



**Health and Human Development Units 3&4 Summary Notes**

# Chapter 1

**Unit 3 Outcome 1 - SAC 1**

**Topic 1: 1.1 - 1.8**

<b>Term</b>	<b>Definition</b>
<b>Health and Wellbeing</b>	<b>Definition:</b> The state of a person’s physical, social, emotional, mental and spiritual existence and is characterised by an equilibrium in which the individual feels happy, healthy, capable and engaged.
<b>Physical health and wellbeing</b>	<b>Definition:</b> Relates to the functioning of the body and its systems; it includes the physical capacity to perform daily activities or tasks
<b>Social health and wellbeing</b>	<b>Definition:</b> Relates to the ability to form meaningful and satisfying relationships with others and the ability to manage or adapt appropriately to different social situations
<b>Emotional health and wellbeing</b>	<b>Definition:</b> Relates to the ability to express emotions and feelings in a positive way. It’s about the positive management and expression of emotional actions and displaying resilience
<b>Mental health and wellbeing</b>	<b>Definition:</b> Relates to ideas, beliefs, values and ethics that arise in the minds and conscience of human beings. Optimal mental health and wellbeing enables an individual to positively form opinions, make decisions and use logic.
<b>Spiritual health and wellbeing</b>	<b>Definition:</b> Relates to ideas, beliefs, values and ethics that arise in the minds and conscience of human beings. It includes the concepts of hope, peace, a guiding sense of meaning or value, and reflection on a person’s place in the world. Spiritual health and wellbeing can also relate to organised religion, a higher power and prayer, values, a sense of purpose in life, connection or belonging

<b>Disease</b>	<b>Definition:</b> Disease is a physical mental disturbance involving symptoms, dysfunction or tissue damage
<b>Difference between disease and illness</b>	<b>Definition:</b> Disease is a physical mental disturbance involving symptoms, dysfunction or tissue damage. Whereas illness is a subjective concept relating to a personal experience of a disease
<b>Illness</b>	<b>Definition:</b> illness is a subjective concept relating to a personal experience of a disease
<b>Dynamic</b>	<b>Definition:</b> It means continually changing. <ul style="list-style-type: none"> <li>- An individual's health and wellbeing</li> <li>- A populations health and wellbeing</li> </ul>
<b>Subjective</b>	<b>Definition:</b> Means health and wellbeing can be influenced or based on personal beliefs, feelings, or opinions.
<b>Interrelated</b>	<b>Definition:</b> Relates to the fact that all dimensions of health and wellbeing affect one another. A change in one dimension will usually have an impact on the other four dimensions.
<b>Optimal health and wellbeing</b>	<b>Definition:</b> the highest level of health and wellbeing an individual can realistically obtain
<b>Equilibrium</b>	<b>Definition:</b> A state of balance and/or calmness
<b>Infirmity</b>	<b>Definition:</b> the quality or state of being weak or ill; often associated with old age

## 1.3 – Dimensions of health and wellbeing

The WHO definition of health acknowledges that there is a range of dimensions of health and wellbeing — namely the physical, mental and social dimensions. In recent years, there has been an increased focus on the emotional and spiritual dimensions of health and wellbeing, which will also be considered in this section

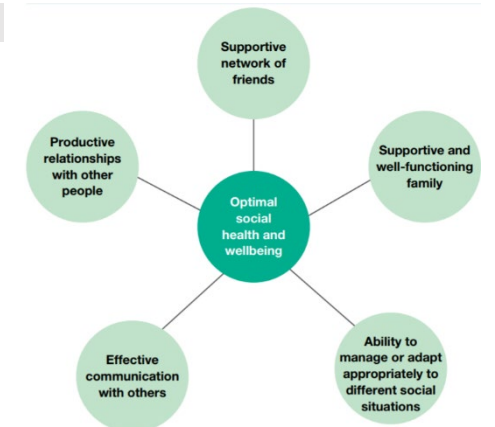
### 1.3.1 – Physical Health and Wellbeing

- Physical health and wellbeing relates to the functioning of the body and its systems; it includes the physical capacity to perform daily activities or tasks. Physical health and wellbeing is supported by factors such as regular physical activity, consuming a balanced diet, having appropriate rest or sleep, maintaining an ideal body weight, and the absence of illness, disease or injury.
- Simply ‘not being sick’ is perhaps the most basic level of physical health and wellbeing, but there are many other aspects of the physical dimension.
- A person may be free from disease and injury but may not have enough energy to complete the tasks they need to. They may be unfit or overweight, all of which relate to physical health and wellbeing. It is only when the whole body and its systems are functioning to the best of their ability that a person can be considered as having optimal physical health and wellbeing



### 1.3.2 – Social Health and Wellbeing

- Social health and wellbeing relates to the ability to form meaningful and satisfying relationships with others and the ability to manage or adapt appropriately to different social situations. It also includes the level of support provided by family and within a community to ensure that every person has an equal opportunity to function as a contributing member of the society. Social health and wellbeing is supported by strong communication skills, empathy for others and a sense of personal accountability.
- The quality of relationships that individuals have with others is a key aspect of social health and wellbeing. Humans are social beings, and interacting with others is an important aspect of human existence. Sometimes these interactions are positive and add value to life.
- When an individual has a supportive group of friends, a supportive and well-functioning family and maybe an intimate relationship with another person, their social health and wellbeing is optimal.



### 1.3.3 – Emotional Health and Wellbeing

- Emotional health and wellbeing relates to the ability to express emotions and feelings in a positive way. Emotional health and wellbeing is about the positive management and expression of emotional actions and reactions as well as the ability to display resilience.
- Emotional health and wellbeing is the degree to which an individual feels emotionally secure and relaxed in everyday life. Experiencing a variety of emotions is part of human life.
- Although the basic emotions are experienced by most people at some stage in their lives, they often experience them in different ways and in different circumstances. Consider embarrassment. Some people may feel embarrassed in a situation that would not cause embarrassment to others. They may also experience different degrees of embarrassment ranging from slight discomfort to severe anxiety. The situations in which embarrassment is experienced, and the way it is experienced, are often influenced by the individual's level of emotional health and wellbeing

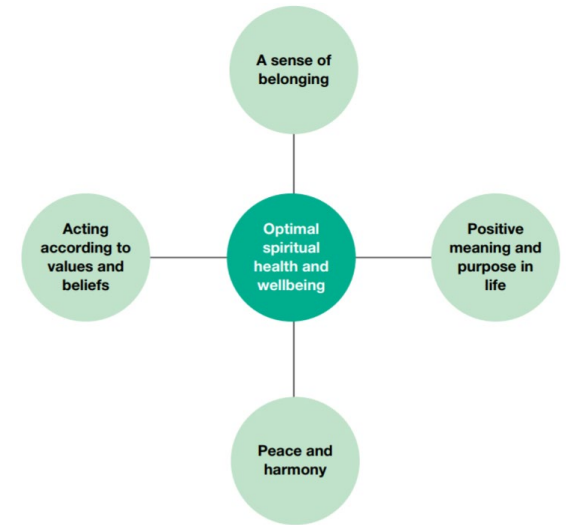
### 1.3.4 – Mental Health and Wellbeing

- Mental health and wellbeing is the current state of the mind or brain and it relates to the ability to think and process information. A mentally healthy brain enables an individual to positively form opinions, make decisions and use logic. Mental health and wellbeing is about the wellness of the mind rather than illness.
- Mental health and wellbeing is associated with low levels of stress and anxiety, positive self-esteem, as well as a sense of confidence and optimism. The human mind is a complex thing, and it is what sets us apart from other animals. The way the mind functions determines mental health and wellbeing. When stress levels are low, and a person feels relaxed and positive about themselves and life, mental health and wellbeing can be said to be optimal.
- Conversely, if a person is stressed and experiencing negative thought patterns about themselves, others, or the world in general, mental health and wellbeing may not be optimal. Mental disorders are often associated with poor mental health and wellbeing, but these concepts are not the same.
- Mental disorders relate to conditions that significantly impact on thought processes and mental functioning, such as depression and anxiety. Mental health and wellbeing, on the other hand, relates to the overall functioning of the mind and can be positive or negative.



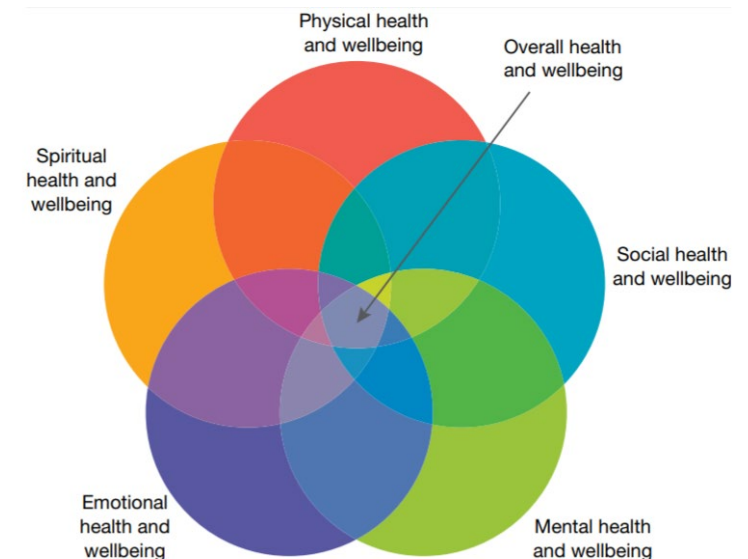
### 1.3.5 – Spiritual Health and Wellbeing

- Spiritual health and wellbeing is not material in nature, but relates to ideas, beliefs, values and ethics that arise in the minds and conscience of human beings. Spiritual health and wellbeing includes the concepts of hope, peace, a guiding sense of meaning or value, and reflection on a person's place in the world.
- Spiritual health and wellbeing can be highly individualised; for example, in some traditions, spiritual health and wellbeing may relate to organised religion, a higher power and prayer, while in other practices it can relate to morals, values, a sense of purpose in life, connection or belonging
- A sense of belonging is a human need. A sense of belonging occurs when a person feels like a member or a part of the society or world in which they live. Belonging assists in seeing value in life and can help in dealing with painful experiences. Individuals who have a sense of belonging realise that everyone goes through hard times and that they are not alone.



