

THE MEDICAL AND SOCIAL EVALUATION OF THE ELDERLY PATIENTS IN THE JOHANNESBURG GENERAL HOSPITALS*

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The demography of a country at a given time is brought about by the interaction of the birth rate, mortality and migration, past and current. The present general trends of the structural changes of the population in the Republic of South Africa are along the same lines as in other Western societies. There is both a relative and an absolute increase in the number of European persons over the age of 65 years.

Statistics of Aged in South Africa

In 1936, of the total European population of over 2 million, 4.9% were older than 65.¹ By 1951 the proportion had risen steeply to 6.5%. Badenhorst² estimated that by 1980 it would stand at 8.6%, placing South Africa in the same position that obtained in the USA, Italy, and Australia in 1950.³ However, he admitted at a later date that he had underestimated these forecasts considerably.⁴

The absolute figures rose steeply from 99,000 in 1936 to 171,000 in 1951.¹ The figure for 1958 was an estimated 203,000. By projection methods, the estimate for 1980 is 324,000.² This, too, is probably an underestimate.

As previously stated,⁵ the effect of the progress of medical treatment has been not so much the increase of life expectancy of the older age groups, as the survival of larger numbers of the young and the middle-aged to old age. This was forcefully emphasized by Titmuss at the 3rd Congress of the International Association of Gerontology.⁶ The Republic of South Africa is, therefore, faced with the prospect of continued ageing of the population⁷ as are the other Western nations, and may soon pass from a 'mature' to a relatively 'old' nation. The Summary Report of the Proceedings of the World Population Conference, 1954,⁸ stated: 'European populations in North America, Oceania, and South Africa are increasing more rapidly than those in Western Europe'.

Statistics of Aged in Johannesburg

The population of Johannesburg reflects not only these same increases, but also the trends of the natural shift from the rural to the urban areas. In 1936, 10,500 were over 65 years of age.¹ This figure was doubled in the following 15 years. This change is well demonstrated by the superimposition of 2 pyramids representing the population structure of the 2 census years, 1936 and 1951 (Fig. 1). Each horizontal projection represents the numbers of each 5-year group, divided into males and females.

The shoulders of the pyramid for the census year 1936 represent the large numbers of persons between the ages of 20 and 35 years. By 1951 the survivors aged 15 years; this is demonstrated by the movement of the shoulders at that time to the higher age groups. By 1965, however,

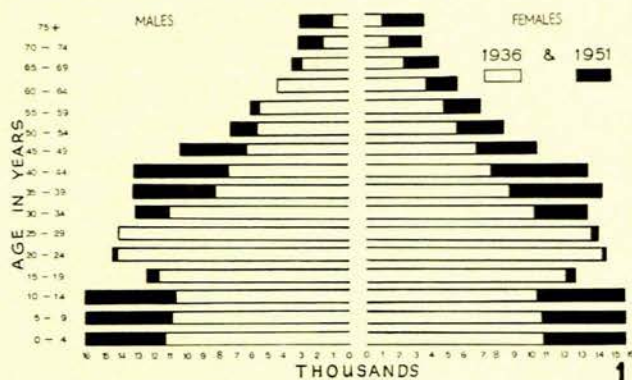


Fig. 1. Age pyramids for Johannesburg Municipality (population 1936 and 1951).

they would reach the age of 60-65 years in considerable numbers. It is quite apparent from the diagram that the number of aged would increase even more rapidly by 1970 or 1975.

Extension of the span of life in middle age and old age by improved medical care does not imply at the present time the complete arrest or the elimination of disease. Many are disabled by the degenerative diseases.

Benjamin,⁹ expressing similar views, stated: 'The social and medical services . . . will face a growing burden of chronic invalidity arising from the sheer growth in numbers of older persons outstripping the slower improvement in their average vitality'.

New types of statistics are required to identify the new problems in the care of the aged in Johannesburg. These will be a guide for the effective development and evaluation of official and voluntary programmes in the field of medical care, and for extending the scope and improving the balance of the work.

Quantitative information on the prevalence of acute and chronic diseases and impairments, the volume and degree of disability, the utilization of the medical services, available hospital beds, and the pattern of behaviour of the chronically ill persons, are only some of the data needed for this work.

The present paper is divided into 2 sections. The first part is the background material to the second, which is the medical and social evaluation of inpatients, 65 years and over, in the Johannesburg General Hospitals.

BACKGROUND MATERIAL

At present, a convenient choice of a group for study according to functional and sociological ageing is not possible. The choice of the group is, therefore, made on a chronological basis. The life expectancy at birth in South Africa is over 65 years.¹ Sixty-five is the most

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frequently chosen age for old-age programmes and pensions. Support is also given for this arbitrary choice by the fact that most surveys use this age delimitation.

