicide, and 13 admitted patients with acute fractures of tibia and fibula. Eight hospitals gave more than 12 blood transfusions yearly. This gives some idea of the range of work that the hospitals undertook.

In table II the surgical statistics are broken down to show that nearly half the hospitals undertook surgery, two thirds of which was by consultants and a third by general practitioners. The range of

TABLE I—*Details of facilities and admissions at 53 general practitioner hospitals*

	Total	Average (and range)
Population served	2 080 725	33 730 (4000-200 000)
Distance to DGH (km)		21·9 (1·6-48·3)
No of acute beds	1247	23·8 (8-82)
No of geriatric beds	163	6 hospitals only (3-120)
No of obstetric beds	129	12 hospitals only (3-22)
No of admissions yearly	27 886	509 (105-2695)
Length of stay (days)		20·1 (8·0-65·5)
% Occupancy		71·1 (60·0-100·0)
No of deaths:	2204	
No transferred to DGH	1276	
No transferred from DGH	1827	

TABLE II—*Details of surgery performed and anaesthetics given in 26 hospitals in 1976*

	No	%
Total cases	10 518	
No of operations:		
By consultant	7549	72
By GP surgeon	2969	28
No of general anaesthetics:	6808	
By consultant	2929	43
By GP anaesthetist	3879	57
Type of cases		
General:	5995	100
Herniorrhaphy	2098	35
Varicose veins	1799	30
Haemorrhoids	1019	17
Breast biopsy, tumours, etc	719	12
Vasectomy	360	6
Gynaecological	2209	100
Abortion	132	6
Sterilisation	221	10
Other	1856	84
Orthopaedic	1473	14
Ear, nose, and throat	841	8
Dental (8 hospitals)	145	

operations performed was limited, but the volume was large, and the types of cases dealt with constitute the bulk of most surgical waiting lists. The average waiting time was 13 weeks for dilatation and curettage, and 18 weeks for herniorrhaphy. The average length of stay for herniorrhaphy was seven days. The 12 hospitals performing obstetrics represented an underestimate of general practitioner obstetric units, since many of these units are either situated in district general hospitals adjoining consultant units or provided as separate entities and therefore excluded from this survey. Total deliveries were 2640 with a forceps-ventouse rate of 4·3%. The average length of stay was 5·8 days, and there were six caesarean sections and a perinatal mortality of nine cases (3·4 per 1000 births). The low perinatal mortality figure was double-checked, and may reflect correct selection of cases for delivery in relatively isolated units.

Table III shows outpatient statistics. The survey totals are contrasted with the maximum and minimum numbers recorded by each hospital providing the service, which indicates the wide divergence of all forms of outpatient activities. For *x*-ray work loads some hospitals gave the numbers of examinations, while others gave numbers of cases. I therefore converted all *x*-ray work load figures into numbers of cases by dividing unit returns by eight (the average number of units per case).

The casualty referral rate of 1·4% meant that almost all casualties who arrived at the hospital could be treated locally. Ambulance crews usually took serious cases straight to the nearest district general hospital, but fewer than a further 1% of local cases were transferred in this way.

TABLE III—*Outpatient statistics for 53 hospitals in 1976*

	No of cases (and range)
Casualties:	
Total	285 958 (148-25 641)
New cases	149 900 (130-13 880)
Casualty referrals to DGH	3 971 (17-545)
Consultant outpatients	137 989 (69-25 441)
X-ray examinations:	
Total cases	165 776 (126-15 030)
Contrast media	3 267 (50-1215)
Physiotherapy treatments	200 340 (548-20 470)

Table IV compares hospital work loads. Extrapolation of the sample figures gave general practitioner hospital work loads for England and Wales, and these were expressed as a percentage of the England and Wales total figures.[5] The "population served" figure was the mean of the 29% recorded in hospital questionnaires (which was too high since it represented considerable overlap with district general hospitals, particularly in Greater London) and the 10·8% representing patients on the lists of responding doctors. The low general practitioner response rate depressed this figure artificially. As in the case of maternity unit statistics the total deliveries were an underestimate of those taking place in general practitioner units. Likewise the figure for deaths of 2·2% was an underestimate of the proportion of hospital deaths, since many deaths occurred at home.