### 1.4 - Interrelationships between the dimensions of health and wellbeing

- The five dimensions of health and wellbeing are interrelated; that is, they all affect each other. Although they will not all be affected in the same way or to the same degree, a change in one will usually have some effect on the other four. For this reason, all five dimensions need attention in order to achieve optimal health and wellbeing.
- Overall health and wellbeing is determined by the combined levels of health and wellbeing in the five dimensions as shown in figure 1.17. Each circle represents a dimension of health and wellbeing. They all influence each other, and all combine to produce the overall level of health and wellbeing experienced. When all five dimensions are as good as they can be, health and wellbeing is said to be optimal.
- Optimal health and wellbeing, therefore, refers to the highest level of health and wellbeing an individual can realistically attain. However, everyone is born with different genetic potential and is influenced by different environments. As a result, every individual's level of optimal health and wellbeing will be different.



Consider a student who has suffered a broken leg (physical health and wellbeing) and is recovering in hospital. While in the hospital and during the recovery phase, their health and wellbeing could be affected in numerous ways:

#### Physical health and wellbeing:

- may not be able to exercise, so fitness levels reduce
- could gain weight as physical activity levels decrease
- immune and other body systems may be affected by the food given in hospital (this could have positive or negative effects on health and wellbeing, depending on what the diet was like before)

#### Social health and wellbeing:

- might make new friends in hospital
- may get a lot of visits from family members they would not normally see
- will not be able to socialise and interact with friends at school and during leisure time

#### Mental health and wellbeing:

- may be depressed about missing out on socialising with friends and family
- may feel like they are a burden on their family.

#### Emotional health and wellbeing:

- could experience a range of emotions including frustration or feelings of loneliness
- might be happy or sad to miss out on school

#### Spiritual health and wellbeing:

- may develop a sense of belonging with those in the hospital setting
- may accept that some aspects of life are out of their control, thereby promoting spiritual health and wellbeing.

### **1.5 - Optimal health and wellbeing as a resource**

- In 1986 the World Health Organization stated that to reach an optimal level of health and wellbeing, 'an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health (and wellbeing) is, therefore, seen as a resource for everyday life, not the objective of living'.
- With this in mind, it becomes clearer that health and wellbeing is both a resource and an outcome. As a resource, health and wellbeing can provide benefits for individuals, countries and the world as a whole.



**TABLE 1.3** How the five dimensions of health and wellbeing can influence each other

	Physical	Social	Mental	Emotional	Spiritual
<b>Physical</b>		When an individual experiences good physical health and wellbeing, they are physically able to participate in activities with friends.	An individual experiencing good physical health and wellbeing is more likely to feel good about themselves and have positive self-esteem.	An individual who is sick may experience emotions such as fear and anger.	A person who is in a good state of physical health and wellbeing is able to connect with other members of society, which can enhance feelings of belonging.
<b>Social</b>	Having strong social networks can reduce the risk of a range of conditions including cardiovascular disease.		Having a close network of friends allows people to share problems with others, which can reduce stress.	Close social bonds allow individuals to be themselves and share their emotions with others.	When a person has social bonds, they are more likely to feel connected to society.
<b>Mental</b>	Stress can lower immune system function and increase the risk of infectious diseases.	If a person is experiencing good mental health and wellbeing, they are more likely to interact in a positive way with friends and family.		With low levels of stress and high self-esteem, an individual may be better able to fairly judge the emotions they are experiencing.	Stress is characterised by excessive self-focus. When an individual is focusing on themselves, they are less likely to feel connected to their community.
<b>Emotional</b>	If an individual can recover from misfortune, they are more likely to participate in their normal activities such as exercise, which can enhance fitness.	An individual who can express their emotions can share their feelings with friends, which can promote more meaningful friendships.	If an individual can process emotions effectively, they may feel better about themselves, which enhances self-esteem.		Experiencing appropriate emotions (both positive and negative) can assist in a person feeling connected to their world and the events that occur in it.
<b>Spiritual</b>	When an individual has purpose in life, they are more likely to take care of themselves physically so they can fulfil their purpose. This can promote a healthy body weight.	If an individual feels connected to their society, they are more likely to treat people fairly, which can enhance relationships.	Believing that life has a positive meaning and purpose can enhance self-esteem.	If a person acts according to their values and beliefs, they may feel more comfortable with the emotions they experience throughout life.	

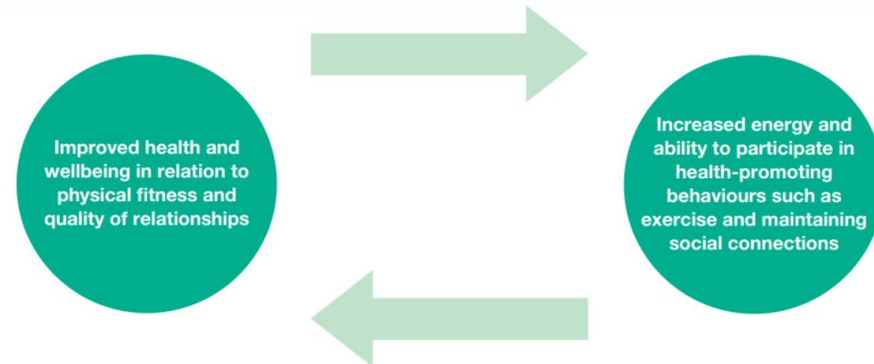
### 1.5.1 Importance of health and wellbeing as a resource individually

- Similar to other traits such as knowledge, social skills and creativity, health and wellbeing is a characteristic of human existence. Like these traits, health and wellbeing can be used to enhance human life but cannot be directly traded or sold for goods and services. It also cannot be obtained in exchange for goods and services.
- On a basic level, optimal health and wellbeing reduces the risk of illness and premature death. The Australian Institute of Health and Welfare (2013) estimates that 4.5 million years of healthy life were lost in Australia in 2011 from either premature death or time lived with illness, disease or injury.
- As well as reducing the risk of premature death and disease, optimal health and wellbeing increases the ability of individuals to live free from pain and concentrate on activities that improve their lives such as studying, working and socialising. Optimal health and wellbeing also decreases stress and anxiety and promotes positive emotions such as happiness.

Being healthy can assist in creating a cycle of wellbeing. It allows individuals to work more effectively and improve their lives, which in turn promotes health and wellbeing. For example, optimal health and wellbeing increases the capacity of individuals to:

- work productively
- gain an education
- earn an income
- exercise
- effectively run a household (e.g. shopping, cleaning, caring for children)
- spend time with friends
- work towards their purpose in life
- increase leisure time
- live independently
- sleep well
- maintain positive thought patterns.

**FIGURE 1.20** Optimal health and wellbeing is a resource that can be used to further promote the health and wellbeing of individuals.



All these processes contribute to improved health and wellbeing, which increases the ability of individuals to further promote or improve their health and wellbeing. Optimal health and wellbeing also reduces healthcare costs for individuals. Illness can generate significant health-related costs such as doctor's consultations and medication. Individuals are often required to make financial contributions towards these costs, thereby reducing the amount of money that can be spent on other things.

## 1.5.2 Importance of health and wellbeing as a resource nationally

In addition to its importance to individuals, optimal health and wellbeing has a number of social and economic benefits for a country's population as a whole (see figure 1.21).

Populations with optimal levels of health and wellbeing experience greater economic benefits such as:

- higher average incomes
- greater productivity
- less absenteeism from work
- less reliance on social security
- reduced healthcare and associated caring costs.

Social benefits of optimal health and wellbeing for countries include:

- improved life expectancy and other health outcomes
- reduced levels of stress in the community
- more participants in social activities such as community activities and volunteering
- and less strain on the health system (contributing to shorter waiting lists for elective surgery for example).

The most basic way to examine the importance of health and wellbeing at a national level may be through measurable indicators. The measurable costs of health and wellbeing are often related to aspects of the physical dimension, but it is important to remember that illness in relation to any dimension will impact on the person as a whole and also contribute to lower levels of health and wellbeing for the population. Optimal health and wellbeing decreases reliance on the health system, and this has economic benefits. Doctors' consultations, medication and other health services cost Australians over \$161 billion in 2014–15. Many of these costs could be saved if all people experienced optimal health and wellbeing.