The Johannesburg General Hospital contains 694 beds and its function is to treat acute cases. Closely linked to this hospital are the Nursing Home units for other patients requiring thoracic and plastic surgery, and medical, surgical, orthopaedic and neurosurgical treatment. This adds a further variable number of 180-250 beds. The Queen Victoria Maternity Hospital, and the Fever, Children's, Dental, and Non-European Hospitals are excluded from this study.

Most of the patients are from the Johannesburg area. During the year, January-December 1960, a total of 20,421 hospital patients were admitted. The monthly average was 1,702, with peak admissions of 1,800 in March and August, and low admission rates of 1,560 in April and December.

The admissions of the consecutive months of October, November and December (average 1,689), were chosen for detailed analysis. A total of 5,069 patients were admitted. After exclusion of the private patients, members of the nursing staff, transfers to the maternity hospital, and those transferred directly from the Casualty Department to the Edenvale and South Rand Hospitals, 3,973 remained. A further 8.6% of this number were excluded because of incompleteness of the relevant information.

A final figure of 3,636 was then analysed. Of this number, about 23% (828) were 65 years and over. The medical admissions numbered 1,186, of which 33% (392) were 65 years and over. Of the 1,520 general surgical admissions (including thoracic surgery, neurosurgery and plastic surgery admissions), only 15.3% (233) were of the older age group. The admission numbers to the gynaecological, orthopaedic and eye wards fell away rapidly. The numbers are too small for further analysis at present.

The average length of stay in hospital showed the expected increase with age. This is especially well demonstrated by the medical admissions (Table I). In the 3 groups, under 45, 45-64, and 65 and over, their periods of stay were 13.1, 19.2 and 20.6 days respectively. Similarly, on the surgical side the corresponding figures were 11.1, 14

TABLE I. ANALYSIS OF TOTAL ADMISSIONS TO THE JOHANNESBURG GENERAL HOSPITAL (OCTOBER, NOVEMBER AND DECEMBER 1960)

Age group (in years)	Total analysed		Medical		Surgical	
	Number	Average stay (days)	Number	Average stay (days)	Number	Average stay (days)
Under 45	1,686	6.54	408	13.12	857	11.11
45-64	1,122	16.26	396	19.24	430	14.04
65 and over	828	19.10	392	20.57	233	16.61

and 16.6 days. The average duration of stay of all the admissions was 12.4 days. This is higher than the figure of 11 days issued by the Transvaal Department of Hospital Services for the year 1958-1959,²⁰ because of the selection of the group in the present study.

Of interest is that the periods of stay in hospital are far longer than those in the USA. This can be accounted

for by the different pattern of hospital utilization and conditions prevailing there. The average length of stay in the short-stay hospitals for all ages is 8.6 days, and for those 65 and over, 15 days.²¹

MEDICAL AND SOCIAL EVALUATION

As a development of this study, a random sample of 90 patients admitted between 1 February and 31 July 1961 was further analysed. Of the primary diseases which resulted in the admission of the patients to hospital, arteriosclerotic and degenerative heart diseases, malignant neoplasms, and digestive and respiratory-system diseases were by far the commonest (Fig. 2). The hypertensive-heart-disease group could not be separated from the

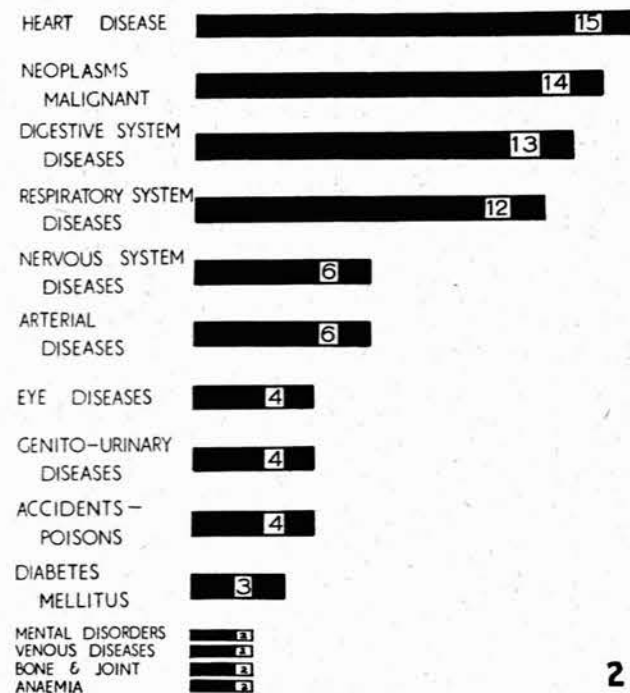


Fig. 2. Main diagnoses on admission among the 90 patients studied.

arteriosclerotic group. Several major diseases occurred together in the same patient; the full incidence of these is still being studied.

The volume and degree of disability of these acute and chronic diseases merits special analysis. The 90 patients have been grouped into 5 grades of disability following the classification of Zeman.²² This has been correlated with the home care provided either by persons at home, by neighbours or by servants (Table II).

