

Measurements of Health Status

3.1.2



Health

- Write down what **health** means to you, using key words that you associate with the term health.

Are these people healthy?

How do these images reflect the different **dimensions of health?**











World Health Organisation (WHO) Definition of health

A state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity.

Definition

- Limitations ?
- Strengths ?

Strengths:

- Health is a positive concept - it recognises positive aspects of health (i.e. not merely the absence of disease or infirmity)
- Involves the whole person (i.e. other dimensions of health - social, mental and not just the physical aspects)
- Wellbeing - Health is influenced by a wide range of factors/aspects of life
- Health is *dynamic, constantly changing*

Limitations:

- The word 'Complete', which suggests an ideal or perfect state. Most people would agree such a state is not achievable. If not in a complete state in all areas of health at once, you are not healthy according to this definition.
- **Not easily measured** – most of the information and measures of health is about ill-health, rather than the positive features described in the WHO definition
- **Wellbeing is subjective and difficult to measure**
- **Absence** of influence of environmental and inherited factors on health

Dimensions of health (P M S)

Physical health is ???

Social health is ???

Mental health is ???



MUST:

1. LEARN THESE DEFINITIONS
2. BE ABLE TO RECOGNISE / STATE SOME EXAMPLES OF EACH

Physical Health

Relates to the efficient functioning of the body and its systems, and includes the physical capacity to perform tasks and physical fitness.

Positive aspects / examples include:

- The ability to resist disease
- Having a high fitness level
- The ability to recover from illness and injury
- Having sufficient energy, strength and coordination to engage in daily physical activity
- Having a healthy body weight
- Being free from disease or illness

Social Health

Being able to interact with others and participate in the community in both an independent and cooperative way.

Positive aspects / examples include:

- Ability to develop and maintain social interactions and relationships with others
- Being able to positively and effectively communicate with others
- Ability to learn and use appropriate social skills
- Making a positive contribution to the community
- Accepting responsibility for own actions

Mental Health

‘State of wellbeing in which the individual realises his or her own abilities, can cope with normal stresses of life, and can work productively and fruitfully, and is able to make a contribution to his or her community.’

Positive aspects / examples include:

- Ability to understand and express emotions
- A high level of self confidence
- Having a positive /high level of self esteem
- The ability to cope with challenging situations
- Being able to deal with stress

Interrelationships between the Dimensions of Health

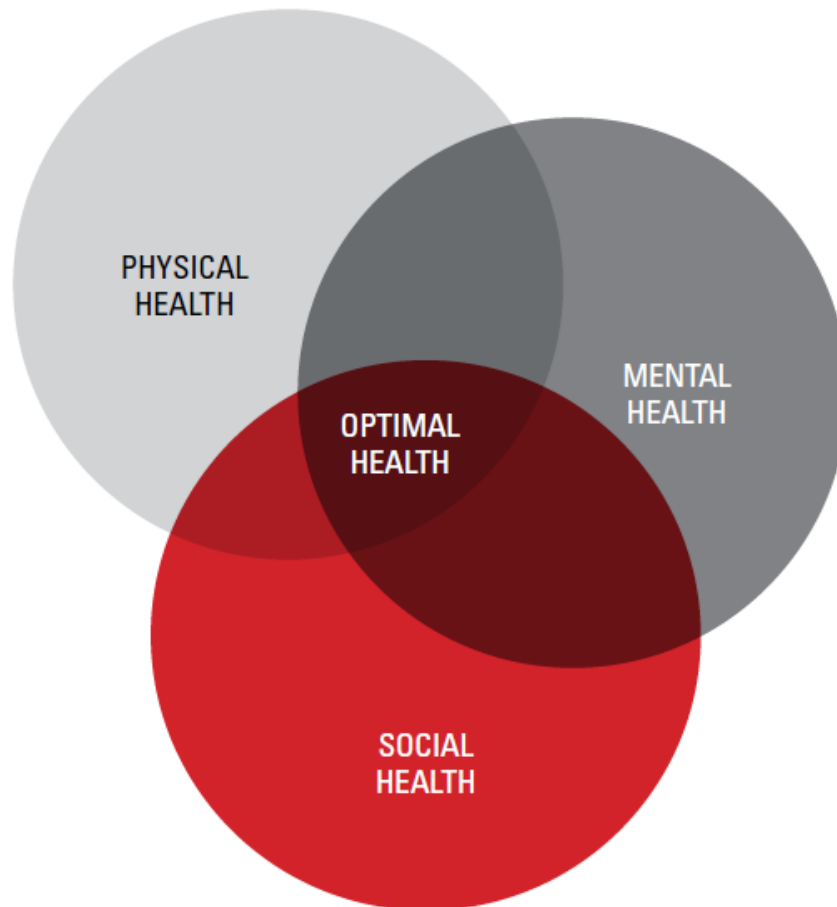
It is essential to understand that although there are different components to health, no one component can exist in isolation.