FIGURE 1.21 The importance of health and wellbeing nationally



### 1.5.3 Importance of health and wellbeing as a resource globally

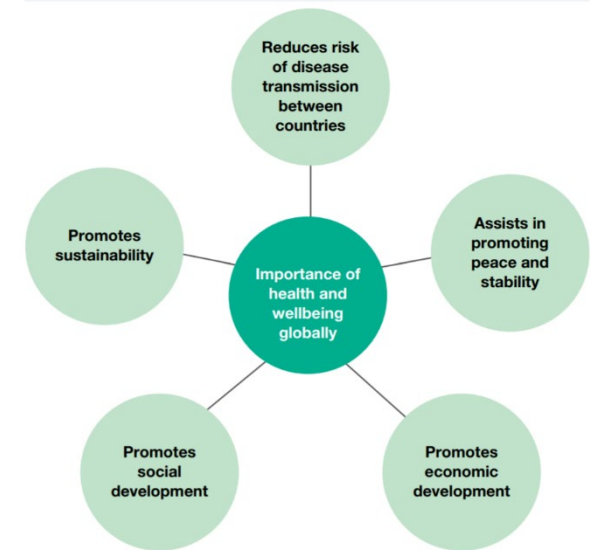
As well as being an important resource for populations within countries, optimal health and wellbeing provides a range of benefits for the population on a global scale as shown in figure 1.23. Optimal health and wellbeing can reduce the risk of infectious or communicable diseases spreading between countries. Infectious or communicable diseases refer to diseases that are passed from one person to another from either direct or indirect contact:

- *direct contact* — through touch (e.g. chicken pox), sexual intercourse (e.g. syphilis, HIV), saliva and droplets from coughing (e.g. influenza), and through human waste such as faecal or oral transmission (e.g. hepatitis A)
- *indirect contact* — through water (e.g. cholera), food (e.g. E. coli), blood (e.g. hepatitis B and HIV), and vectors such as mosquitoes (e.g. malaria).

Given favourable conditions, these diseases can spread quickly from person to person and can result in a pandemic, where the disease spreads across large geographical regions and affects a high proportion of the population in a relatively short period of time.

Pandemics can have serious consequences for the global population including significant rates of illness and premature death, reduced workforce participation and productivity, the shutdown of non-essential services, disruptions to travel and the transport of goods, food shortages, school closures, and the breakdown of law and order. In times of crisis such as in the event of a pandemic, people are often unable to go about their daily activities and instead shift their focus to survival, which impacts on all aspects of life.

**FIGURE 1.23** The importance of health and wellbeing as a resource globally



## 1.6 - Prerequisites for health — part 1

### Peace

peace can be defined as the absence of conflict. When a community or country is experiencing peace, there is a decreased risk of premature death, serious injury, disability and other adverse effects that are usually associated with conflict. Peace, therefore, promotes the physical; health and wellbeing of all people.

- From an individual perspective, the risk of injury and premature death associated with conflict decreases during times of peace, and the accompanying reduction in levels of stress and anxiety can enhance mental health wellbeing.
- A peaceful environment increases the ability of people to move freely around their community and go about their daily activities such as working, accessing food, going to school and socialising. This enhances their choices, allows them to pursue their purpose in life and further promotes health and wellbeing. Peace promotes the preservation of infrastructure including roads and other transport systems, agriculture, water and electricity systems, healthcare facilities, schools and places of employment — all of which are often destroyed during the conflict.

## Shelter –

shelter describes a structure that provides protection from the outside environment. Adequate shelter is a basic human right and provides a number of benefits to health and wellbeing. These include protection from the elements, privacy, safety and security, reduced stress and anxiety, ability to focus on employment or education, and more time to pursue a purposeful and meaningful life.

- Many geographical regions experience extreme weather events which contribute to hundreds of thousands of deaths each year. The adequate shelter can provide protection from such occurrences and assist in reducing levels of stress and anxiety as exposure to extreme weather is decreased
- Protection from adverse weather can promote adequate sleep, which in turn can increase the ability to pursue employment and education in the waking hours. Adequate sleep also increases the capacity of individuals to participate in activities that add value to life, such as socialising and participating in the life of their community. This promotes social health and wellbeing.

## Education –

education impacts health and wellbeing in numerous ways. Education empowers individuals and increases their ability to earn an income, understand health promotion messages, exhibit healthy behaviours, and find meaning and purpose in life. As a result, educated people often have greater access to the resources required to experience high levels of health and wellbeing.

- Education is often a key requirement for obtaining meaningful and well-paid employment that promotes economic development and increases the ability of individuals to afford resources such as food, shelter and healthcare, all of which promote health and wellbeing
- Meaningful employment also promotes self-esteem and provides a sense of purpose and meaning in life, which enhances spiritual health and wellbeing
- Educated individuals are more empowered to take control of their lives. Educated women, for example, are particularly advantaged in relation to having a say in the decisions that affect their lives, such as when and if they get married and whether or not to have a family.

## Food –

Adequate food intake is both an essential requirement for life and a basic human right. 'The state in which all persons obtain nutritionally adequate, culturally appropriate, safe food regularly through local non-emergency services.' (VicHealth) is referred to as food security. Food security increases the ability of individuals to consume the required ingredients, which is important for the functioning of the human body. It provides the energy required for individuals to complete daily tasks and reduces the risk of malnutrition.

- Some of the nutrients in food are important for increasing immunity to disease. With food security, individuals spend less time looking for food and are less likely to experience stress because they know there is food available. This can promote mental health and wellbeing.
- Access to appropriate and nutritious food helps to provide adequate levels of energy. Adequate energy increases the capacity of children to attend school and learn. Improved health and wellbeing due to adequate nutrition enables individuals to work and earn an income. This ultimately contributes to the improvement of the economy of a country.

## Explain 3 ways that:

### Peace can promote health and wellbeing:

- Reduces the risk of premature death and Injury
- Increases the ability of people to work
- Increases the ability of people to attend school

### Shelter can promote health and wellbeing:

- Provides protection from the elements
- Provides a safe place for people to spend their time and pursue activities
- Allows people to pursue study

### Education can promote health and wellbeing:

- Increases the ability of people to earn an income
- Increases the ability of people to improve the socioeconomic status

### Food can promote health and wellbeing:

- Strengthens the functioning of the body
- Allows people to have enough energy to lead productive lives
- Allows people to live free from illness

## 1.7 – Prerequisites for health – part 2

**Income:** Income is an underlying factor for many health and wellbeing outcomes. From an individual perspective, income increases the ability to afford resources such as healthcare, recreation, transport and education. From a population perspective, income increases the capacity of governments to provide social services and resources such as public housing, education and healthcare; social security; infrastructure; recreation facilities such as parks and gardens; and law and order. All of these resources and services can promote health and wellbeing.

Governments receive income from the taxes paid by individuals and businesses. When average incomes of individuals and businesses are high, the revenue that the government has available to spend on infrastructure and services is also likely to be high. Governments are responsible for providing a range of resources and services that promote health and wellbeing:

- Public housing is an important source of shelter for many individuals, and a government with a high income is better equipped to provide it. Housing provides protection from the elements, provides a sense of safety, and promotes health and wellbeing.
- With an adequate income, governments can provide basic public health and education systems. This promotes the health and wellbeing of all people as those in need are generally prioritised, not just those with the ability to pay.
- Social security relates to benefits provided by government to those in need. Such benefits come in many forms which include food, income, healthcare and housing. The income a government receives directly influences its ability to provide such resources, and in turn influences the level of health and wellbeing experienced among the population.

### **Stable Ecosystem:**

An ecosystem is a community that consists of all the living and non-living components of a particular area. These components include plants, animals, and micro-organisms such as bacteria, and the non-living components include weather, rocks soil and watercourses. A stable ecosystem occurs when balance is achieved between the environment and the species that live in an environment.

Stability indicates that all living things are having their needs for food, water, shelter and reproduction met without causing detrimental effects to the natural environment. Every ecosystem will experience fluctuations in the balance or stability that it experiences, but changes should not be too pronounced to ensure stability is preserved.

As living beings, humans are a part of an ecosystem. We rely on many other components of the environment to survive and experience optimal health and wellbeing. For example:

- Plants and animals are made up of organic matter which is used for food.
- Plants and animals provide opportunities for employment such as the fishing and agriculture industries.
- Predictable weather patterns contribute to effective farming.
- Human shelter is often made from natural materials such as timber and stone.
- Clean water and air are products of the ecosystem in which we live and are vital for human survival

### **Sustainable Resources:**

sustainability is defined by the United Nations as ‘meeting the needs of the present without compromising the ability of future generations to meet their own needs.’ Sustainable resources therefore relate to ensuring that the resources used to promote health and wellbeing in the present are available for future generations, so they too can experience a good quality of life.

Resources required for energy production, food and water supply, employment, housing and healthcare are examples of materials that must be sustainable if current standards of health and wellbeing are to be maintained.

Many resources that are currently used for energy production such as oil, gas and coal, can take millions of years to regenerate. So once these resources are used, they are not available for future generations. The transition to sustainable energy production such as wind and solar power will assist in satisfying energy needs into the future, allowing future generations to enjoy uninterrupted access to resources such as heating, cooling, electricity and transport. These resources are often required to engage in activities such as education, employment, sleep, food production and recreation, which all work to promote health and wellbeing

### **Social Justice:**

Social justice can be defined in a number of ways, but the common underlying theme is equal rights for all, regardless of personal traits such as sex, class and income, ethnicity, religion, age or sexual orientation. Social justice means that all people are treated fairly, including women and girls in both their private and public life.

Social justice includes economic justice, which means that poverty and discrimination are targeted to improve the lives of those who may have been the victims of injustice in the past. Social justice includes celebrating diversity and promoting the health and wellbeing of all people. The Australian government's concept of social justice reflects this understanding, defining a socially just Australia as one in which there is:

- a fair distribution of economic resources
- equal access to essential services such as housing, healthcare and education
- equal rights in civil, legal and industrial affairs
- equal opportunity for participation by all in personal development, community life and decision-making.

### **Equity:**

Equity relates to a need for fairness in relation to an acceptable quality and standard of living. It goes beyond enforcing laws and ensures that all people can share in the benefits of a society. This can work to reduce feelings of segregation and thereby enhance feelings of belonging and promote spiritual health and wellbeing. Equity is a concept that relates to fairness and social justice. As already discussed in this section, a range of resources are required to promote health and wellbeing, and all people should have access to the resources they require for a decent standard of living. In basic terms, equity means that there are minimum levels of income and resources that all people should have access to.

