

Ageing and the Singapore Healthcare System

Dr Gerald Koh

Associate Professor

Saw Swee Hock School of Public Health

National University of Singapore

A member of the National University Health System

Learning Outcomes

At the end of the lecture, students should be able to appreciate the following :

Demographics of aging in the world, Singapore & its implications to healthcare;

- Sociological aspects of aging in ill health (e.g. living alone, economic hardship, lack of social support, etc).

Topics

- Population Ageing in the World
- Population Ageing in Singapore
- Social Aspects of Ageing

Population Ageing in The World

- Population ageing is unprecedented, without parallel in human history—and the twenty-first century will witness even more rapid ageing than did the century just past.
- Population ageing is pervasive, a global phenomenon affecting every man, woman and child—but countries are at very different stages of the process, and the pace of change differs greatly. Countries that started the process later will have less time to adjust.
- Population ageing is enduring: we will not return to the young populations that our ancestors knew.
- Population ageing has profound implications for many facets of human life.

United Nations. World Population Ageing: 1950-2050. 2002.

Available at <http://www.un.org/esa/population/publications/worldageing19502050/>

Singapore's ageing population is expected to increase to 20 percent in 2030 from 10 percent currently.

Definitions of Older Persons

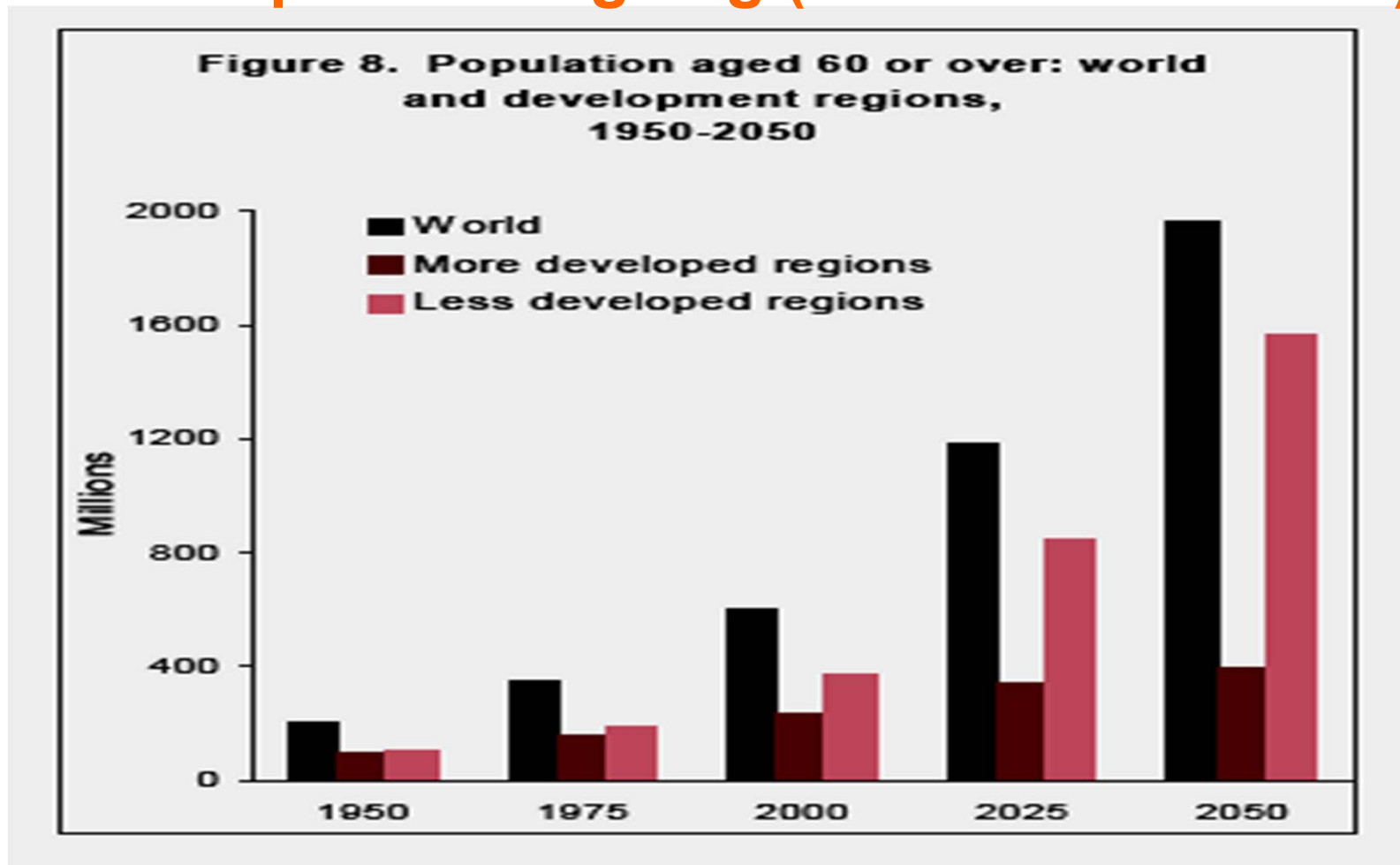
United Nations definition:

