COAL AND CORTISONE

MAN-POWER IN A SICK SOCIETY

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The cost of the Health Service being usually expressed in money, we tend to forget that the only purpose of money is to buy labour and raw materials. If these are not forthcoming in sufficient amount money is of no avail. Medical labour, whether used directly in the treatment of the sick or indirectly in the production of drugs and equipment for their benefit, is drawn from a pool common to all forms of labour, including the part engaged in our export trade, upon which our survival depends. If this trade were to languish through shortage of raw material, rearmament, foreign competition, or other causes, it might be possible to transfer some of the workers thus rendered idle to the Health Service, but any improvement in the Service which might ensue would be more than counterbalanced by the deterioration in the standard of health due to the diminished import of food. Even if a satisfactory market for our exports continues, our standard of living will depend upon the maximum allocation of labour to industry. It is therefore of the highest importance to determine the optimum share of the national labour pool which can be spared for health and other social services.

While our relations with other countries are partly beyond our control, and therefore impossible to forecast, our future domestic circumstances can be predicted with some accuracy. The figures for total population and age distribution given in the *Report of the Royal Commission on Population*, 1949, tell us the number of mouths which will have to be fed, the man-power which will be available for production, and the social burden which the non-workers will cause to the workers. From these figures we can predict the changes likely to occur in the incidence of disease, and from the combined information we can deduce our ability in man-power to cope with it.

Table I shows the age distribution for England and Wales calculated from the figures given for Great Britain in the Population Report.

TABLE I.—Age Distribution, England and Wales, in Millions

Year	0-14	15-40	41-64	65 and Over	Total	Dependants per 100 Workers
1947	9.2	16.1	13.2	4.5	43.0	47
1962	9.3	15.0	14.9	5.6	44.8	50
1977	8.7	15.3	13.9	7.3	45.2	55

The Available Man-power

Taking 1947 as the starting-point, in 1962 workers will have increased by 0.6m., but the non-workers by 1.2m., made up of 1.1m. aged and 0.1m. children. Thus dependants per 100 workers will have risen from 47 to 50. In the following 15 years the situation will worsen appreciably, for the workers will decline by 0.7m., while a fall of 0.6m. in children will be more than offset by an increase of 1.7m. in the aged, bringing the number of dependants per 100 workers to 55. Even this underestimates the gravity of the situation, for in the first period the increase in workers is confined to those aged 41-64. While they are increasing by 1.7m. those aged 15-40 are declining by 0.9m. Industry

is therefore gaining in experience but losing in health and vigour. The loss of younger workers is already having its effect, for at the moment there are 400,000 industrial vacancies which cannot be filled. This predicament is far from temporary, for in the second period the older group will decline by 1.0m., while the younger group will recover by only 0.3m.—a slight gain to industry in health and vigour but a heavy loss in experience.

The Incidence of Ill-health

Age Group 65 and Over.—The rise in the aged of 0.9m. in the first period, followed by a further rise of 1.7m. in the second, making a total of 62%, will of course be reflected in a great increase in the incidence of diseases to which this group is prone. In a previous communication (Roberts, 1949), based on the latest figures then available—namely, those of the Beveridge Report—I estimated the increase between 1941 and 1971 at 50%. For mental illness, since, according to the Ministry of Health, 75% of patients are 65 or over, it follows that by 1977 the number of patients will have increased by 47%. Meanwhile, during the year ended December 31, 1949, overcrowding in mental hospitals increased from 12.2 to 14.0%—a fact which seems to suggest that the much-vaunted new methods of treatment are not keeping pace with the increase in incidence.

Age Group 41-65.—The older half of this group is associated with the incipience of degenerative diseases and of those, such as cancer, which run a prolonged course but are not classed as chronic sickness. Apart from the increase in incidence due to the increase in numbers, continued medical progress will effect a further prolongation in a state of invalidism, while an increasing proportion will survive to enter and swell the ranks of the aged. Between 1962 and 1977 this factor will diminish owing to the decline in numbers.

Age Group 15-40.—The fall of 1.1m. by 1962 will cause little easement, because this group is the least prone to ill-health.

Age Group 0-14.—By 1962 there will be little change; after that, a fall. Upon this group elaborate preventive measures are being lavished—antenatal and post-natal clinics and so forth. Yet although these have been in operation for some years there appears to be no sign that they are effecting any diminution in juvenile illness.

The overall prospect, therefore, is one of steadily mounting ill-health, but confined to the older members of the community.