The 5 grades are as follows:

1. Individuals capable of unlimited activity, to be trusted to go about the city in safety, and unsupervised.
2. Individuals capable of moderate activity, to be trusted in the neighbourhood of their homes (limited capacity).
3. Individuals whose capabilities are limited and whose activities need both assistance and supervision, and who require escort outside (practically housebound). They need

nursing, washing, feeding, and attention to bladder and bowels.

4. Individuals who are confined to bed or its immediate vicinity (bed-bound).

5. Individuals who are totally blind, or whose vision is so impaired that they cannot take care of themselves.

Of the 11 patients who are bed-bound (grade 4), 5 are being cared for at home. Of the 6 listed as being in

TABLE II. DISABILITY RATING AND CONDITIONS OF CARE AMONG 90 ELDERLY PATIENTS

Grade of disability ²²	Total	Home care				Institutional care	Unclassified
		None	By person at home	By neighbour	By servant		
1	25	6	18	—	—	1	—
2	31	11	14	4	1	1	—
3	12	2	2	1	4	3	—
4	11	—	5	—	—	6	—
5	2	—	2	—	—	—	—
Unclassified ..	9	—	—	—	—	—	9
Total	90	19	41	5	5	11	9

institutions, 2 are in an acute general hospital at present and 4 are in aged homes.

Of great importance is the fact that of the housebound group (grade 3), 2 have no assistance, and of those with some limitation (grade 2), a third have no substantial help at home. These require more care than can be provided by a district nurse or a medical practitioner under the present system of care at home.

Four married individuals of limited capacity (grade 2), living with their spouses, are placed in the group not receiving home care because the disability of the spouse is greater than their own. This whole group with limited capacity (grade 2), and not receiving home care requires further study because of their frequent and long stays in hospital. During the previous 12 months this group of 11 has been admitted on 24 occasions, with an average length of stay of just over 25 days on each occasion, which is well above the general average stay. Five patients have been attending the outpatient department regularly for 10 years or more. One particular patient has had 14 separate admissions for the same illness in this period.

The 6 patients in the group with unlimited and unsupervised activity (grade 1) are either single, widowed, or estranged from their relatives, and are therefore alone. They all have illnesses of long standing with several recorded admissions to hospital. All are attending the medical outpatient department regularly. A deterioration of their physical state may easily place them into the more severe grades of disability.

Taken together as a group, the 2, the 11, and the 6 (all with no home care), totalling 19 patients in all, form a considerable number of patients in an unfortunate position for whom no adequate provision has been made. This group is representative of about 700 of the patients admitted in a year.

In Johannesburg there are limited hospital facilities for those patients classified as chronic sick, who, as defined, require constant skilled nursing and medical attention.^{23,24} Not all the 90 patients studied required the diagnostic or therapeutic facilities and the nursing or medical care which are provided by a general hospital for acute cases.

One expects, therefore, to find a moderate number of admissions which are unnecessary on these grounds. However, the figure of 23 is surprisingly high. Of these, only 2 need not have been admitted at all, since other facilities were easily available and adequate. Four were admitted because there was no one to care for them at home. One patient came from an aged home, which could not provide medical care. Three patients could have been treated at home if medical services were provided, and a further 3 if nursing services covering most of the day were also available. The relapse of the remaining 10 patients may have been prevented if adequate provision had been available for the continuation of their general treatment outside hospital.

The full position becomes manifest when these findings are interpreted as absolute figures for the period of a full year. Approximately 846 patients, 65 years and over, do not require the facilities provided by the Johannesburg General Hospital as an acute hospital. Better follow-up facilities may have prevented the admission of the largest group, totalling 368. These include regular visits by district nurses and social workers, free transport arrangements, and special facilities and considerations in the outpatient departments. A further 147 patients were admitted because of the lack of home domestic help. Home medical and nursing services may have prevented the admission of a further 220 patients.

The Witwatersrand Jewish Aged Home and the aged homes of the Rand Aid Association provide certain nursing and medical care for their residents. The part they play in the reduction of the admissions to the Johannesburg General Hospital is at present being studied.

This paper presents some of the preliminary findings of the work in this field which is in progress in the Department of Medicine of the University of the Witwatersrand. Further studies are being pursued along the lines indicated.

SUMMARY

There is a rapid increase in the relative and absolute numbers of European persons over the age of 65 years in South Africa. These changes are reflected in the population changes of Johannesburg.

Because of the growing burden of increased invalidity in the older age groups, information on their use of hospital services is required.

Approximately 23% of the adults admitted to the Johannesburg General Hospitals are aged 65 years and over. The increase in the average length of stay in hospital in this group is demonstrated. A random sample of 90 elderly patients is studied in greater detail from the medical and social aspects.

This survey emphasizes that large numbers of disabled elderly persons have inadequate facilities for home care. Preliminary study demonstrates that many of these patients do not require inpatient care as provided by a teaching

hospital for acute cases, and their admission could be prevented by extension of the present social and medical facilities to the home.

Investigations are continuing along these lines.

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