- 60 – 75 years: young old
- >75 years: old-old
- - A country is deemed to have an aged population is \geq 10% is aged \geq 60 years

World Health Organisation definition:

- 65 - 79 years: young old
- >79 years: old-old more diseases

World Population Ageing (Absolute Numbers)

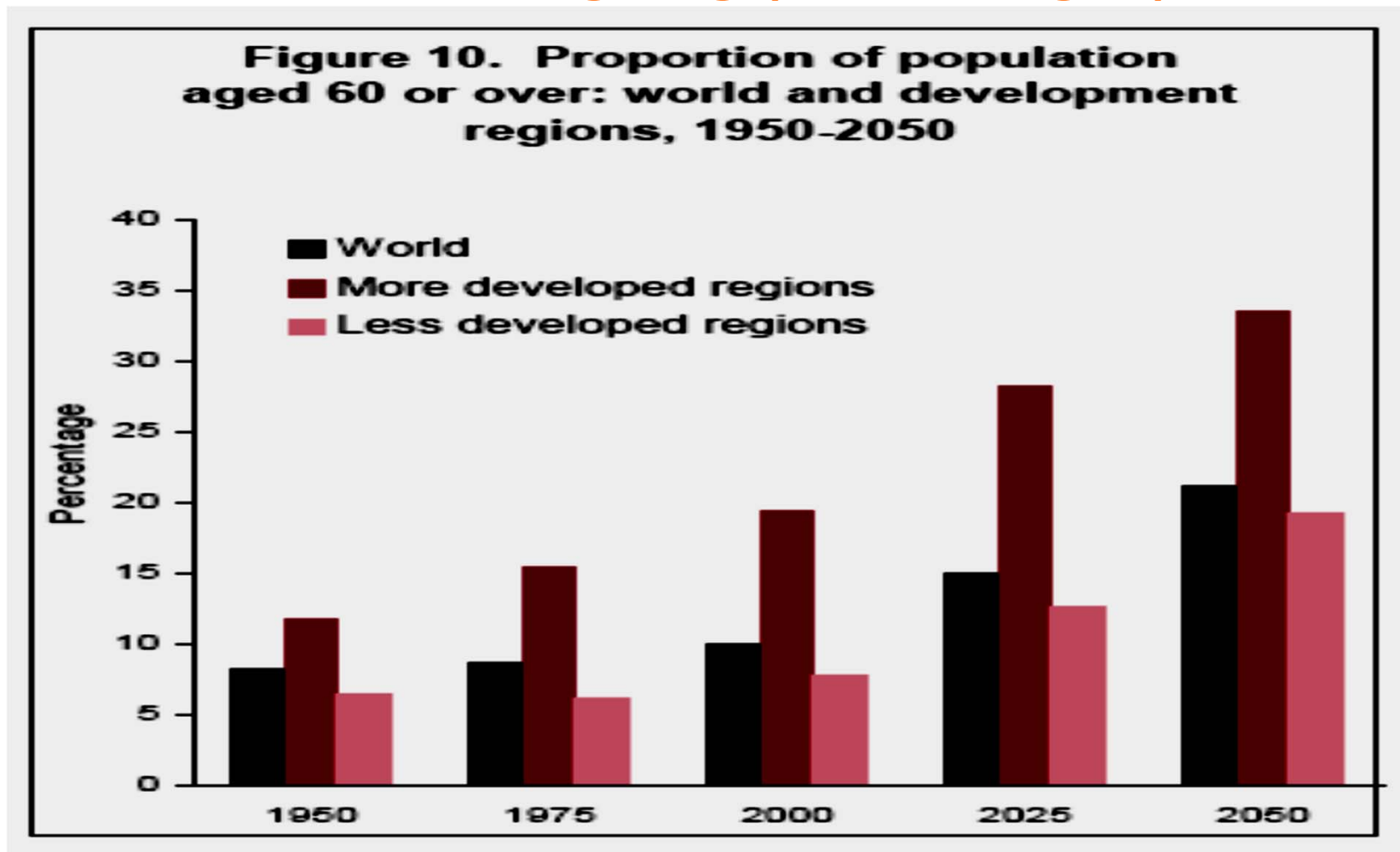


United Nations. World Population Ageing: 1950-2050. 2002.

Available at <http://www.un.org/esa/population/publications/worldageing19502050/>

More developed regions has high percentages.

World Population Ageing (Percentages)