Idle Dreams

Such, then, is the problem—a death-struggle between economics and morbidity, between national and individual survival—a problem which would be grave enough even if international relations were harmonious. How does the Ministry propose to solve it? The answer is to be found in the Ministry's memorandum entitled *The Development of the Consultant Services* (1950). This must be read in conjunction with the recently published Report for the year ended March 31, 1950 (Cmd. 8342), which shows the stage reached on December 31, 1949.

The purpose of the memorandum is to indicate to regional hospital boards their duties "against the background of the long-term organization of the Service." It deals with each class of disease in turn. In many instances requirements are based on hearsay evidence. The phrases, "It is said that . . .," "It has been suggested that . . .," occur again and again. The planners seem to have accepted without question the extravagant estimates submitted by representatives of each interest in turn. They express beds and man-power usually in terms of requirements for populations of 100,000-120,000; in the less common diseases for 1,000,000 or for a region. They make no attempt to add up the separate estimates so as to show the needs for the treatment of all diseases in the whole country. Had they done so the result might have surprised them. Adopting the axiom that the

whole is equal to the sum of its parts, I have taken the liberty of making good the deficiency by simple multiplication and addition. Since in some places the memorandum is not free from ambiguity the calculation has not been easy. I hope, however, that I have interpreted its meaning with reasonable accuracy, and I apologize for any mistakes. The result, together with the bed-provision existing at the end of 1949, is shown in Table II.

TABLE II

	Beds Allo- cated Dec 31, 1949	Total Beds Required	Total Senior Staff Required (Estimated as Full-time)	
			Consultants	Registrars
General hospitals:				
General medicine ..	33,739	97,700	1,170	1,170
General surgery ..	32,312	70,400	1,170	780
Unclassified ..	15,169			
Gynaecology ..	7,320	12,900	430	430
Obstetrics ..	17,385	38,700		
Paediatrics ..	9,470	22,500	215	430
Cardiology ..	324	800	21	14
Chest diseases (other than sanatorium) ..	126	7,800	34	a
Dentistry ..	126	b	1,640	
Dermatology ..	1,585	4,300	129	129
E.N.T. ..	5,427	19,500	390	390
Neurology ..	828	5,400c	108	d
Neurosurgery ..	579	3,500	108	e
Ophthalmology ..	3,524	8,200	312	78
Plastic surgery ..	941	2,200	23	29
Radiotherapy ..	1,526	2,600	72	29
Thoracic surgery ..	1,206	5,200	34	34
Traum. and orthop. surgery	11,846	31,300	390	390
V.D. ..	693	2,600	344	
Other specialist units ..	6,768			a
Total ..	150,914	335,600	6,590	3,903
Other hospitals:				
Infectious diseases ..	21,848	25,800	258	a
Mental ..	198,713	163,000	752	a
Mental deficiency ..		86,000		
Tuberculosis ..	28,307	86,000	645	a
Chronic sick ..	54,587	58,600	f	f
Convalescent ..	6,664			
General practice ..	7,864			
Private pay-beds ..	6,647			
Staff not included above:				
Anaesthesia ..			780	780
Pathology ..			1,660	
Physical medicine ..			258	129
Diagnostic radiology ..			410	260
Grand total ..	475,544	755,000	11,353	5,072

a, Numbers not stated. b, Included in other beds. c, Includes chronic cases. d, "Assisted by such whole-time registrars and junior staff as may be necessary." e, "On the same lines" as d. f, These beds to be under general physicians.

Hospital Beds

Table II shows that beds of all kinds are deficient by nearly 300,000. In other words, existing beds need to be increased by 63%. General hospital beds need to be nearly doubled. The deficiency applies in varying degree to all diseases, with two exceptions—infectious diseases and chronic sickness. For the former ample provision is of course essential in order to meet epidemics, but the Ministry's view that the provision for the chronic sick is nearly sufficient is contrary to general experience.

From Table II an interesting calculation can be made. Deducting 35,000 beds closed for cleaning and redecorating, there will always be 300,000 general hospital beds in use. Taking 18 days as the average stay of each patient, each bed will be occupied annually by 20 patients. The population being 43m., this means that the Ministry expects one person out of seven to do his duty by spending 18 days in a general hospital every year. To these must be added the convalescents, those permanently or semi-permanently immured in mental, mental deficiency, tuberculosis, and chronic sick hospitals (for whom 420,000 beds are to be provided), the thousands in bed at home "with the doctor" (or without), and the hordes besieging general practitioners' surgeries and contributing to the 35.3m. attendances in casualty and out-patient departments. So much for a healthy nation.

