Middle Articles

HOSPITAL TOPICS

Changing Use of Hospital Beds by the Elderly

R. W. PARNELL,* D.M., M.R.C.P.; K. W. CROSS,† PH.D.; MARY WALL,‡ B.SC.

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Summary: Recent changes in the age structure of the mental hospital population in the Birmingham Region are first examined. The proportion of patients aged 65 and over of the total in residence has steadily increased and at the end of 1967 was 43%, and more than half the female patients are now in this age group.

Admissions of elderly persons to both psychiatric and general hospitals have increased, and these hospitals have responded to the increased demand on their services by increasing bed-turnover rates. During 1967 on average one-fifth of all patients occupying beds for acute cases (excluding maternity) were 65 years of age or over.

In the geriatric hospital service, on the other hand, accommodation per head of the population decreased between 1961 and 1967, as did the total annual number of admissions and the rate of turnover. This suggests that the geriatric service is overstretched and that it is under-organized, understaffed, or undercapitalized—possibly all three. The enforced expedient of admitting "excess" elderly patients to mental hospitals does not recommend itself.

Introduction

In this paper we examine the changes which took place in the age structure of the hospital population in the Birmingham region between 1961 and 1967. The proportion of elderly patients in psychiatric hospitals will be seen to be increasing. The findings are discussed in relation to (*a*) the increase in the number of elderly persons at risk in the population; (*b*) the use of beds designated "geriatric" and "acute"; and (*c*) the number of places available in welfare homes. Together, these form the major "pool" of hospital and residential accommodation available to the elderly, and in studying the reasons for the rising proportion of elderly patients in mental hospitals it is necessary to do so against the whole background of residential care.

Regional Psychiatric Hospitals

Residents

At the end of 1961 there were 12,276 patients in residence (including those temporarily absent), of whom 4,201 (34%) were 65 years of age or over. At the end of 1967 11,079 patients were in residence, of whom 4,771 (43%) were 65 years of age or over. Thus over the six years the proportion of residents who were elderly increased by 9%. During these years the total number of resident psychiatric patients fell by 10%, but the reduction was confined to younger patients. The number of older patients increased by 570, an increase in six years of 14% on the 1961 figure. This is equivalent to a 10-year growth rate of 23% for elderly residents.

Cook, Dax, and Maclay (1952) stated that in 1938 only 18% of residents in mental hospitals in England and Wales were aged 65 or over, and that in 1948 the proportion was 24%. Brooke (1967) reported that the proportion of patients aged 65 and over had risen from 30% in 1954 to 39% in 1963.

The 1967 figure of 43% for the Birmingham region suggests that the upward trend is continuing. There is, too, a notable difference between the sexes; whereas the proportion of elderly men in the region's psychiatric hospitals is only 31%, the proportion of elderly women patients now amounts to 52%.

The implications of these changes for accommodation and staffing need stressing. Nurses and doctors who have elected to train and work in psychiatric hospitals may find themselves employed in geriatric care for which they may have less inclination and so perhaps less aptitude.

Patients in residence may also be related to the population of the region for the years 1961 and 1967; the population in the latter year has been estimated from the 1966 Census population. These rates per 1,000 population in each age group are given in Table I, and it may be noted that, although the rate for younger patients in residence decreased, the rate for patients aged 65 years and over increased. The number of elderly patients in residence therefore increased to a greater extent than did the elderly in the population at risk. It does not necessarily imply that there has been an increased incidence in senile psychosis, because pressures arising from inadequate general or geriatric hospital accommodation could bring about the same result. Those interested in planning accommodation will note that the 1967 level of psychiatric bed coverage for the elderly was 9.0 beds per 1,000 population aged 65 and over, and that this figure has risen from 8.8 per 1,000 in 1961.

TABLE I.—*Patients in Residence in Mental Hospitals and Admissions per 1,000 Population in each Age Group*

Year	Patients in Residence			Admissions		
	Under 65	65 and Over	All Ages	Under 65	65 and Over	All Ages
1961	1·9	8·8	2·6	2·3	5·0	2·6
1967	1·4	9·0	2·2	2·8	6·2	3·2

* Consultant Geriatrician, Highcroft and Summerfield Hospitals, Birmingham.
† Senior Lecturer in Social Medicine, University of Birmingham, Birmingham 15.
‡ Statistician to Birmingham Regional Hospital Board.

Admissions

The changes so far described took place during a period when the admissions for patients in both age groups increased. The increase from 1961 to 1967 was 27% for patients under 65 and 25% for older patients. The proportions of elderly admitted in 1961 and 1967 were almost the same (19.6 and 19.3% respectively). The right-hand half of Table I shows the admissions in relation to the population at risk; and it is evident that the admission rates for both younger and older groups have increased.