All of the components of health are interrelated e.g. If an individual is suffering from poor mental health, their physical health will also be impacted (too tired to exercise, weight loss due to stress etc)



Note: the interrelationships between components of health can also be positive!

Interrelationships between dimensions of health



Consider the following examples...

Ben is 29 years old, he is very happy to have just been promoted in his job. Whilst this is a significant achievement for Ben, he now works much longer hours and is beginning to feel stressed from the longer working days.

How does the status of Ben's mental health impact upon his...

- Physical health
- Social health



Consider the following examples...

Lilly is aged 74. She has been living alone since her husband died 5 years ago. As she has become frail with age she has been unable to drive and go out and visit her friends.



Recently, Lilly had a fall in her home and broke her hip. She is no longer able to live alone and is now living in an aged care facility.

How does the status of Lilly's physical health impact upon her:

- Mental health
- Social health

Interrelationships

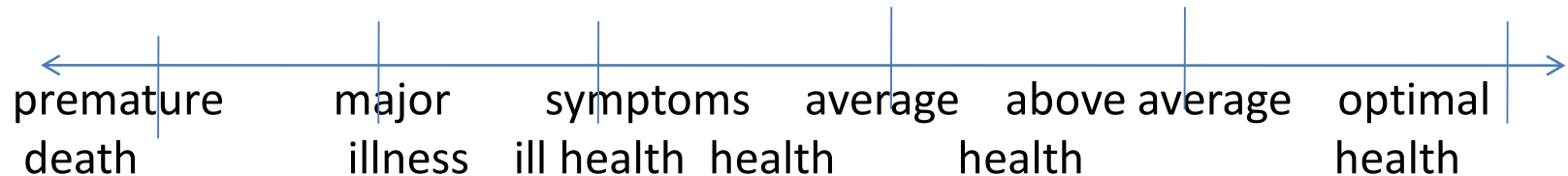
- Clip: Bubble girl's lonely life
- Clip: Jacqui
- Describe the interrelationships between the dimensions of health for this girl.



*Jacqueline Saburido
September 19, 1999*

Health is a changing entity

A HEALTH CONTINUUM



- **Where** on the health continuum would you rate your health at this present time?
- **Where** would it have been 5 years ago?
- **Has** it moved over time? **Explain**
- **Where** would you expect it to be in 5 years time?
- **What factors** may impact on your **health** over the next 5 years?

How would you rate?

Using the 'Health Continuum' place the following people on the continuum (discuss with partner):

- How would you rate an Australian wheelchair athlete who has a very high levels of physical fitness and ability to cope with stress ?
- A woman who has recently recovered from breast cancer , and is now in remission.
- A 15 year old girl who has not had a day off from school all year and smokes 3-4 cigarettes a day.
- A 17 year old boy who is extremely depressed and withdrawn from friends.
- A 90 year old man who walks 4 km a day and whose wife of 60 years just passed away.



Measurements of Health Status

Health status is the term used to describe how 'healthy' an individual, group or population are.

Health status can be determined using a variety of statistical measures, such as LE, YLD etc.

These statistical measures can assess the rate of illness or disease, disability, death, cost of health care etc.