TABLE IV—*Contribution of general practitioner hospitals to total hospital work load. Results are sample figures × 7 as percentage of England and Wales totals*

	No	(%)		No	(%)
GPs on staffs	3 948	(16)	Abortions	945	(0·9)
Consultants on staffs	2 660	(22)	Casualties	2 001 706	(13·2)
Population served	9 900 000	(20)	New cases	993 300	
Acute beds	8 729	(3)	Radiographs	1 160 432	(4·1)
Admissions	195 202	(3·7)	Physiotherapy treatments	702 380	(5·6)
Operations	73 626	(6·3)	Dental operations	1 015	(7·1)
Deaths	15 428	(2·2)*	Consultant appointments	965 923	(4·5)
Deliveries	18 480	(2·5)†	Vasectomies	4 795	‡
Sterilisations	1 498	(3·8)			

*All deaths. † All deliveries. ‡No hospital figure available.

GENERAL PRACTITIONERS

The general practitioner questionnaires showed that the average responding general practitioner had a list of 2498 (range 150-4000). He worked 6·3 hours or 9·6% of his time in the general practitioner hospital. One hundred and twenty-two responders worked 4·5 hours in other hospitals. Forty taught trainees and 103 taught medical students. Remuneration for hospital work was derived either from the bed fund or from sessional payments for specialist services provided by general practitioners. In the case of the 109 general practitioners who received only bed-fund payments, the percentage time worked exceeded percentage remuneration received by at least 5:1. Sessional payments corresponded more closely to the rate of income received from general practice, but only 6·3% of income was derived from all hospital sources—that is, including sessional payments for work in other hospitals.

Nevertheless, 207 responders considered hospital work essential for job satisfaction, the commonest reasons given being continuity of care, clinical interest, professional contact, use of skills, and the patient's convenience. General practitioners considered that there should be more facilities for performing *x*-ray examinations, including investigations with contrast media; more acute beds, geriatric beds, and consultant clinics; and more facilities for physiotherapy.

Discussion

In comparison with national totals general practitioner hospitals are bearing more than their share of hospital work load. This is particularly evident in the case of casualties, surgery, and outpatients. Had the 1962 hospital plan been implemented throughout about 20 more district general hospitals would have been needed to accept the work load. That this amount of hospital care is being provided more economically and conveniently in smaller units represents a major economy for the National Health Service. The qualitative advantages of providing hospital care in this way have been described,[3 4] and in the present industrial climate it seems that the size of a unit is important. None of the hospitals surveyed had been subjected to any industrial dispute or unrest and, with few exceptions, morale was uniformly high. The reasons for low morale were either a change in the role of the hospital or an arbitrary withdrawal of facilities by the area health authority. At the same time the complementary role of the general practitioner hospital and the district general hospital cannot be overemphasised. Co-operation between general practitioners and consultants in

these hospitals is one of the happiest features of the National Health Service.

The effectiveness of a hospital to its community depends as much on its outpatient facilities as on hospital beds. Ambulances cost over £1 per patient-mile and provision of casualty and x-ray facilities locally will usually prove cheaper than transporting large numbers of patients to the nearest district general hospital. The scope and role of community hospitals may well prove to be wider than originally envisaged,[6] [7] and these findings suggest no prima facie case for excluding surgery for simple commonplace conditions. Over 70 000 operations a year are being performed safely in general practitioner hospitals, which represents about 12% of the present England and Wales waiting list; this might be interpreted as a reason for increasing surgical facilities rather than otherwise. Likewise, nearly one million new casualties are being treated, a service for which fewer than half of area health authorities are making any payment—a fact which is responsible for major disquiet among general practitioners.

The Oxford region has shown that a 35-bedded hospital is the most cost-effective unit.[8] The average general practitioner hospital is 11 beds below this size, and expansion of existing hospitals towards the optimum size may prove the most economic immediate development and enable some of the long-stay geriatric case load to be catered for efficiently and humanely.