Senior Staff

It might have been thought that estimates of future senior staff could be based only on figures showing the existing staff expressed as full-time labour. Such figures, however, are apparently not available. The report for 1949–50 enumerates full-time and part-time appointments, many of the latter being multiple. For instance, 1,310 whole-time and 12,372 part-time consultant appointments were held by 5,200 persons. On a similar calculation 686 whole-time and 2,891 part-time senior hospital medical officer appointments involved 1,100 persons, giving a total of 6,300 persons. Since some of the multiple part-time appointments were collectively not full-time, we may take the full-time labour at about 5,000—that is, less than half the number required according to the memorandum. Registrars and junior hospital medical officers are given as 3,972 whole-time and 831 part-time. The amount of full-time labour of these grades employed in 1949 was therefore approximately the same as the amount which will ultimately be required.

More significant, however, is the consultant/registrar ratio. The overall ratio aimed at is about 2:1, but for some reason not explained it varies widely between 4:1 for ophthalmology and 2:3 for general surgery. One suspects that the planners have accepted the views of consultants given with no thought for the fate of their assistants. The ideal ratio should of course vary according to whether establishment is static or expanding, and according to the purpose of registrarships. If establishment is static and each consultant has one registrar of six years' tenure, he will have five registrars during his 30-years term of office. But, of these, only one will reach consultant rank. If establishment is expanding, a condition which can at best be only gradual and temporary, perhaps two will gain promotion. The system of registrarships is therefore workable only on the condition that the majority of the holders cannot expect to attain consultant rank. Whether this is just to them or in the best interests of medicine I do not propose to discuss. It may well be that a registrarship in general medicine is a good preparation for general practice, but the same cannot apply to plastic or thoracic surgery.

It was the belated discovery of this situation which led the Ministry in the autumn of 1950 to announce its decision drastically to reduce the number of registrars, recommending those discharged to seek employment abroad or in general practice. That this was to be the fate of some registrars was mentioned in the memorandum which we are discussing and which was published in the same year. But here comes the interesting point. The memorandum in almost identical form had been issued *confidentially* to regional hospital boards early in 1948. It contained this passage:

"In this memorandum the term 'registrar' is used in a generic sense where it is desired to suggest the employment of officers senior to the house-physician or house-surgeon and considered to be passing through a probationary period of training in a specialty. Some practitioners may start on such a career and, after a period of a year or two, turn to training in some other consultant field or to general practice. Others will continue, acquire a full period of training, emerge as consultants for more senior appointments on hospital staffs. It is not possible to estimate the numbers in either group, and as a result estimates of the numbers of registrars given in later sections include both these groups."

It would be interesting to know why the Ministry informed the predominantly lay regional hospital boards two years before it informed the medical profession.

Total Personnel

Table III shows the figures for non-medical personnel. With the medical staff the total came to about 220,000 reckoned as whole-time. Even so, nurses were short by 41,263 and midwives by 2,344. If we add 20,000 general practitioners, their secretaries, the pharmaceutical chemists,

TABLE III.—*Non-medical Personnel, December 31, 1949*

	Whole-time	Part-time
Professional and technical	13,271	5,311
Administrative and clerical	23,797	
Maintenance, transport, etc	26,210	
Regional headquarters staff	1,320	
Blood-transfusion centres	1,107	
Nurses	125,131	23,624
Midwives	8,888	969
Total	199,724	29,904

and the number, unknown but certainly very large, engaged in the medical trades we arrive at a total which forms a substantial part of the nation's labour force. If the additional 63% of beds were forthcoming, hospital personnel would have to be increased by 140,000, giving a total of 360,000. The truth, of course, is that this extra labour is not and will not be available, for the simple reason that it does not and will not exist.

Thus the authors of the memorandum live in a world far removed from reality. They show throughout no evidence that they recognize any economic limitations to their plans. Indeed, the only limiting factors which they admit are the existing shortages in buildings and trained specialists, but they confidently assume that these shortages cannot fail to be remedied in course of time. In a mood of joyful anticipation they portray the future in glowing colours—the future, that is to say, for hospital staffs. They envisage a kind of clinical *Republic* on the Platonic model in which the medical guardians work in ideal surroundings and are paragons of virtue and industry, exhibiting in perfection give-and-take, willingness to co-operate, and anxiety to improve their efficiency—qualities which, to do them justice, most of them already display without any Ministerial prompting.