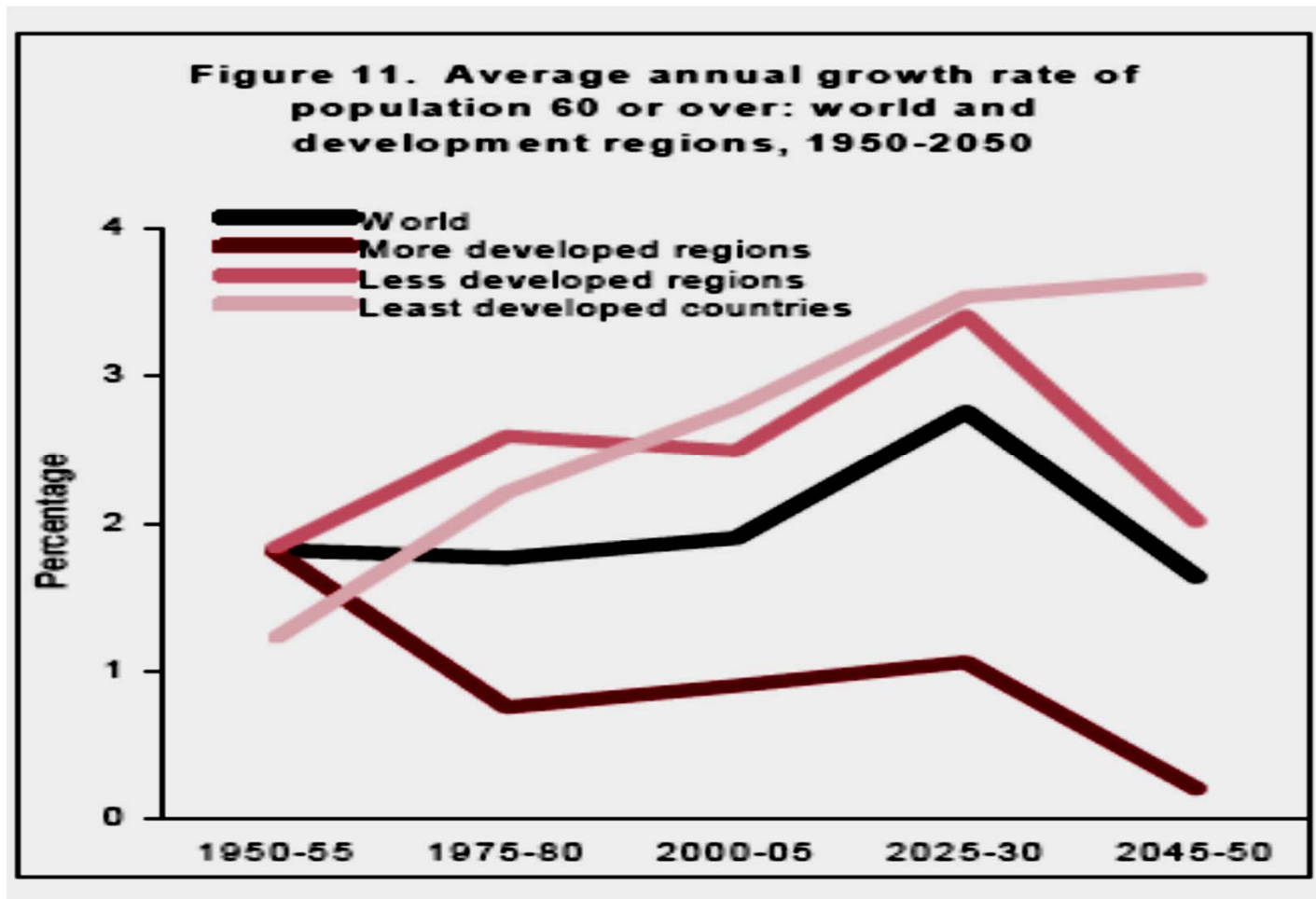


United Nations. World Population Ageing: 1950-2050. 2002.

Available at <http://www.un.org/esa/population/publications/worldageing19502050/>

absolute numbers required to know how many to build bed, while percentage shows how much of the population is supporting the elderly

World Population Ageing (Rate of Ageing)



United Nations. World Population Ageing: 1950-2050. 2002.

