

# SINGAPORE - AN AGEING SOCIETY

P W J Choo, K S Lee, R E Owen, F J Jayaratnam

## ABSTRACT

Singapore is undergoing a rapid transition into an ageing society. This is due to a dramatic fall in the birth rate combining with a fall in infant and early childhood mortality rate as well as an improvement in the life expectancy.

Other changes in the society such as the breaking up of the extended family structure, the changing role of women as well as the increasing expectations of elderly and their families are taking place at the same time. These changes will place increasing demands on the families of the elderly, social services, community and health services. There will have to be a rethinking on how we care for our elderly and the measuring required in meeting this challenge.

**Keywords :** Rapid, ageing, increasing demands, challenge

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## INTRODUCTION

The coming years will see dramatic changes in the structure of the Singapore population. The population is projected to increase from its current 2.6 million in a declining rate to stabilise at 3.2 million in the year 2030. Within this population structure, there will be enormous movement in the age structure. The current pyramidal shape age structure of population will become increasingly more rectangular as the population ages.

The factors responsible for the ageing of Singapore's population include :

- (1) A fall in the infant and early childhood mortality rate
- (2) A dramatic fall in the fertility rate
- (3) An improvement in the life expectancy in those age above 60 years.

The very rapid nature of change in the above factors will see Singapore transform into an ageing society within a very short period. In a survey of countries showing

their increase in elderly population, Singapore is projected to have the second fastest growing elderly population. There will be an increase of 34% of elderly between 1985 to year 2025.

## DEMOGRAPHIC CHANGES

In this paper, we are using the age of 60 years as a definition of an aged person. This conforms with the International Plan of Action on Ageing by United Nations 1982. At present, the aged comprise 8% of the population and this will increase to 11% by 2000 and subsequently to 26% in 2030 Table I(a). This dramatic rise is more vividly seen in Table I(b) where the population is represented as index numbers with 1980 as base year. Between 1980 and 2030 there will be a 33% increase in the total population while the aged population will have increased by 373%<sup>(1)</sup>.

In terms of numbers, we now have 220,000 aged persons. This will rise to 835,000 by 2030.

More worrying and dramatic will be the increase of the very old (those age 75 and above). This group represents the frail elderly with physical, mental and social frailty. This is the group most likely to depend on the health and social services. There will be an almost eight fold increase in this group from 31,000 in 1980 to 242,800 in 2030 where it will comprise 7.6% of the total population.

Table II illustrates the dramatic speed in which the Singapore population will age. This is of great importance as the impact will be all the greater. What took 115 years in France will take only 20 years in Singapore. Singapore will have to place with equal swiftness and decisiveness effective measures to respond to this dramatic change, thus ensuring a successful and smooth transition in our society.

## UTILIZATION OF HEALTH RESOURCES

Through the years the utilization of health resources has been ever increasing (Table III)<sup>(2)</sup>. The elderly tend to

Department of Geriatric Medicine  
Tan Tock Seng Hospital  
Moulmein Road  
Singapore 1130

P W J Choo, MRCP (UK), DGM  
Senior Registrar

K S Lee, M Med (Int Med) (Singapore)  
Registrar

R E Owen, MRCP (UK)  
Senior Physician

F J Jayaratnam, AM, FRACP  
Senior Physician and Head

Correspondence to : Dr P W J Choo

**Table I(a)**  
**Actual and Projected Population 1980 – 2030 (in Thousand)**

Age Group	1980		1988		2000		2030	
	No.	%	No.	%	No.	%	No.	%
0 – 14	653.1	27.1	611.9	23.1	671.1	22.4	574.3	17.9
15 – 59	1587.2	65.7	1814.3	68.6	1991.6	66.5	1804.5	56.1
60 – 74	142.3	5.9	172.3	6.5	253.4	8.5	592.6	18.4
75 plus	31.3	1.3	48.6	1.8	79.0	2.6	242.8	7.6
<b>Total Population</b>	<b>2413.9</b>	<b>100.0</b>	<b>2647.1</b>	<b>100.0</b>	<b>2995.1</b>	<b>100.0</b>	<b>3214.2</b>	<b>100.0</b>
Population age 60 and above	173.6	7.2	220.9	8.3	332.4	11.1	835.4	26.0

**Table I(b)**  
**Population in Index Number with 1980 as 100**

Age Group	1980	1988	2000	2030
0 – 14	100	94	103	88
15 – 59	100	114	125	114
60 – 74	100	121	178	416
75 plus	100	155	252	776
<b>Total Population</b>	<b>100</b>	<b>109</b>	<b>124</b>	<b>133</b>
Population above age 60 years	100	124	188	473

**Table IV**  
**Admission Rate to Hospitals by Age and Sex in 1987 (Rate per 1000)**

Age	Male	Female	Total
0 – 14	158.3	126.1	142.9
15 – 19	74.5	45.9	60.6
25 – 29	60.0	152.4	104.8
35 – 39	61.8	92.3	76.8
45 – 49	79.8	84.3	82.1
55 – 59	144.1	102.3	123.4
64 – 69	217.6	164.1	190.1
> 70	331.9	256.6	288.7