All people in the community should have access to fundamental resources, and governments should implement laws and policies that ensure no person is disadvantaged in their ability to access such resources.

Equity promotes health and wellbeing by ensuring access to:

- education
- employment
- human rights
- resources such as healthcare

In order to promote health and wellbeing, equity is a key consideration within and between generations. It also extends to issues of social justice and the sustainable use of resources.

**Explain three way that:**

Income can promote health and wellbeing:

- Allows people to purchase resources such as food
- Allows people to purchase healthcare and shelter



A stable ecosystem can promote health and wellbeing:

- Plants and animals are made up of organic matter which is used for food.
- Plants and animals provide opportunities for employment such as the fishing and agriculture industries.
- Predictable weather patterns contribute to effective farming.

Sustainable resources can promote health and wellbeing:

- Forests and other natural environments provide resources such as timber for building shelter and other structures
- Forests provide clean air for respiration and disease prevention
- Forests provide fibres used for manufacturing and clothing, and substances used for medicine production

Social Justice can promote health and wellbeing:

- A fair distribution of economic resources
- Equal access to essential services such as housing, healthcare and education
- Equal rights in civil, legal and industrial affairs

Equity can promote health and wellbeing:

- Ensures access to education
- Ensures access to employment
- Ensures access to human rights

## Key Skills – 1.8

### Explain the dynamic and subjective nature of the concepts of health and wellbeing and illness

- Health and wellbeing is continually changing (dynamic) therefore it's never going to be the same for any one person. Health and wellbeing is also personal (subjective) to each individual person. Therefore, it can be influenced by other people, opinions or comments. Such as a doctor saying you're still sick, but you think you're better. Illness is more of a personal and individual feeling about how a person feels about their own disease. Illness is always changing (dynamic) and is personal (subjective), therefore reflecting the dynamic and subjective nature of health and wellbeing and illness.

Explain what is meant by the terms 'dynamic' and 'subjective'.

- *Dynamic* refers to health is continually changing. *Subjective* refers to health and wellbeing can be influenced or based on personal beliefs, feelings, or opinions.

Provide three examples of characteristics associated with optimal emotional health and wellbeing.

- For example, optimal health and wellbeing increases the capacity of individuals to: work productively, gain an education and earn an income

### Explain the subjective nature of health and wellbeing.

- Health and wellbeing is personal (subjective) to each individual person. Therefore, it can be influenced by other people, opinions or comments. Such as a doctor saying you're still sick, but you think you're better.

### Explain the dynamic nature of the concept of illness.

- Illness is the way a person feels about their own disease. Therefore, it can make their illness change and fluctuate.

## **Describe interrelationships between dimensions of health and wellbeing**

- This means that all five dimensions work together to achieve optimal health and wellbeing. High levels of health in one dimension will often lead to high levels of health in the other four dimensions. Similarly, if one dimension suffers, the others will likely be diminished also.

### Explain how having chicken pox could affect the dimensions of health and wellbeing.

- By bringing weakening the immune system (physical health and wellbeing). Since chicken pox is a contagious disease you wouldn't be able to socialise with pretty much anyone (social health and wellbeing). By not socialising with anyone, you wouldn't be able to talk about how they might be feeling about having chicken pox (mental health and wellbeing). By having chicken pox, you may not know how to deal with or express your emotions because of your decrease in mental and social health and wellbeing (emotional health and wellbeing). By having the contagious disease of chicken pox, you wouldn't be able to go to church to practise your faith (spiritual health and wellbeing).

### Explain how experiencing depression may affect social and spiritual health and wellbeing.

- By experiencing depression, you may feel like you don't want to talk to anyone, see anyone, do anything, go outside. All decreasing your social health and wellbeing. From this, there would be a decrease in your spiritual health and wellbeing because (1) you may feel like you won't want to go anywhere and (2) you may feel like practising your faith or beliefs may not be worth it anymore.

### Discuss how regular exercise could influence three dimensions of health and wellbeing.

- By doing regular exercise you would be maintaining a healthy body weight (physical health and wellbeing). You would be releasing endorphins in the brain (mental health and wellbeing). You could be doing exercise classes with other people improving (social health and wellbeing).

### Explain how leaving school at the end of year 10 to start an apprenticeship could affect health and wellbeing.

- By leaving school at the end of year 10, you wouldn't be getting a complete education which is very valuable. You would be giving yourself a disadvantage in not being able to earn a high income. Negatively affecting health and wellbeing. Plus, the apprenticeship isn't a guaranteed job as well.

### Explain the individual and collective importance of health and wellbeing as a resource

- Optimal physical health and wellbeing means that a person is less likely to experience an infectious or chronic condition. With less illness, individuals are more equipped to work and earn an income. This income can then be used to provide resources such as food, shelter, clothing and adequate healthcare, which can further promote health and wellbeing by reducing levels of stress (mental health and wellbeing), provide adequate levels of energy for socialising (physical and social health and wellbeing), give the individual a sense of purpose in life (spiritual health and wellbeing), and assist in experiencing positive emotions such as satisfaction (emotional health and wellbeing).

### Explain how optimal social health and wellbeing can be a resource for individuals and communities.

- By having optimal social health and wellbeing, you are able to effectively communicate with others. Meaning, you have productive relationships with others around in the community and in turn, they may become a supportive network of friends. This reflects how optimal social health and wellbeing can be a resource individually and, in a community, as well.

### Explain how spiritual health and wellbeing can be a resource nationally.

- By people going to and donating to a local place of worship. That increases the financial growth of the religion and in turn supports the economic growth of the nation.

### Describe global benefits of the pursuit of optimal health and wellbeing

- Reduced rates of communicable diseases such as malaria mean that fewer people experience the symptoms associated with this condition and therefore fewer people will die as a result. With people in better physical health and wellbeing, they have an increased capacity to work and to be productive members of society. With more people being productive, a greater amount of resources such as food and shelter can be provided to meet the needs of the community. This works to decrease conflict between countries as more people are able to access the resources they need for a decent standard of living, and this increases their ability to lead lives they value and promotes health and wellbeing.

### Explain how optimal health and wellbeing can promote economic development globally.

- By having optimal health and wellbeing you are able to work productively, gain an education and earn an income which helps the nation grow economically and ultimately the global economy as well.

### Besides economic development, outline two global benefits of optimal health and wellbeing

- Morbidity and mortality are reduced, allowing countries to work together to combat broader issues such as climate change
- The risk of global disease outbreaks is reduced

### Identify the WHO's prerequisites for health and explain their links to improved health outcomes

- The prerequisites are peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice and equity.
- For example, peace means that infrastructure is less likely to be destroyed. This increases the capacity of individuals to access resources such as water. Water assists in promoting physical health and wellbeing by keeping people hydrated. This improves health and wellbeing and health outcomes.

Create a mnemonic to assist in recalling the names of the nine prerequisites identified in the Ottawa Charter.

- **P**eter
- **S**tole
- **E**verything
- **F**rom
- **I**nside
- **S**omeones
- **S**pecial
- **S**ecret
- **E**nvelope

Explain how each of the following can promote health and wellbeing:

(a) income: by having an income you are able to afford resources such as food, shelter, healthcare that promotes health and wellbeing

(b) a stable ecosystem: by having a stable ecosystem, we are able to eat food and drink water, our needs for survival. This promotes health and wellbeing.

(c) equity: allows those less privileged to access healthcare, food and water that they need so that everyone can live a happy and healthy life. This promotes health and wellbeing.

### Exam Preparation Questions CHAPTER 1

#### Question 1

Briefly explain what is meant by spiritual health and wellbeing. (2 marks)

- Refers to a positive sense of belonging, meaning and purpose in life. It includes values and beliefs that influence the way people live and can be influenced by an individual's connection to themselves, others, nature and beyond.

Briefly describe the difference between mental and emotional health and wellbeing. (2 marks)

- Mental health and wellbeing focuses on the individuals state of mind. And the ability to think and process information. Whereas emotional health and wellbeing refers to the ability to recognise, understand and effectively manage and express emotions and to display resilience

## Question 2

Darren was recently diagnosed with anxiety (a mental illness). Explain how Darren's condition may impact three dimensions of health and wellbeing. (3 marks)

- This can impact his **mental health and wellbeing** as he has high levels of stress (from the anxiety) possibly affecting his self-esteem and confidence.
- This can impact his **emotional health and wellbeing** because he is focusing so much on the stress and anxiety, he may not effectively express or respond to emotions well.
- This impacts his **social health and wellbeing** as he may not socialise or communicate with people or new people as a result of his anxiety

## Question 3

Briefly explain why shelter and sustainable resources are important for improved health outcomes. (4 marks)

- Shelter: by having shelter, people are able to have a safe space to pursue activities such as study. Which then allows them to gain an education and gain employment and an income.
- Sustainable resources: by having sustainable resources, it allows the future generations to have access to resources and tools to help them live a happy and healthy life.