A crude index of turnover can be obtained by dividing the annual numbers of admissions by the number of patients in residence at the end of each year. Table II shows that the turnover ratio for patients under 65 years increased throughout the period. The ratio for older patients also increased from 1961 to 1965, but has decreased slightly in each of the last two years. This may be the first outward statistical sign of failure to meet the increased demands of the ageing population, but it is evident that at least until 1965 the mental hospitals had responded to those increased demands effectively by increased turnover.

TABLE II.—*Turnover Ratios of Regional Mental Hospitals*

Year	Annual Admissions per 100 Patients in Residence	
	Under 65 Years	65 and Over
1961	123	57
1962	142	58
1963	147	62
1964	164	64
1965	170	68
1966	184	66
1967	200	63

Geriatric and Chronic Sick Departments

We next examine data concerning geriatric departments in the region for the years 1961 and 1967. Patients under 65 years of age are, of course, admitted to these units, but they do not contribute more than 10% to the total admissions. It is therefore reasonable to use these total figures to draw conclusions about the trends for elderly patients.

The average daily number of occupied beds and the number of discharges and deaths per annum are given in Table III. The daily number of occupied beds increased by 3.7% over the six years while the annual discharges and deaths decreased by 4.8%. The turnover ratio of discharges per 100 average occupied beds fell from 270 to 248. Thus between 1961 and 1967, when increased turnover was essential to meet greater demands on the service, an increase was not forthcoming. Examination of the data for the intervening years showed no significant departure from the overall downward trend.

TABLE III.—*Average Occupation of Beds in, and Patients Discharged (or Died) from, Geriatric and Chronic Sick Units, and Rates per 1,000 Population Aged 65 and Over*

Year	Average Daily No. of Occupied Beds	Discharges and Deaths per Annum	Discharges per 100 Average Occupied Beds	Rates per 1,000 Population Aged 65+	
				Average Occupied Beds	Discharges and Deaths
1961	5,742	15,498	270	12·0	32·4
1967	5,957	14,755	248	11·2	27·9

When the average number of occupied beds and the annual discharges and deaths are examined in relation to the population at risk the worsening situation is revealed more clearly. The number of beds per 1,000 population 65 years and over marginally decreased, but the ratio of the annual number of discharges and deaths to population decreased from 32 to 28. Since the latter provide the vacancies for further admissions it is evident that the geriatric service is now making a proportionately smaller contribution to the needs of the community than in 1961.

Departments for Acute Cases

Unfortunately information about the proportion of elderly patients in general hospitals is not readily available. One reason for this is that form S.H.3, on which hospitals make their annual returns to the Ministry of Health, provides no information about the age of the patients treated. Using separate information available in the Birmingham region, one of us (Wall, 1965) has shown that the annual number of persons over 70 years of age treated in the region's departments for acute cases is increasing; between 1958 and 1963 the number of men discharged (or dead) increased by 31% and the number of women by 41%.

Since this rate of increase exceeds the rate of increase in the population at risk by a comfortable margin, there is little doubt that general hospitals have responded to the geriatric problem with an increase in their rate of turnover. This is remarkable when it is remembered that the average length of stay of patients over 65 years of age discharged from beds for acute cases in the region during 1967 was 16.6 days, compared with an average of 11.5 days for all patients under 65 years of age, excluding maternity (Wall, 1968).

From the same source the average daily number of beds for acute cases occupied during 1967 by patients 65 years and over is known, and, adjusting for the percentage occupancy of such beds in the region by patients of all ages (74%), the number of beds available for the elderly may be calculated. On relating to the population at risk, the rate of provision of acute beds for the elderly was 0.67 per 1,000 total population—that is, 6.4 beds per 1,000 population aged 65 and over.

On the average, on any one day during 1967 20.6% of all beds for acute cases (excluding maternity) were occupied by patients in this age group. This proportion, of course, varies from specialty to specialty, the maximum value being 40% for ophthalmology; one-third of the beds in the departments of general medicine and diseases of the chest were occupied by patients aged 65 and over.

Welfare Accommodation

The level of provision of welfare accommodation influences the amount of hospital accommodation required for the elderly. It is known that the number of welfare places in the region has increased over recent years, but no precise up-to-date information is available. In the City of Birmingham there has been an increase from 1.3 places per 1,000 total population in 1961 to 1.8 in 1967. In England and Wales the number of places increased by a third between 1961 and 1966, and in the latter year the rate per 1,000 total population was 2.2, which corresponds to 17.6 places per 1,000 population 65 years of age and over. Thus although the increase in the number of places in Birmingham has undoubtedly helped to relieve the burden on the hospital services, the present level is still below the national average.