The statistics on general practitioner attitudes are open to question on the grounds that they represent a self-selected sample of just over half the general practitioners who deliberately chose practices with hospital facilities. But an average list size greater than the national figure suggests a true commitment to general practice. The increase in work load produced by a general practitioner hospital is as variable as the hospital activities themselves. An active hospital with a casualty department doubles the practice rate of night calls, half of which are for casualties. There is no financial incentive to undertake general practitioner hospital work, which confirms a report[9] that the work is attractive in itself. In industrial areas, however, I was told that there was difficulty in finding recruits to general practice who wanted to take part in hospital work because the conditions of service are so poor. A policy decision on incentives will be necessary before the very large contribution that general practitioners can make to the hospital service can be fully realised. This has major implications for the development of community hospitals. Further studies on the attitudes of general practitioners without hospital access and the effect of hospital attachment on standards of practice would be of value.

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MATERIA NON MEDICA

The shanty on Volunteer Point

The shanty is an old shepherd's cottage with two up, two down, a lean-to kitchen, and a chemical closet round the back by the peat shed. You can't miss it because its red corrugated iron roof and white walls stand out strikingly two or three miles away; and, after all, there isn't another dwelling within 10 miles. It takes eight hours to reach by Land Rover from Port Stanley after a bumping, bruising journey over rugged windswept moorland, scarred by rocky outcrops and studded with low diddle-dee bushes. If you are lucky you have to winch the Land Rover out of the bogs only five or six times during the journey. If you are unlucky you do not arrive at all.

So why did we go to so much trouble to reach this isolated shanty? The explanation is that it surveys Volunteer Point in the Falklands, looking out across the grassy dunes, over the snow white beaches towards the cold, blue South Atlantic, where there are thousands and thousands of penguins. We were lucky enough to be there in the nesting season. The little Magellan or jackass penguins were guarding their eggs in burrows dispersed all over the sand-dunes, often several hundred yards from the sea. At our approach quizzical heads poked out twisting and turning myopically as if to get a better view and then offering vicious pecks if we drew too near. In the evenings we were almost deafened by their donkey-like braying. The gregarious gentoos were nesting in enormous colonies on moorland even further inland than the Magellans. These little chaps, looking just like miniature waiters, chattered interestedly as we walked among them but were neither frightened nor aggressive. Many of them spent their time toddling up and down well beaten and tortuous paths to the sea. Most impressive of all were the king penguins standing imperiously and unconcerned, some incubating a single egg, covered by a warm apron of belly wall and resting on top of the feet. The kings were a good deal less common than the gentoos but nested in groups in the same colonies, being distinguished by their greater size and by their scarf of bright yellow-orange feathers. We were told that in a few weeks the penguins would be gone, only to return to the same beach, to the same burrows, on the same day next spring.

For those fortunate enough to visit the Falklands a trip to the shanty on Volunteer Point is a must—P J TOGHILL (consultant physician, Nottingham).

The Kalevala

Elias Lönnrot (1802-84) is probably forgotten as a doctor. For 20 years he worked as a district medical officer at Kajaani in Eastern Finland and spent his spare time collecting folk ballads. A selection of these was published in 1835, and the expanded version which we know today as the *Kalevala* appeared in 1849. The result was that, although he was a modest man, he came to be regarded as one of the pioneers of Finnish nationalism and ended his working life as professor of Finnish language and literature at Helsinki. His artistic and nationalistic successor was surely Sibelius, who wrote a number of tone poems based on the *Kalevala—Kullervo, The Return of Lemminkäinen, Pohjola's Daughter* are examples. His music must have been many people's introduction to the Finnish epic; it was certainly mine.

What do these hypnotic, repetitive rhythms remind you of?

> I will only give my daughter
> Give the youthful bride you seek for
> If the river-swan you shoot me
> Shoot the great bird on the river.

Sibelius's *Swan of Tuonela*? Or Longfellow's *Hiawatha*? In both cases you would be right, but it would be a pity if you were put off by Longfellow's feeble and plagiaristic imitation. For the *Kalevala* is a masterpiece of dramatic story telling in which the heroic adventures of the jovial and reckless Lemminkäinen, Väinämöinen the patriarch, the wicked giant Kullervo, and many others compare favourably with Homer's *Odyssey*. In the words of W F Kirby, its English translator, there are "many beautiful passages and episodes which are by no means inferior to those we find in the ballad literature of better-known countries than Finland"—ALEX PATON (consultant physician, Birmingham).