## Question 4

Outline two benefits of optimal health and wellbeing as a resource globally. (2 marks)

- With more countries moving into the high-income category, these nations can work together to help eradicate poverty in many low-income countries
- Governments in individual countries can use the increased income to develop health systems in their own country and enable universal access to health care

# Chapter 2

## CHAPTER 2 - Measuring health status

Term	Definition
<b>Health Status</b>	An individual's or a population's overall health, taking into account various aspects such as life expectancy, amount of disability and levels of disease risk factors.
<b>Health Indicators</b>	Standard statistics that are used to measure and compare health status (e.g. life expectancy, mortality rates, morbidity rates)
<b>Self-assessed health status</b>	A measure based on a person's own opinion about how they feel about their health and wellbeing, their state of mind and their life in general. It is commonly sourced from population surveys.
<b>Life Expectancy</b>	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.
<b>Prevalence</b>	The number or proportion of cases of a particular disease or condition present in a population at a given time.
<b>Incidence</b>	Refers to the number (or rate) of new cases of a disease/condition in a population during a given period
<b>Burden of Disease</b>	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 disease and disability.  Burden of disease is measured in a unit called the DALY
<b>Disability Adjusted Life Years (DALY)</b>	A measure of burden of disease. One DALY equals one year of healthy life lost due to premature death and time lived with illness, disease or injury
<b>Year of Life Lost (YLL)</b>	A measure of how many years of expected life are lost due to premature death

<b>Years of Life Lost Due to Disability (YLD)</b>	A measure of how many healthy years of life are lost due to illness, injury or disability
<b>Health Adjusted Life Expectancy (HALE)</b>	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.
<b>Mortality</b>	Refers to death, particularly at a population level
<b>Maternal Mortality</b>	Death of a mother during pregnancy, childbirth or within six weeks of delivery
<b>Maternal Mortality Ratio</b>	The number of mothers who die as a result of pregnancy or childbirth per 100 000 live births
<b>Infant Mortality</b>	The death of a child between birth and their first birthday
<b>Infant Mortality Rate</b>	The rate of deaths of infants between birth and their first birthday, usually expressed per 1000 live births
<b>Under 5 Mortality</b>	The death of a child under 5 years of age
<b>Under 5 Mortality Rate</b>	The number of deaths of children under five years of age per 1000 live births.
<b>Morbidity</b>	Refers to ill health in an individual and the levels of ill health in a population or group



## Health Status:

**An individual's or a population's overall health, taking into account various aspects such as life expectancy, amount of disability and levels of disease risk factors.**

This health status can be made by these health indicators:

- Mortality rates (death rates)
- Life expectancy
- Morbidity (rates of disease)
- Incidence (number of new cases of diseases)
- Prevalence (number of cases of diseases)
- Disability Adjusted Life Years (DALY)
- Burden of disease
- Self-Assessed Health Status

## 2.2 Questions

### Test your knowledge

1. Explain what is meant by self-assessed health status.

Is a measure based on a person's own opinion about how they feel about their health and wellbeing, their state of mind and their life in general. It is commonly sourced from population surveys.

2. Explain the difference between life expectancy and health-adjusted life expectancy as health status indicators.

Life expectancy is 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.

Whereas health-adjusted life expectancy is 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.

3. (a) According to table 2.2, what was the life expectancy and health-adjusted life expectancy for males and females in Australia respectively?

Life expectancy for males is 80.4 years and 84.5 years for females. Health adjusted life expectancy for males 70.8 years and 72.9 years for females

(b) What do these numbers mean in relation to quantity and quality of life for males compared to females?

It means that females are expected to live longer than males. It doesn't mean that the quality of males' lives is any different to females' lives. Males will live nearly 10 years in poor health compared to nearly 12 years for females lived in poor health.

4. (a) What is a trend?

A general change or movement in a particular direction. For example, trends indicate a significant increase in obesity rates over the past 20 years

(b) Identify two trends evident in figure 2.5.

*Both males and female's life expectancy have been on the increase since 1890. Throughout this whole increase, since 1890, females have always had a higher life expectancy than males.*

(c) Would you expect this trend to continue into the future? Why or why not?

Yes. Because the healthcare in Australia is excellent and it has given people the opportunity to keep on improving their health. It has been on the increase for 120 years and it is expected to keep on increasing.

**Apply your knowledge**

5. Which dimension of health and wellbeing is generally the focus of health statistics?

(b) Why would this be the case?

Physical. Because physical disruptions are easy to point out, figure out and see what is actually going on. Most people see physical as the main way of interpreting if you in good health or not.

6. Outline the relationship between age and the proportion of those assessing their health and wellbeing as excellent or very good according to figure 2.3.

The amount of people assessing their health as good decreases as people get older

(b) Suggest reasons that may account for the relationship outlined in part (a).

As you get older you tend to deteriorate and reduce in function.

7. Suggest reasons that might account for the lower life expectancy experienced by men compared with that of women.

Statistically, women are more likely to go to the doctor, take care of their health and access healthcare. During a certain period of life (youth), men are more risky and reckless. Causing accidents, injury or death

**Questions from Global Health Statistics Video**

Outline the relationship between life expectancy and wealth

- People who have more money, tend to live longer lives. They can purchase private health insurance

Discuss possible reasons for this

- More money = longer life. The more money a country has they better quality of life it citizens has. Better food, better healthcare, clean water and housing

Identify 2 events that affected life expectancy in the early 1900s

- WW1 and the Spanish Flu

Brainstorm other events that may have affected life expectancy

- WW2, the great depression.

## 2.3 Questions

### Test your knowledge

#### 2. List the top three causes of death for men and women.

Coronary heart disease, Dementia and Alzheimer disease and Cerebrovascular disease (including stroke)

#### 3. (a) How have the causes of death changed over the past century in Australia?

- Cardiovascular diseases have increased from 20.0 percent people dying in 1907 and 28.5 per cent people dying in 2015. Infectious diseases decreased from 12.6 per cent people dying in 1907 and 1.8 percent people dying in 2015.

#### (b) Brainstorm factors that may have contributed the change outlined in part (a).'

- Cures, vaccines, medicines and healthcare have vastly improved since 1907. Whereas cardiovascular diseases increasing may be from unhealthy eating, smoking or drugs

#### 6. Explain what a mortality rate of 150 per 100000 people means.

- It means that 150 out of the 100,000 people have died.

#### 7. If a population has 1,000,000 people and the mortality rate is 500 per 100,000 people, how many people on average would die each year?

- 5000 people

#### 8. Outline two trends as shown in figure 2.6.

- Males always have a higher death rate than females throughout 1907 to 2015
- Deaths per 100,000 people have decreases from 1907 in both females and males to 2015

#### 9. Brainstorm factors that may have contributed to the trends in mortality identified on page 51.

- More research and knowledge around infectious diseases and treatments and cures are becoming more and more available
- Deaths from motor vehicle accidents have decreased since the 1970s due to new technology in cars and streets as well as making new laws and stricter ones too.

## 2.4 Questions

#### 3. Explain why morbidity rates have increased as mortality rates have decreased.

- Because mortality (death) rates have dropped, people are living longer which leaves more time and opportunity for people to get diseases and illnesses.

#### 4. (a) Identify two trends evident in overweight and obesity over the lifespan according to figure 2.19.

- As people get older they become more obese and overweight, then after 75 years of age, it starts to deplete.
- From 2011-2015 rates of overweight and obesity prevalence have been higher than 1995-2005

#### (b) Suggest factors that may have led to these trends.

- Unhealthy diet
- Not exercising
- Portion control
- Food accessibility

#### (c) Which age group is most likely to be overweight or obese according to this figure?

- 65-74

#### 5. (a) List one difference between the long-term conditions of males and females as shown in table 2.4.

- The percentage of females reporting long sightedness is higher than males.

(b) Suggest factors that may have led to this difference.

- Females are more likely to seek medical attention than males.

## 2.5 Questions

1. (a) What is meant by the term '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 disease and disability.
- Burden of disease is measured in a unit called the DALY

(b) How are DALY calculated?

- YLL + YLD

3. Explain the difference between YLL and YLD.

- YLL is a measure of how many years of expected life are lost due to premature death.  
Whereas YLD is a measure of how many healthy years of life are lost due to illness, injury or disability

4. Refer to figure 2.24.

(a) What are the top three contributors to YLL in Australia?

- Cancer, Cardiovascular diseases and Injuries

(b) What are the top three contributors to YLD in Australia?

- Cancer, Cardiovascular diseases and Mental and substance use disorders

(c) What are the top three contributors to overall burden of disease in Australia?

- 20-24

(b) What is the benefit of using burden of disease as a health indicator?

- It shows the total impact a condition has on a society or population. It shows us how many people die and how many are living a unhealthy life from the condition. Allowing us to focus on conditions that need focusing on

(c) What is the unit of measurement for burden of disease data?

- Disability Adjusted Life Year (DALY)

2. (a) What is one DALY equal to?

- One year of life lost (YLL) and year of life lost due to disability, disease or injury (YLD)
- Cancer, Cardiovascular diseases and Mental and substance use disorders

5. Refer to figure 2.25.

(a) Identify the age group that contributed the most DALY in 2011. Approximately, how many DALY were contributed by this age group?

- 60-64, Approximately 375,000 DALY.

(b) Identify the age group that contributed the least DALY in 2011.

- 100+

(c) Identify the age group that had the greatest proportion of DALY contributed by neurological conditions.

- 100

(d) Identify the age group that had the greatest proportion of DALY contributed by injuries.