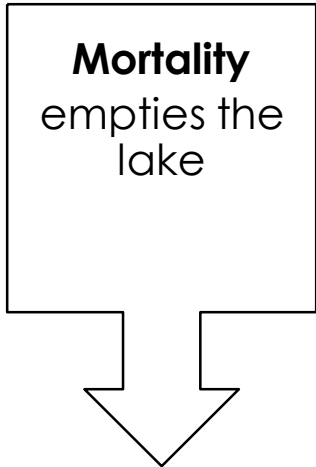
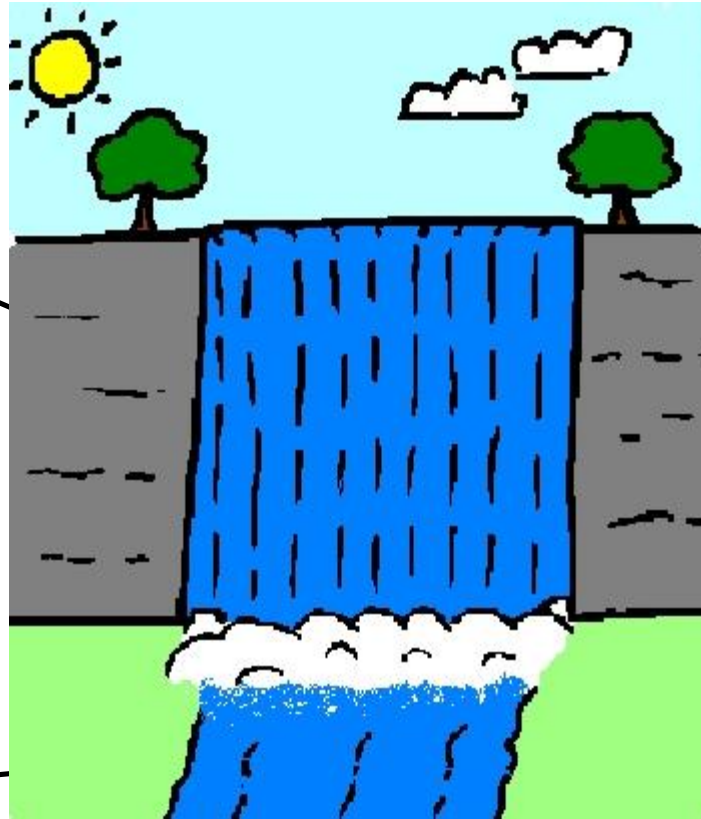
Health Status

- **An individual's or populations overall level of health, taking into account various aspects such as life expectancy, amount of disability, and levels of disease risk factors**
- Important data: Life expectancy, information about diseases/illness, comparisons with other countries
- Information about the health status of a population helps governments shape health policies and to determine how health services should be delivered

Prevalence vs. Incidence

Incidence is like a stream – when the disease or disability occurs

Prevalence is like a lake – the total pool of incidences together



Morbidity

Morbidity refers to levels of illness and disability within a population.

Morbidity rate refers to the incidence and prevalence of a condition within a sub-population or population (usually expressed per 100,000)



Mortality

Mortality refers to deaths in a population

Mortality rate refers to the number of deaths from a specific cause or all causes (usually expressed per 100,000 in a 12 month period).

- for example, a particular illness, disease or environmental factor (motor vehicle accidents).

Sub-categories of mortality include U5MR, IMR & MMR



Sub-categories of mortality

- **U5MR – Under 5 mortality rate**
 - Refers to the number of deaths occurring in a given population of children under five during a specified time period; usually given per 1000 live births.
- **IMR – Infant mortality rate**
 - Refers to the risk of an infant dying between birth and one year of age in given year; usually given per 1000 live births.
- **MMR – Maternal mortality rate**
 - Refers to the number of women dying from pregnancy-related causes; usually given per 1000 live births.