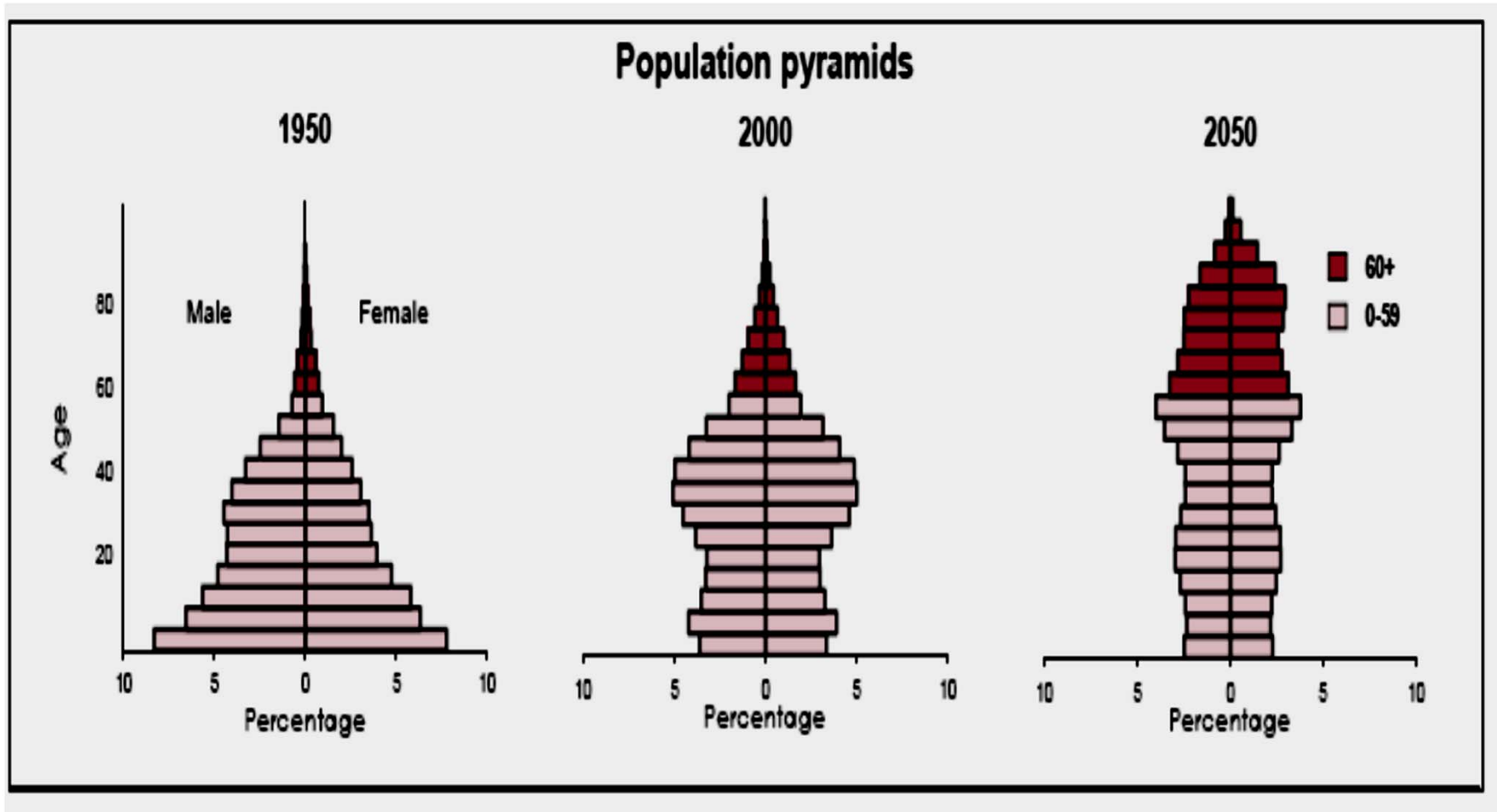
Available at <http://www.un.org/esa/population/publications/worldageing19502050/>

Population Ageing in Singapore

- Singapore is the most rapid ageing country in South East Asia and the 2nd most rapid ageing country in Asia after Japan.
- A result of our decreasing total fertility rate and increasing life expectancy.

number of hospital beds is going to increase by 300 percent.
difficulty is in the manpower

Population Ageing in Singapore



only 4% in the elderly is dependent.
elderly do have an economic value

Population Ageing in Singapore

Indicator	Age	1950	1975	2000	2025	2050
Percentage in older ages						
Total	60+	3.7	6.7	10.6	30.0	35.0
	65+	2.4	4.1	7.2	21.5	28.6
	80+	0.4	0.4	1.4	3.8	12.6
Female	60+	4.6	7.2	11.4	31.9	37.7
	65+	3.1	4.5	8.0	23.1	31.5
	80+	0.5	0.6	1.7	4.5	15.1
Male	60+	2.9	6.3	9.7	28.2	32.3
	65+	1.8	3.7	6.5	19.8	25.7
	80+	0.3	0.3	1.0	3.0	10.0

Take home messages

- The proportion of older persons is increasing and will reach 35% in 2050.
- There are more females in the aged population than males because women have a longer life expectancy.

Population Ageing in Singapore

Indicator	Age	1950	1975	2000	2025	2050
Total fertility rate (per woman)		6.4	1.9	1.5	1.8	1.9

- The **total fertility rate** is the average number of children a woman would bear over the course of her lifetime if current age-specific fertility rates remained constant throughout her childbearing years (normally between the ages of 15 and 49).
- **Question:** Will we be able to reverse our declining total fertility rate between 2000 to 2050?