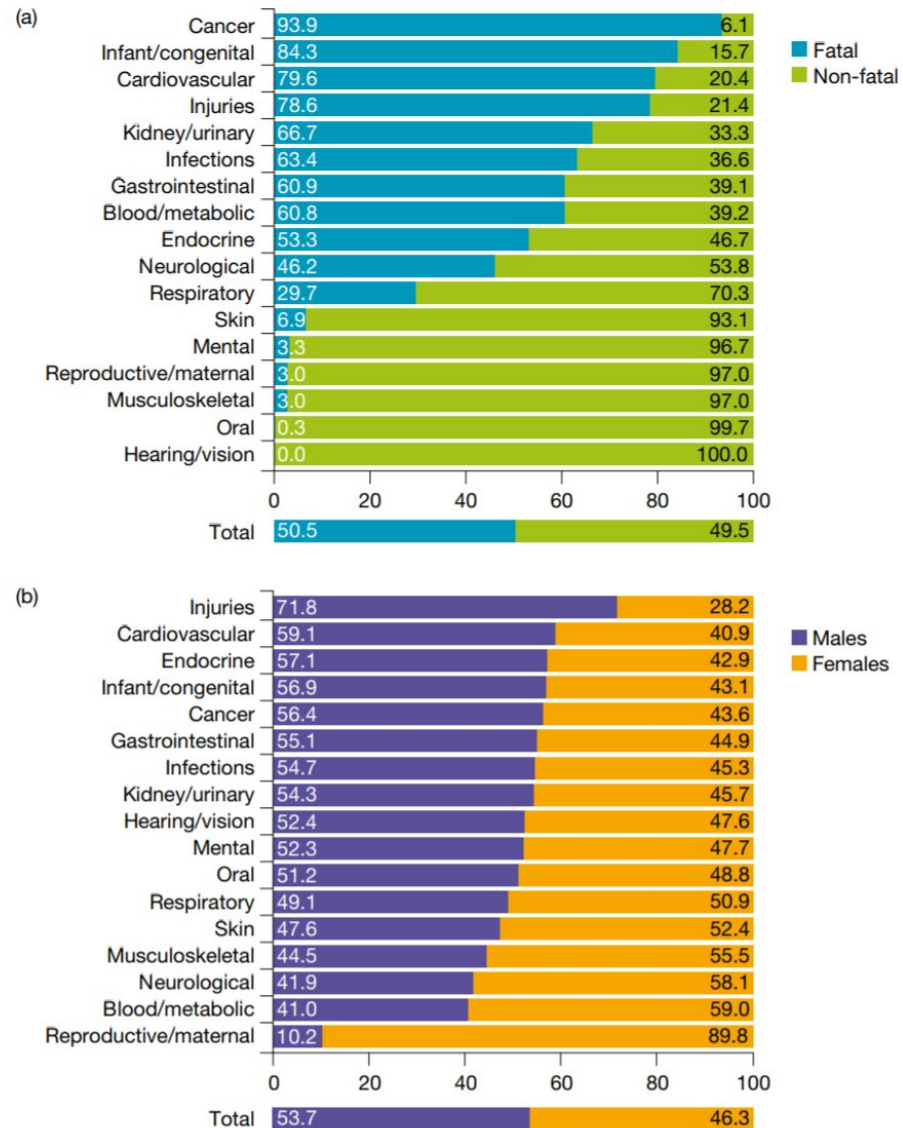
## 2.6.3 Exam preparation CHAPTER 2

### Question 1

Refer to figure 2.29.

- (a) Explain what is meant by DALY. (1 mark)
- a measure of burden of disease. One DALY equals one year of healthy life lost due to premature death and time lived with illness, disease or injury
- (b) Identify the disease group that contributed the greatest proportion of DALY through fatal outcomes. (1 mark)
- Cancer
- (c) Identify the disease group that contributed the greatest proportion of DALY through non-fatal outcomes. (1 mark)
- Hearing and vision
- (d) Identify the disease group for which males had the highest proportion of DALY. (1 mark)
- Injuries
- (e) Identify the disease group for which males had the lowest proportion of DALY. (1 mark)
- Reproductive/maternal
- (f) Referring to data in this topic, compare the health status of males and females in Australia. (4 marks)
- From the data, it shows that males are more prone to injury than females through their recklessness and females are more likely to have reproductive or maternal problems than males. Showing that males are dying more from accidents rather than disease. And females are dying more from disease or reproductive problems than accidents.

**FIGURE 2.29** Proportion (%) of total burden by fatal versus non-fatal (a) and sex (b), by disease group, 2011



# Chapter 3

Term	Definition
<b>Anaemia</b>	A condition characterised by a reduced ability of the body to deliver enough oxygen to the cells due to a lack of healthy red blood cells
<b>Body Mass Index (BMI)</b>	A statistical measure of body mass calculated by dividing weight (in kilograms) by height (in m <sup>2</sup> ). A score of 18.6–24.9 is considered a healthy weight. Between 25–29.9 is considered overweight and 30 and over is considered obese.
<b>Cholesterol</b>	A type of fat required for optimal functioning of the body that in excess can lead to a range of health concerns including the blocking of the arteries (atherosclerosis). Can be 'bad' low-density lipoprotein (LDL) or 'good' high density lipoprotein (HDL).
<b>Dental caries</b>	A decay of teeth caused by a breakdown in the tissues that make up the tooth
<b>Energy Dense</b>	(foods) foods that contain significant amounts of fat, carbohydrates and/or protein, therefore contributing large amounts of energy to the diet
<b>Hypertension</b>	High blood pressure
<b>Nutrient Dense</b>	(foods) foods that contain a large amount of nutrients such as vitamins and minerals

### 3.2 Factors influencing health status and burden of disease — smoking

Smoking is a practice in which a substance is burned and the resulting smoke is inhaled to be tasted and absorbed into the bloodstream. Smoking generally relates to the use of tobacco, but can also include marijuana and other drugs.

Rates of smoking have decreased significantly in Australia over time, from around 25 per cent in 1991 to around 14.5 per cent in 2014–15. A range of interventions contributed to this decrease, including advertising bans; bans on smoking indoors and increasingly in outdoor public spaces; plain packaging; price increases; restrictions on sales to minors; public education; and media campaigns (figure 3.4).

Although rates have decreased significantly, tobacco use was responsible for 9 per cent of the total burden of disease and injury in 2011, making it the number one preventable and modifiable risk factor in Australia. The impact of tobacco includes the risks associated with past tobacco use, current use, and exposure to second-hand smoke. Although males used to smoke in greater numbers, current rates of smoking are now more equal between males and females. The dangers of smoking were proven more than 40 years ago. Even so, people continue to smoke and die from smoking-related conditions. Whether it is physical or mental, addiction to smoking cigarettes can be one of the hardest addictions to overcome.

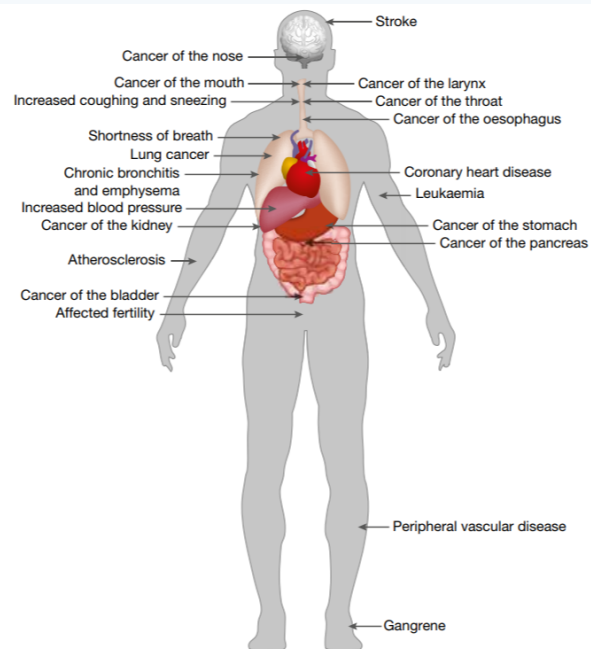
Tobacco smoking is a risk factor for a range of health concerns (figure 3.5) such as:

- Cardiovascular disease
- Many forms of cancer
- Low birth weight
- Respiratory conditions (for example, emphysema and asthma)
- Increased risk of infection.

Nearly 40 per cent of all smoking-related deaths are due to cardiovascular disease. As well as increasing blood pressure, chemicals in tobacco smoke speed up the process of atherosclerosis, which significantly *increases the risk of heart attack and stroke and contributes to higher mortality rates from these conditions.*

Tobacco smoke can cause a fault in body cells as they divide. This can lead to a tumour and, ultimately, cancer. These faults can be caused in many parts of the body, making tobacco smoking the most preventable risk factor for disease and death in Australia.

**FIGURE 3.5** With more than 4000 chemicals in each cigarette, smoking can lead to any of these conditions and effects.





### 3.3 Factors influencing health status and burden of disease — alcohol

Alcohol consumption has been a part of human life for thousands of years. Many cultures consume alcohol at social gatherings and it can form an integral part of ceremonies, customs and rites of passage. In moderation, alcohol has minimal side effects. Red wine in moderation may actually have benefits for cardiovascular health. Alcohol misuse (including alcoholism and binge drinking) may indicate the presence of an alcohol use disorder — a disease characterised by ongoing risky alcohol consumption.

Alcoholism is when a person can't stop drinking once they have started or has a constant desire to drink alcohol.

Binge drinking is defined as drinking seven or more standard drinks for males or five or more standard drinks for females in one sitting.

Alcoholism is more likely to contribute to chronic conditions in the long term such as liver disease, whereas binge drinking often results in health concerns in the short term such as road accidents, injuries, drownings and violence. An alcohol use disorder is not required for negative health outcomes to occur as a result of alcohol consumption.

Binge drinking on one occasion may not necessarily mean the presence of an alcohol use disorder, but still increases the risk of negative health outcomes.

Alcohol is filtered through the liver. Excessive consumption can cause scarring of the liver tissue, which can lead to the liver not functioning properly and toxins remaining in the body. Over time, this can lead to chronic liver diseases such as sclerosis of the liver.

The behaviour of those affected by alcohol can change, putting a strain on relationships and increasing the risk of mental health issues and associated outcomes including suicide and self-harm. Those under the influence of alcohol are also more likely to act impulsively and take risks such as drink driving and displaying aggression, which increases the risk of injuries and violence. Judgement and motor control are affected by alcohol use. As a result, falls and road traffic injuries are a significant cause of burden of disease attributable to alcohol use.