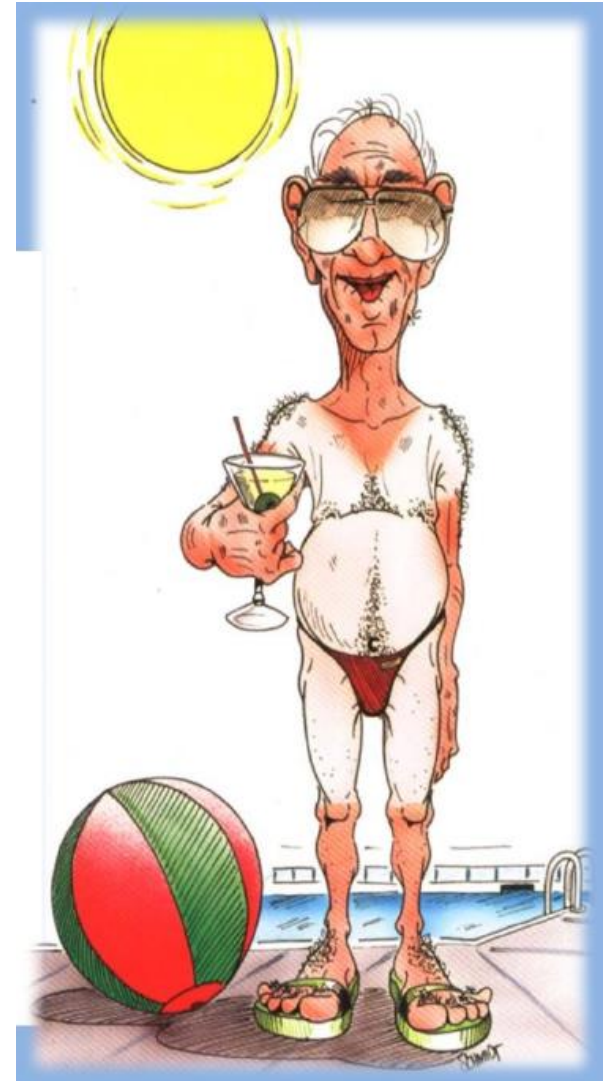
LE - Life Expectancy

Life expectancy (LE) - An indication of how long a person can expect to live. It is the number of years remaining to a person at a particular age if death rates do not change.

LE at birth - An indication of how long a person can expect to live. It is the number of years a newborn can expect to live if death rates do not change.

- Life expectancy does not make allowances for illness or disability.

What environmental and inherited factors may help determine a person's life expectancy?



YLD - Years Lost to Disability

A measure of how many years of life lived with a disability or injury. Calculated using specific disability weights.



What is meant by the term disability?

Examples of disability weights P. 23 text

- Measurement is quite complex and is measured according to 'disability weight' which ranges from :
 - 0 (no impact) to 1 (equivalent death)
- Disability weights are based on the average severity for each condition.

YLL - Years of Life Lost

A measure of how many years of expected life are lost due to premature death.

$$\text{YLL} = \text{LE} - \text{age of death}$$



- YLL is calculated by using the projected life expectancy data. Any death that occurs before the projected age is considered YLL.
- **NOTE:** Does not take disability (morbidity) into account

DALY - Disability Adjusted Life Years

A measure of Burden of Disease. One DALY equals one year of healthy life lost due to premature death (YLL) and time lived with illness, disease or injury (YLD).

$$\text{DALY} = \text{YLL} + \text{YLD}$$

This is a statistical measure which was developed to provide a more accurate picture of health status and burden of disease

The DALY combines in one measure the impact from morbidity (YLD) and the impact from mortality (YLL).

One DALY is equal to one year of life.



Burden of Disease (BoD)

A measure of the impact of diseases and injuries, specifically it measures the gap between current health status and an ideal situation where everyone lives to old age free of disease and disability. Burden of disease is measured in a unit called DALY.

- Essentially burden of disease is the impact or rate of illness and disease in a country.
- Burden of disease is a broad term which encompasses many statistical measures, usually using a unit called DALY.
- Can be used to assess the impact of an individual disease or can assess population health as a whole.

[Clip: Burden of Disease: What does DALY mean?](#)



Example: How does cardiovascular disease contribute to the burden of disease in Australia?

HALE - Health Adjusted Life Expectancy

A measure of burden of disease based on life expectancy at birth, but including an adjustment for time spent in poor health. It is the number of years in full health that a person can expect to live, based on current rates of ill health and mortality.



This may also be written as 'healthy life years'

$$\text{HALE} = \text{LE} - \text{YLD}$$

Is Australia a healthy nation?