**Table II**  
**Speed of Population Expansion**

Country	Year population 7% above age 65	Year population 14% above age 65	Duration in year
France	1865	1985	115
Japan	1971	1996	25
Singapore	2000	2020	20

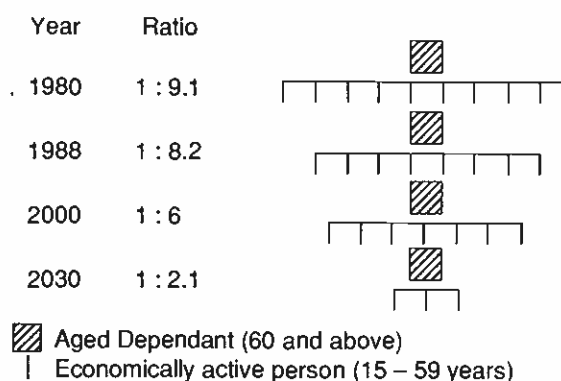
**Table III**  
**Utilization of Health Resources 1985 – 1988**

Year	1985	1986	1987	1988
Hospital Admissions	91.1	92.0	96.0	101.1
Specialist Clinic Attendances	487.2	507.3	512.7	523.7
A & E Attendances	171.3	146.2	167.1	183.5

Rate per 1,000 Population

utilise a greater amount of these services. The current 8% of aged persons, account for 20% of all outpatient attendances and 18% of all hospital admission. Table IV shows the admission rate to hospitals by age and sex in 1987.

**Table V**  
**Old Dependency Ratio**



It can be seen that from age 64, there is a significant rise in admission rates and after 70 years this increase is even greater. With an ageing society where the population of our elderly especially the very old is projected to have a dramatic increase, the expected demand on our health services will be overwhelming. There will have to be reorganisation of the health services to meet this. We will have to change the way of approach, style and application of our limited resources.

Policies aiming at preventive care and health promotion in old age will have to be foremost in our planning policy. The aim of maintaining the elderly at home in the community is of utmost importance. Social,

community and health services will have to be in place to ensure its success. Speciality medical services ie. Geriatric Medicine and Psychogeriatrics will have to be established to cater for the projected demand.

### A CHANGING SOCIETY

The result of an increase in life expectancy with a decrease in fertility rate will give rise to a declining ratio of economically active person to aged person. This is reflected in the old dependency ratio which will decrease from 1: 9.1 in 1980 to 1: 2 .1 in 2030. The implication will be an increasing burden on the working population (3). Measures to decrease this burden such as increasing the retirement age to 65 years, encouraging a higher level of savings and investments in policies promoting good health, social and good family relationship would help to reduce this level of burden.

Apart from the increase in elderly there are other equally important changes to our society. These changes would greatly affect how we can meet this challenge of an ageing society. These changes would include the following :-

- . A decreasing number of children per family with a "smaller" household sizes. This would decrease from 4.73 in 1980 to 3.05 in 2030. Having an aged person in a family will become increasingly common<sup>(4)</sup>.
- . The increasing trend for young couples to move out and have separate households from their

parents. This will lead to an increasing number of aged person households.

- . The life expectancy of women is longer than men. This over the years will result in an increasing number of single elderly women.
- . The change in the traditional role of women from carer to active participants in the workplace. Their role as traditional carers for their elderly parents will have to be replaced.
- . The increasing expectations of the elderly and their family as we progress as a society will lead to increasing demands for services for the elderly<sup>(5,6)</sup>.
- . Our present elderly are an 'elite survival' cohort who have lived through a period where public health, medical services and social condition were less than ideal. The future elderly will be a different cohort where a higher level of disability and fraility is expected.

The rapid progress that Singapore has enjoyed has resulted in an improved health standard and longer life expectancy. Our elderly population is a result of this transition, and has to be viewed as a challenge and not a burden to society. The same hard work, determination, foresight and planning that saw us succeed as a nation will have to be applied to ensure that those surviving to old age and society will continue to progress. There will have to be organised and coordinated participation involving government, ministries, social, community, health, volunteer organisations and individuals to achieve our transition to an ageing society.

### REFERENCES

1. Cheung P. Population Ageing in Singapore, National Seminar on Population Ageing in Singapore, Singapore 1987.
2. Singapore. Ministry of Health Annual Report 1988. Ministry of Health Singapore, 1989.
3. Merriman A : Handbook of International Geriatric Medicine. Singapore : PG. Publishing, 1989.
4. Singapore. Family Planning Board Projection. Ministry of Health Singapore, 1984 : 26-34.
5. Singapore Gerontological Society of The Aged - Who Cares? Singapore : Internal Printers, 1986.
6. Merriman A : Geriatric Medicine in Singapore. Quo Vadis? Ann Acad Med Singapore 1987; 16 : 1.