FIGURE 3.10 Some of the effects of excessive alcohol consumption

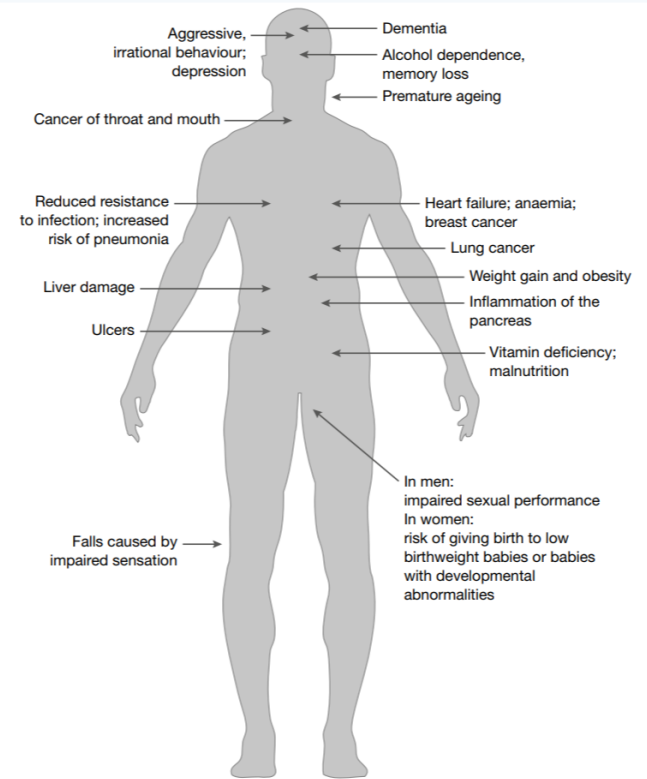
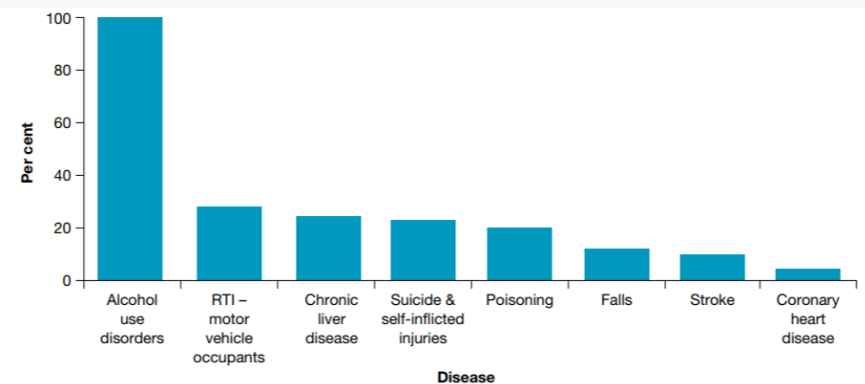


FIGURE 3.12 Burden (%) attributable to alcohol use, selected conditions, 2011



### 3.4 Factors influencing health status and burden of disease — high body mass index

Body mass relates to the amount of body weight an individual is carrying. Generally, assessments about body mass are made using the body mass index (BMI) and waist circumference measurements. BMI provides a height-to-weight ratio and is calculated using the following formula:

$$\text{BMI} = \frac{\text{Weight (kg)}}{[\text{Height (m)}]^2}$$

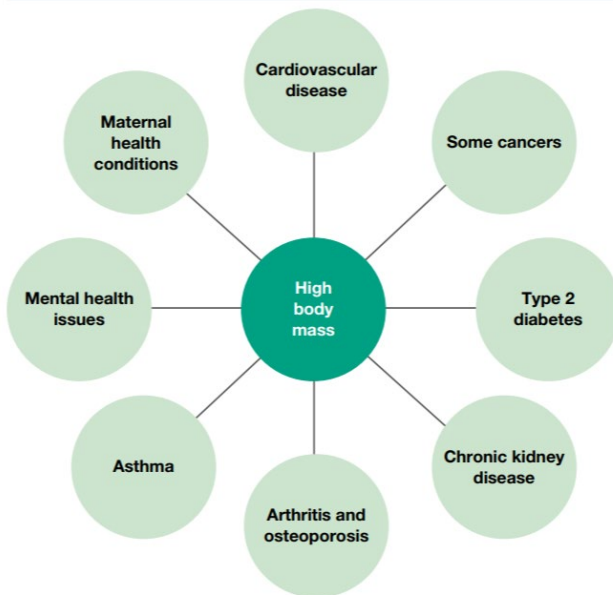
So for someone who is 182 centimetres tall and weighs 88 kilograms:

$$\begin{aligned} \text{BMI} &= \frac{88 \text{ (kg)}}{[1.82 \text{ (m)}]^2} \\ &= \frac{88}{3.31} \\ &= 26.6 \end{aligned}$$

**TABLE 3.1** BMI classifications for adults

BMI	Classification
Under 18.5	Underweight
18.6–24.9	Healthy weight
25–29.9	Overweight
30 and over	Obese

**FIGURE 3.16** High body mass contributes to a range of health concerns.



The BMI score of adults is compared to classifications to determine whether an individual is considered underweight, in the healthy weight range, overweight or obese. These figures are shown in table 3.1. High body mass index refers to a weight that is above a healthy range. People with a high BMI are classified as either overweight or obese.

However, BMI doesn't take fat distribution into account. Research has shown that those with a higher proportion of abdominal fat are more at risk of disease and illness compared to those with a lower proportion of abdominal fat. For this reason, waist circumference is increasingly being used as an indicator of the health risks associated with high body mass.

Although waist circumference is being used more often, BMI remains a useful indicator, especially for populations and groups, and is the measure used by the Australian government to determine high body mass

# Chapter 4

Term	Definition
<b>Biological Factors</b>	Factors relating to the body that impact on health and wellbeing, such as genetics, body weight, blood pressure, cholesterol levels, birth weight
<b>Environmental Factors</b>	The physical surroundings in which we live, work and play. Environmental factors include workplaces, housing, roads and geographical access to resources such as healthcare
<b>Food Insecurity</b>	When healthy, affordable food is not obtainable
<b>Food Security</b>	'The state in which all persons obtain nutritionally adequate, culturally appropriate, safe food regularly through local non-emergency sources'
<b>Health Literacy</b>	The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions
<b>Sanitation</b>	The process of eliminating contact between humans and hazardous wastes, including human and animal faeces, solid wastes, domestic wastewater (sewage, grey water), industrial wastes and agricultural wastes
<b>Social Exclusion</b>	The segregation that people experience if they are not adequately participating in the society in which they live
<b>Social Inclusion</b>	People experiencing participation in the community in which they live and feel supported.
<b>Sociocultural Factors</b>	The social and cultural conditions into which people are born, grow, live, work and age. These conditions include socioeconomic status, social connections, family and cultural influences, food security, early life experiences, and access to affordable, culturally appropriate healthcare.
<b>Socioeconomic Status (SES)</b>	The social standing of an individual in comparison to others in that society. It is based on education, income and occupation.

## 4.2 Factors contributing to variations in health status — biological

There are 3 different factors that affect or contribute to variations in health status:

- Biological
- Sociocultural
- Environmental

Biological factors relate to the structure of the cells, tissues and systems of the body and how adequately they function. There is a range of biological factors and, although many are the outcome of various sociocultural and environment factors, there is often a genetic influence that cannot be controlled. In some cases, examples of biological factors are also examples of physical health and wellbeing.

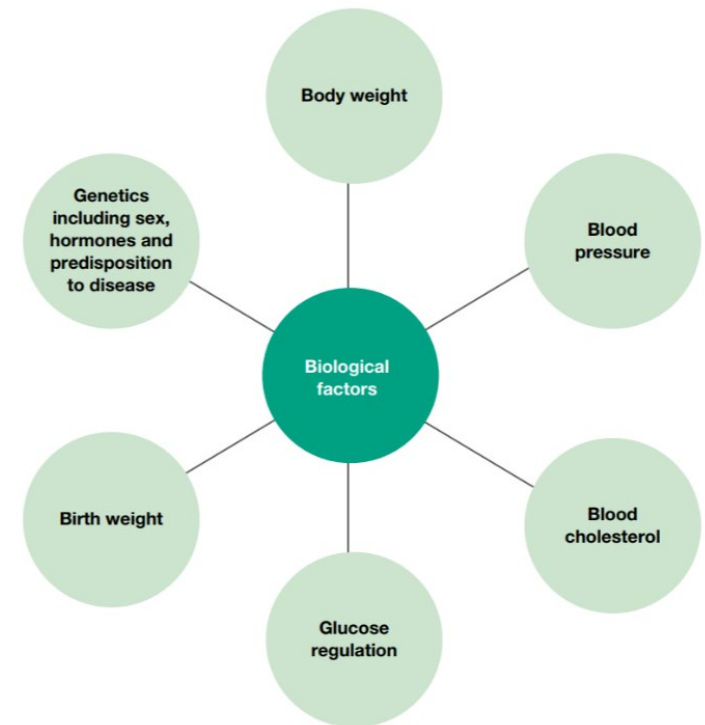
### 4.2.1 Body Weight:

Body weight is also responsible for a range of differences in health status between population groups within Australia. A biological factor, body weight can impact on health and wellbeing and influence other biological factors. It therefore contributes significantly to variations in health status between individuals and population groups. For example, obesity increases the chances of developing high blood pressure, high blood cholesterol and impaired glucose regulation (which are also biological factors). Other health concerns associated with high body weight include:

- Cardiovascular disease
- Some cancers (including colorectal cancer)
- Respiratory problems
- Type 2 diabetes
- Arthritis
- Self-esteem issues and depression
- Social exclusion.