Discussion

A situation clearly exists where the increased numbers of elderly in the population (there were 529,697 persons aged 65 years and over in the Birmingham region in 1967 compared with 478,551 in 1961) are making greater demands for hospital care than ever before, and there are good reasons for believing that these pressures will continue to increase. In the six years under review the general hospitals in the Birmingham region undoubtedly dealt with increasing numbers of elderly patients. There was a 14% increase in the number of patients aged 65 and over resident in mental hospitals, a 25% increase in the

number of elderly admissions, and an increase in their rate of turnover.

Unfortunately the increase in admissions of elderly persons to mental hospitals, and the improvement in turnover have not been matched by similar trends in the geriatric units. Here the amount of accommodation per head of population has fallen, the number of patients dealt with has declined, and the rate of turnover is lower. Though the mental hospitals may be seen as providing some relief for the geriatric problem, the extent of this relief is inadequate, and many would claim inappropriate. The new strains arising within the mental hospitals where staff are trained in psychiatric rather than geriatric care have already been mentioned. However useful as an expedient, it is no solution to the geriatric problem to admit more elderly patients to the emptying beds in the mental hospitals unless parts of these hospitals are radically re-equipped and appropriately staffed with persons properly trained for the change of duties. Kidd (1962) has written of "misplacement" of geriatric and psychiatric patients, and McKeown and Cross (1968) have produced broader evidence covering all hospitals and welfare homes in Birmingham.

The signs point to major difficulties ahead and the need for urgent reassessment of the scale of the geriatric services now required. At the end of 1967 there were 12 geriatric/chronic sick (staff allocated) beds for 1,000 persons aged 65 or over in the Birmingham region. If the lower level of provision recommended by the Ministry (10 beds per 1,000 aged 65 and over) is to be adopted for planning future accommodation, a dramatic rise in "productivity" as measured by turnover rates must be achieved, and of this, although there are local exceptions (Parnell, 1968), there is no overall sign at present. The number of geriatric beds required may be debatable; they are expensive to build and at present not easy to staff; indeed, many are now staffed at levels below their current establishment, an establishment which itself falls short of the levels suggested by McKay and Ruck (1967) which a representative body of the British Medical Association has recently accepted as the national minima. However, there can be no doubt about the need for increased recruitment and training of both doctors and nurses in this field, if the most effective methods already available are to be put into practice. Failure will lead to progressive "blocking" of beds in hospitals for acute cases.

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Motor Neurone Disease—a Patient's View

ENID HENKE*

"Do you think you could reorientate your thinking and change your way of life completely?" My reply to the doctor who asked me this question was that I thought I could, but only if I knew the extent to which I would have to do it. A series of investigations had led to a firm diagnosis of motor neurone disease. I am very glad that the doctor answered my questions fully and honestly, even to the point of telling me that I would need to be with people who were prepared to do everything for me. Being told that the disease was a progressive one enabled me to do things while I could and not leave them in the hope that I would soon be feeling better. For example, I had business and personal affairs to attend to and friends who lived a long way away I particularly wished to see, and it was very much a matter of going while I could get in a car and speak clearly enough to make myself understood.

In the 18 months between then and now I have felt a strong desire to share my thoughts and feelings in the hope that they will help doctors who have the difficult task of deciding how much they ought to tell any patient of theirs with the same disease. The obvious immediate answer is, "It will depend on the patient," but, since the disease does mean reorientation of thinking and a complete change in the patient's way of life, I feel that patients and their families should be told as much as possible in the home, in preference to the doctor's surgery or the rather tense atmosphere of an outpatient consulting room.

Doctors can help a great deal even though they might feel a sense of helplessness. They will be unable to help the patient at all, however, unless they can help him to come to terms with the disease and accept it, and this, of course, involves the family, who initially will have the care of the patient. They can help considerably on their visits by asking simple questions requiring only "yes" or "no" for an answer and by sitting down facing the patient. I find it hard to talk to people towering above me, because of difficulty with neck control.

Feeding and Sleeping Arrangements

General practitioners may be asked to advise those looking after motor-neurone patients at home on such matters as feeding and sleeping arrangements. On the matter of feeding, when it becomes difficult to cope with a solid diet, liquidized food is the answer. If a liquidizer is not available then tins of baby food can be used.

Eating gets increasingly tiring, and a plate with a base for hot water will help to keep the food hot. In extreme tiredness "milk foods" or meat extracts can provide nourishment and can be taken through a straw. It is important to remember not to attempt to hurry us. If choking occurs we should be given as much air as possible, sat upright, and patted firmly on the back until the tension has been eased and normal breathing restored. With regard to sleeping, the most comfortable mattress is the interior-spring type, and if a layer of foam rubber (minimum thickness 2 in. or 5 cm.) is placed between the mattress and the bottom sheet this will help to prevent bed sores.

* Assistant Hospital Secretary.