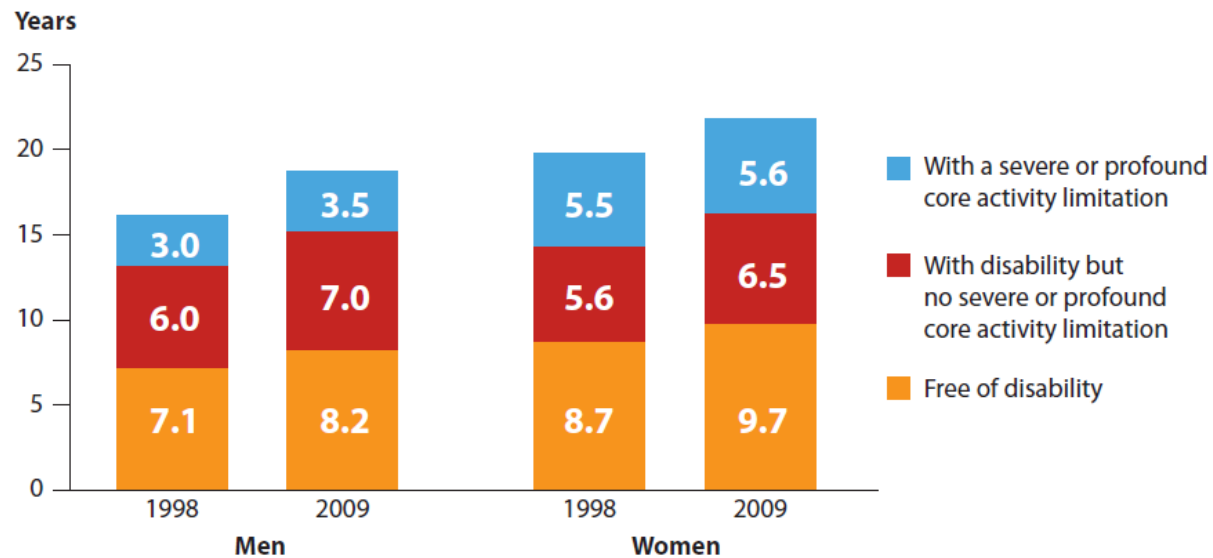
The short answer is 'yes'

- 😊 85% rate their health and quality of life as good to excellent.
- 😊 We compare well with other countries in many ways.
- 😊 We are living longer than ever before.

Living more years in good health

😊 Many older Australians are healthy, and report high satisfaction with life and frequent contact with family and friends.

Expected years of life at age 65, 1998 and 2009



Outliving most of the world

😊 In 2009, we ranked sixth for our male and female life expectancy at birth among similar, developed countries.

Life expectancy at birth: how we compared in 2009



What's good?

- 😊 Heart, stroke deaths are down
- 😊 Surviving a heart attack is more likely
- 😊 Cancer deaths down
- 😊 **Cancer** survival rates up
- 😊 Cigarettes burning out
- 😊 Breathing easier

What needs improving?

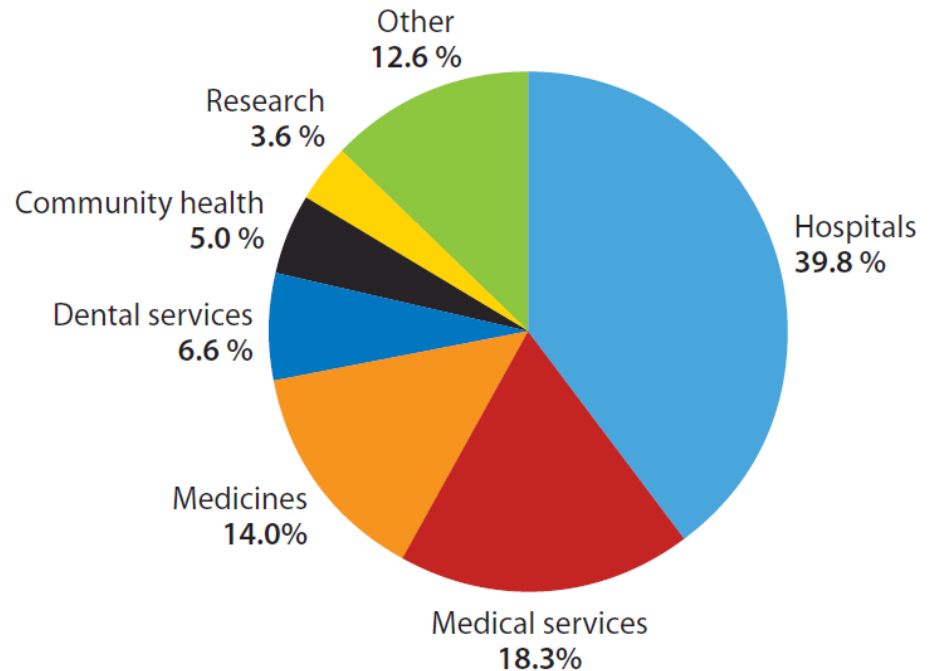
- ☹️ Obesity is growing
- ☹️ Diabetes doubled
- ☹️ Burden on our minds
- ☹️ Chlamydia rates rising
- ☹️ Kidney disease increasing
- ☹️ Injuries taking their toll
- ☹️ Not everyone is smiling
- ☹️ Losing our senses
- ☹️ Low organ donation rates

What are we spending?