But the facts must be faced. The numbers engaged in the Health Service must be determined, not by national needs, but by national earnings abroad. If these decline, the Health Service must suffer. If we want cortisone we must sell more coal. There is no other way. Those who wail against any cuts are crying for the moon, and politicians, to whatever party they belong, who promise that there will be no cuts are promising the moon. The advice which the Ministry is giving to hospital boards is therefore grossly misleading and a direct encouragement to extravagance. Even though the incidence of ill-health is destined to increase, long-term policy should be framed with the prospect of enforced contraction in view.

The point of immediate importance is the entry into the Service. The years quoted in the projections given above are not so far off as they seem. In 1962 those now entering medicine will be in the registrar stage, if it still exists, and in 1977 they will be at the height of their powers. Whether we like it or not, it is a logical corollary to the establishment of the Health Service that the State must control and reduce the intake of medical students to meet the economic future so far as this can be predicted, so as to ensure a balance between the treatment of ill-health and productive capacity. We cannot tolerate a situation in which youth in its thousands hammers at the doors of the medical schools while industry cries out for labour. The Health Service is no haven from the economic storms which will batter us, perhaps to pieces.

Certain consequences of this limitation should be noted. First, every year added to the duration of medical training reduces the number of persons effectively employed. For instance, 20,000 general practitioners are reduced by about 700. The same applies to study-leave, aggravated by the fact that this is invariably expansionist in effect. Apart from those branches of medicine in which exceptional skill and experience are required, is it really true that a person is not fit for independence and responsibility until he is in his middle thirties—that is, until half his life has been spent? Secondly, reduction in the number of the junior grades means that seniors will have to undertake many of the duties

from which they are now relieved. The latter will therefore have to be increased in number by raising the retiring age to 70.

Such, then, is the prospect as I see it. Four years ago in this *Journal* (Roberts, 1948) I asked the question, Where are we going? I still don't know, but at least I know where the Ministry wants us to go. To plenty in the midst of poverty; to a medical heaven in the midst of a bankrupt, bedridden, and hungry hell.

REFERENCES

- Roberts, Ff. (1948). *British Medical Journal*, 1, 485.
— (1949). *Ibid.*, 1, 293.

CONCERNING THE EPILEPTIC

[FROM A CORRESPONDENT]

A general practitioner with a list of 2,000 patients will probably have four or five epileptics under his care. These people will be handicapped in varying degrees by their fits, and by the attitude of mind about epilepsy of those with whom they come into contact. The social handicap is usually by far the greater burden.

In the public mind, epilepsy is associated with mental disorder. Now, while it is true that fits are common among mental defectives and the insane, most epileptics living outside institutions, apart from the occurrence of their fits, are essentially normal individuals, mental deterioration being unusual in those with only a moderate number of fits. Anomalies of temperament, however, are not uncommon: in some cases the temperament is affected by the disease, and the anomalies, like the fits, are a manifestation of the paroxysmal dysrhythmia of cerebral cells, but often temperamental changes are a secondary phenomenon, the result of social frustration. There is also a common belief that the outlook for an epileptic is necessarily bad. This is quite untrue. Many people who have had fits during childhood and adolescence become quite free of attacks in adult life, and in others the administration of drugs usually results in effective control or at least lessening of the fits.

The Harm of Concealment

The knowledge that epilepsy tends to run in families aggravates a common impulse to conceal the occurrence of fits. Concealment can only harm the patient and increase anxiety all round. The social handicap from the familial tendency to epilepsy can be lightened by frankly facing the facts. Even marriage, and the prospect of having children, may in some cases be quite justifiable for an epileptic if the prospective partner is shown to have a normal electro-encephalographic record. Near relatives of an epileptic who have dysrhythmia of an epileptic type have the same chance of producing epileptic offspring as a frank epileptic.

Parents are often ashamed that a child of theirs should have fits, and are over-anxious about the occurrence of a fit in public. At school, fits may cause a great disturbance in the class, and as a result of this the epileptic child comes to be avoided by his fellows. An awareness that he is not wanted soon gives the child a strong sense of inferiority; he becomes desperately lonely, and takes on to himself the shame and anxiety shown by his parents. As a result of this unhappy train of events, the child's fits increase in number. An epileptic child should be allowed as much freedom as possible, even at some risk. Parents must hide feelings harmful to the child; they must take him about with them and treat him as a normal individual. Teachers and pupils at school must learn to regard fits as a natural occurrence, causing no special concern. Whenever possible an epileptic should have a normal home life and education, but if the child has a great number of fits, or his home conditions are bad, the school medical officer will arrange for his admission to a special school for epileptics. Here medical supervision can be more thorough than at home, and the child loses the feeling of being alone and inferior. Early advantage should be taken of institutional care when necessary.