Measuring Health Status – KEY TERMS
Health Status

Key knowledge:
- Indicators used to measure and understand health status: incidence, prevalence, morbidity, burden of disease, disability-adjusted life year (DALY), life expectancy, health-adjusted life expectancy (HALE), mortality (including maternal, infant and under 5) and self-assessed health status

Key Skills:
- Describe and apply indicators used to measure health status of Australians
- Use data to describe and evaluate the health status of Australians.
Health Status

Health status:
‘An individual’s or population’s overall level of health, taking into account various aspects such as life expectancy, amount of disability, levels of disease risk factors’ (Australian Institute of Health and welfare).

Health indicators:
‘Standard statistics that are used to measure and compare health status (e.g. life expectancy, mortality and morbidity rates)
What is ‘Self-Assessed Health Status’?

‘An indicator that reflects a person’s perception of his or her own health and well-being at a given point’

Data is often collected from population surveys

Participants are asked to classify their health status according to five levels (excellent – poor)

SEE FIGURE 2.3 Page 46
Life expectancy

- Life expectancy is the most commonly used indicator of a population’s health:
  ‘An indication of how long a person can expect to live, it is the number of years of life remaining to a person at a particular age if death rates do not change’

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Females</th>
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</thead>
<tbody>
<tr>
<td>Life expectancy</td>
<td>78.5</td>
<td>83.3</td>
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<td>(2003-05)</td>
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<tr>
<td>Life expectancy</td>
<td>80.4</td>
<td>84.5</td>
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<td>(2015)</td>
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Life expectancy - Limitations

- Life expectancy is a useful health indicator particularly when comparing countries or population groups.
- Life expectancy however does not give an indication of the quality of life.
Health adjusted life expectancy (HALE)

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 of full health that a person can expect to live, based on current rates of ill health and mortality

| Health adjusted life expectancy is often referred to as ‘healthy life expectancy’ |
|--------------------------------|-----------|-----------|
| Life expectancy (2015)        | Males     | Females   |
|                               | 80.4      | 84.5      |
| Health adjusted life expectancy (2015) | 70.8      | 72.9      |
| (Difference)                  | 9.6 years | 11.6 years |
In Summary: Health-adjusted life expectancy

- Refers to the number of years a person can expect to live without reduced functioning (including decreased mobility and the decline in the functioning of body systems) due to ill health

- It is an indicator of both quantity and quality of life
Health adjusted life years (HALE)

- Can be remembered by the below equations:
  \[ \text{HALE} = \text{life expectancy} - \text{number of years living in unhealthy states} \]
- Health years: years living free from disability or disease
Mortality

‘Mortality refers to deaths particularly in a population’

Mortality rate the measurement of the proportion of a population who die on a one year period (usually per 100 000)
What is ‘age-standardised rates’ and why is it used?
Why is it useful to identify the leading causes of death?
Why have the leading causes of death changed over the past century?
Why have deaths from infectious diseases, cervical cancer and motor vehicle accidents decreased?
Why have mortality rates from type 2 diabetes and dementia increased?
Infant Mortality/Under-five Mortality Rates

- Mortality rates for infants and children are key indicators of the general health and wellbeing of a population
- Reflect the social and economic resources
- Rely on others to meet their basic needs of food, water and healthcare
- Susceptible to infections and illnesses due to their underdeveloped immune systems
Maternal Mortality Rate

‘Relates to the deaths of mothers as a result of pregnancy or childbirth, up to six weeks after delivery’

- Leading causes include cardiovascular disease and obstetric haemorrhage.
Morbidity refers to ill health in an individual and the levels of ill health in a population or group (AIHW)

Morbidity rate is a measure of how many people suffer from a particular condition during a given period of time

Morbidity rates for many causes have increased whilst some mortality rates have fallen. WHY?
Measures of Morbidity: Prevalence and incidence

**Prevalence:** The number or proportion of cases of a particular disease or condition in a population at a given time

**Incidence:** The number or rate of new cases of a particular disease during a specified period of time (usually a 12 month period)
Burden of disease

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 an old age free of disability and disease.

- Burden of disease is measured in a unit called the disability-adjusted life year or DALY (one DALY = 1 year of life lost due to premature death or the equivalent time of healthy years lost as a result of living with a disease or disability)
Years of Life Lost (YLL)

- These are the fatal component of DALY
- Each YLL represents one year of life lost due to premature death.
- For example: If a person dies at 60 from a car accident, and life expectancy for a 60 year old is 85, then 25 years of life have been lost.
Years of Life Lost due to Disability (YLD)

- Years lost due to disability (YLD) are the non-fatal component of DALY

- A complex formula is used for this calculation
Disability adjusted life year (DALY)

- One DALY is the equivalent of one healthy year of life lost
- Calculating burden of disease

\[
\text{DALY} = \text{YLL} + \text{YLD}
\]

\[
\text{YLL} = \text{Years of life lost}
\]

\[
\text{YLD} = \text{Years of life lost due to a disability}
\]
YLL and YLD Comparison

- Both YLL and YLD have equal value – one year
- YLL is premature death whereas YLD is from illness, injury or disability
In Summary......

- Why have incidence and prevalence of certain diseases increased in Australia?
- Why is the overall rate of DALY relatively high in the first year of life?
- Why is the total number of DALY relatively low in younger age groups, although gradually increase for those aged 60 – 64?