Population Ageing in Singapore

Indicator	Age	1950	1975	2000	2025	2050
Life expectancy (years)						
Total	Birth	60.4	70.8	78.1	81.3	82.9
	60	..	..	21.4	23.8	25.1
	65	..	..	17.7	19.8	21.0
	80	..	..	9.1	10.1	10.8
Female	Birth	62.1	73.1	80.3	83.6	85.3
	60	..	..	23.2	25.8	27.1
	65	..	..	19.3	21.6	22.8
	80	..	..	9.9	11.1	11.8
Male	Birth	58.8	68.6	75.9	78.9	80.5
	60	..	..	19.6	21.9	23.1
	65	..	..	16.1	18.0	19.1
	80	..	..	8.1	8.9	9.5

- Life expectancy** at a specific age is the average number of additional years a person of that age could expect to live if current mortality levels observed for ages above that age were to continue for the rest of that person's life. In particular, **life expectancy at birth** is the average number of years a newborn would live if current age-specific mortality rates were to continue.

Population Ageing in Singapore

Indicator	Age	1950	1975	2000	2025	2050
Dependency ratio	Total	75.0	58.6	41.0	55.4	73.9
	Youth	70.8	52.1	30.8	22.1	24.1
	Old Age	4.2	6.5	10.2	33.4	49.8

- The **total dependency ratio** is the number of persons under age 15 plus persons aged 65 or older per one hundred persons 15 to 64: **U-shaped curve**.
- The **youth dependency ratio** is the number of persons 0 to 14 years per one hundred persons 15 to 64 years: **decreasing**.
- The **old-age dependency ratio** is the number of persons 65 years and over per one hundred persons 15 to 64 years: **increasing**.

Population Ageing in Singapore

Indicator	Age	1950	1975	2000	2025	2050
Potential support ratio		23.8	15.3	9.8	3.0	2.0
Parent support ratio		2.7	1.5	4.4	7.9	35.0

- The **potential support ratio** is the number of persons aged 15 to 64 per every person aged 65 or older.
- The **parent support ratio** is the number of persons 85 years old and over per one hundred persons 50 to 64 years.
- **Take home message:** There will fewer caregivers for your elderly patients in the future.

Population Ageing in Singapore

		1950	1970	1990	2000	2010
Labour force participation (percentage)						
Total	65+	20.1	18.1	11.6	9.7	8.0
Female	65+	6.7	6.5	4.6	4.3	4.1
Male	65+	41.7	32.7	20.3	16.3	12.8

- The **labour force participation rate** consists of the economically active population in a particular age group as a percentage of the total population of that same age group. [The active population (or labour force) is defined as the sum of persons in employment and unemployed persons seeking employment.]
- **Take home message:** Early retirement reduces disposable income at old age.

Population Ageing in Singapore

		1980	1990	2000	2005	2010
Illiteracy rate (percentage)						
Total	60 - 64	51.1	38.8	22.9	15.8	9.8
	65 - 69	57.2	44.5	32.3	23.1	16.0
	70+	66.0	54.7	41.2	33.8	24.3
Female	60 - 64	75.0	59.4	36.0	25.1	14.8
	65 - 69	80.5	66.7	49.5	36.0	25.1
	70+	85.4	75.0	59.4	49.5	36.0
Male	60 - 64	27.3	17.7	9.3	6.4	4.8
	65 - 69	31.9	21.5	13.6	9.3	6.4
	70+	38.5	27.3	17.7	13.6	9.3

- The **illiteracy rate** of a particular age group indicates the proportion of persons in that group who cannot read with understanding and cannot write a short simple statement on their everyday life.
- **Take home message:** Your future patients will be literate & educated (i.e. are more knowledgeable about their illness and have higher expectations)

Group Work time! 😊

**Task: Evolving case
study**