✓ Australia spent
\$121.4 billion on health
in 2009–10.

✓ Accounting for 9.4% of GDP
(Gross Domestic Product-GDP = total spending on all
goods and services in the economy)

✓ This averaged out to
\$5,479 per person.



What can you do for good health?

- ✓ Get vaccinated
- ✓ Brush teeth with fluoridated toothpaste
- ✓ Butting out around children
- ✓ Reduce alcohol consumption
- ✓ Reduce illicit drug use
- ✓ Eat more fruit and vegies
- ✓ Make time for physical activities
- ✓ See your GP for preventive health advice



Eat more fruit and vegies

Dietary guidelines recommend that Australian men and women consume two to four serves of fruit and four to eight serves of vegetables per day.

2 serves of fruit

+

5 serves of vegies

Did you know?

One serve of vegetables can be:



1/2 cup cooked
vegetables or
cooked legumes

=



1 medium
potato

=



1 cup salad
vegetables

One serve of fruit can be:



1 medium piece
(e.g. apple)

=



2 small pieces
(e.g. apricots)

=



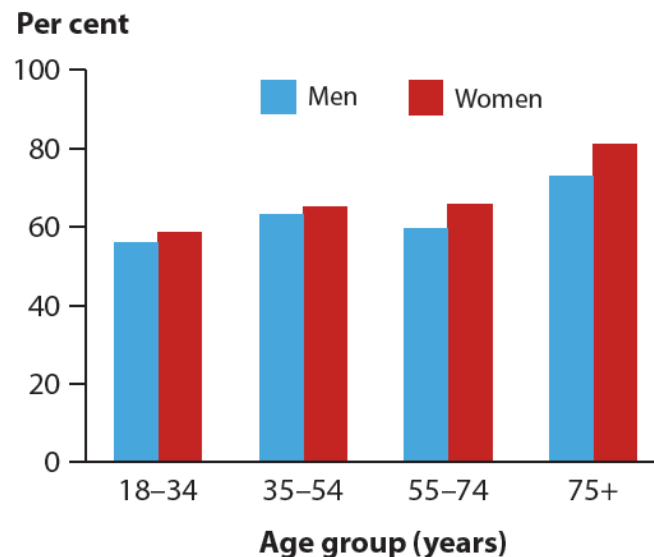
1 cup chopped
or canned fruit

Make time for physical activities

Physical inactivity. The percentage of adults who did not participate in sufficient regular physical activity to gain a health benefit. The recommended minimum level of activity is 150 minutes per week of walking or other moderate or vigorous activity, over at least five sessions.



- In 2007–08, most adults (62%) did not do the recommended amount of physical activity.
- Physical inactivity increased with age—76% of people aged 75 and over did not meet the guidelines, compared with 57% of people aged 18–34.
- Women were slightly more likely than men to be physically inactive.



Source: ABS 2011a.

On an average day in Australia...



342,000 people visit a GP



742,000 medicines are dispensed by community pharmacies



6,800 people are transported by ambulance; a further 900 are treated but not transported



71,000 km are flown by the Royal Flying Doctor Service and 107 evacuations performed



23,000 people are admitted to hospital (including 5,000 for an elective surgery)



820 babies are born (including 260 by caesarean section)



17,000 people visit an emergency department at larger public hospitals



400 treatment episodes are completed with alcohol and other drug treatment services

The changing face of Australia...

Then and now

	1960*	2010*
Median age (years)	29.6	36.9
Aged 65 and over (per cent)	8.5	13.5
Total fertility rate (babies per woman)	3.45	1.89
Average age at death (years)	63.6	74.9
Average household size (number of people)	3.6	2.6
Married (per cent)	64.2	49.6
Divorced (per cent)	1.1	8.2
Born overseas (per cent)	16.9	26.8
Living in capital cities (per cent)	59.9	64.0

*or closest year available.