### 4.2.2 Blood pressure

As blood circulates around the body through the blood vessels, it applies pressure to the blood vessel walls. As the heart contracts and the blood is pushed around the body, this pressure increases. As the heart relaxes and fills with more blood, the pressure on the walls decreases. Blood pressure is simply a measure of these two levels of pressure. A person with high blood pressure has hypertension, a common health concern throughout the world. The blood of a person with hypertension does not flow through the blood vessels as easily as that of someone with normal blood pressure. This may mean that their heart and kidneys (which regulate blood pressure and filter



the blood) have to work harder, and blood flow may be restricted. Hypertension is a contributing factor to many conditions, including cardiovascular disease such as heart attack and stroke, and kidney failure.

The risk factors for hypertension are:

- High body mass
- Lack of physical activity
- Stress
- Smoking
- Excessive alcohol consumption
- Genetic predisposition
- Poor diet (in particular, excess sodium).

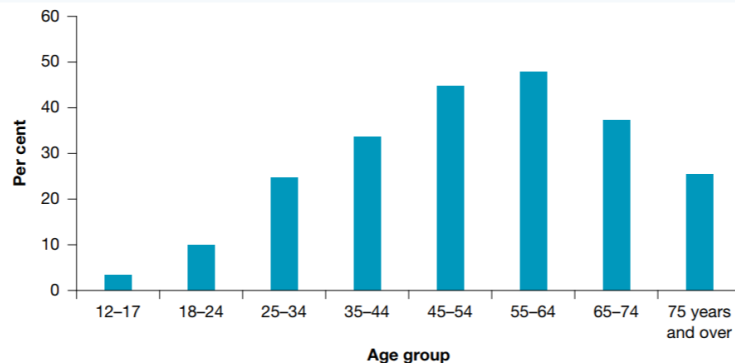
#### 4.2.3 Blood cholesterol

Cholesterol is a type of fat, and high blood cholesterol is a biological factor that contributes to many differences in health status between population groups. Too much LDL cholesterol is a key risk factor for cardiovascular disease, particularly heart attack and stroke. The incidence of high blood cholesterol increases with age, peaking at the 55–64 age group. Blood cholesterol can be checked by a simple blood test. Lifestyle changes can sometimes reverse high levels of blood cholesterol. However, if the main contributor is a genetic predisposition, medication may be required to bring cholesterol levels down. A range of factors can increase the risk of high blood cholesterol, including:

conductor is a genetic predisposition, medication may be required to bring cholesterol levels down. A range of factors can increase the risk of high blood cholesterol, including:

- Excessive alcohol intake
- Smoking
- A diet high in saturated fat and/or trans fats
- A lack of exercise
- Genetic predisposition.

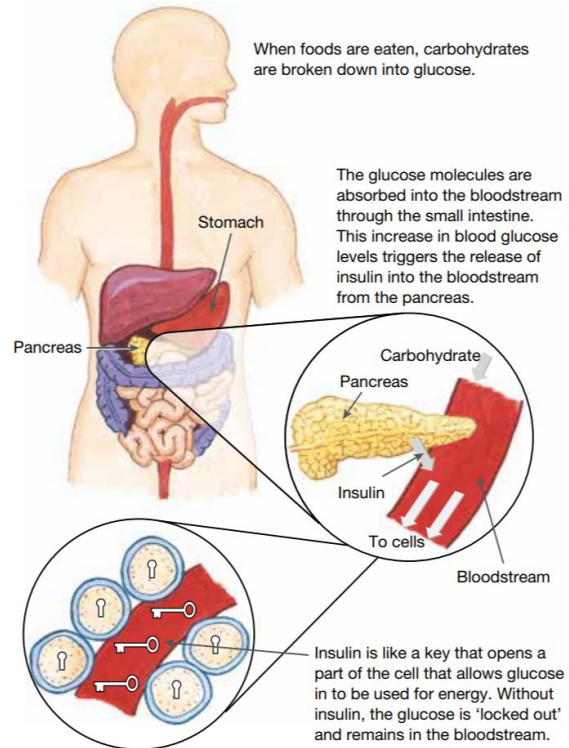
FIGURE 4.5 Proportion of adults with high blood cholesterol, 2011–12



#### 4.2.4 Glucose regulation

Glucose is the preferred fuel for energy within the cells. Glucose is usually obtained from breaking down carbohydrates. When carbohydrates are eaten, the resulting glucose is absorbed into the bloodstream. When blood glucose levels rise, insulin is released from the pancreas to allow the glucose to travel from the bloodstream into the cells to be used for energy. A range of factors can impact on this mechanism and contribute to the cells becoming resistant to the action of insulin, preventing glucose from being absorbed into the cells. This is known as impaired glucose regulation (or insulin resistance). Impaired glucose regulation is seen as a precursor to type 2 diabetes.

FIGURE 4.6 How insulin acts on glucose



Impaired glucose regulation can occur as a result of:

- Genetic predisposition
- stress
- Pregnancy
- Lack of exercise
- Smoking
- Being overweight (particularly around the abdomen)
- A diet high in fat, particularly trans fat
- Excessive alcohol consumption
- High LDL cholesterol
- High blood pressure

#### 4.2.5 Birth weight

Birth weight contributes to variation in health status among individuals and population groups. Birth weight is related to health outcomes directly after pregnancy and later in life. Babies born with a low birth weight (under 2.5 kilograms) are more likely to have an underdeveloped immune system, making them more susceptible to infections. They are also more likely to suffer from premature death and significant disabilities such as speech and learning disabilities. Studies suggest that low birth weight can also contribute to health concerns in adulthood such as:

- High blood pressure
- Type 2 diabetes
- Cardiovascular disease.

There are many causes of low birth weight including:

- Premature birth. Less time spent in the uterus means less time to grow and develop.
- Age of the mother. Young mothers (especially those under 15 years of age) and older mothers (those over 45 years of age) have higher rates of low birth weight babies.
- The mother's nutritional status. An inadequate supply of nutrients can lead to underdevelopment of the foetus.
- Smoking, excessive alcohol consumption and drug use by the mother during pregnancy. Use of these substances has been shown to reduce foetal growth.
- Illness of the mother during pregnancy. Infections in the uterus can lead to early labour, while other infections, such as chickenpox and rubella, can cause slowed growth.

#### 4.2.6 Genetics

The genetic material contained in body cells controls many aspects of life that influence health status, such as sex, body type, hormone production, predisposition to disease and aspects of personality. A person's genetic blueprint and genetic potential are determined at fertilisation. Sex Certain conditions are either exclusive to males or females or are more common in one of the sexes due to the biological differences between the sexes, which is caused by genetics. Examples include:

- Women can't get prostate or testicular cancer.
- Men can't get ovarian cancer.
- Women are more likely to develop breast cancer (less than one per cent of all breast cancer cases occur in men), largely due to most women having more breast tissue than most men.

#### Predisposition to disease

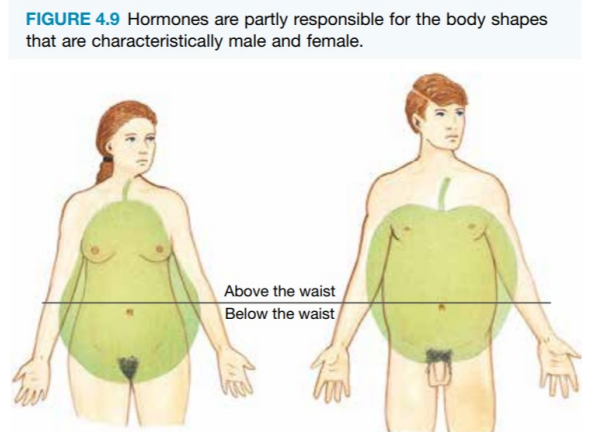
Genetics can influence how likely someone is to develop certain conditions. An increased risk is called a 'genetic predisposition' to that particular condition. Genetic predisposition to disease often runs in families and ethnic groups, making some individuals more likely to experience some conditions than others. This doesn't mean that a person with a genetic predisposition will necessarily develop the condition as other factors also play a role, but they are at an increased risk. Many conditions have a genetic predisposition, including skin cancer. Two people who have spent the same amount of time in the sun, for example, may have different risks of developing skin cancer as a result of their genetics. Other conditions that have a genetic predisposition include:

- Other cancers (including breast cancer and prostate cancer)
- Cardiovascular disease
- Diabetes (types 1 and 2)
- Hypertension
- Depression
- Obesity.

Through these conditions, genetic predisposition can contribute to significant variations in health status. Hormones  
Hormones regulate many processes in the body and control many aspects of health and wellbeing. Hormones are also responsible for the formation of male and female sex characteristics that lead to differences in some of the conditions experienced by males and females.

#### Oestrogen

Oestrogen is a key hormone needed for the regulation of the menstrual cycle in women. Oestrogen also helps to maintain bone density in women by keeping the bones strong, a role played by testosterone in males. When a woman enters menopause, the levels of oestrogen decline. This decline leads to a loss of bone mass from the skeletal system, which can contribute to osteoporosis — a disease characterised by weak, porous bones that are more susceptible to breaks and fractures.





## Testosterone

Testosterone is also known as the male sex hormone (even though it is also found in small quantities in females). Testosterone is mainly responsible for the male sex characteristics and the production of sperm, but may also play a role in increased risk-taking behaviours and aggression in males compared to females.

### 4.3 Factors contributing to variations in health status — sociocultural factors

Sociocultural factors relate to the social and cultural conditions into which people are born, grow, live, work and age. These conditions include:

- Socioeconomic status, which is determined by income, education and occupation
- Social connections, including relationships and social exclusion
- Family influences including culture, lifestyles and values
- Food security
- Early life experiences
- Access to affordable, culturally appropriate healthcare.

Many sociocultural factors are beyond the control of individuals, yet they have a significant impact on health status at an individual and population level. People who experience poor sociocultural conditions experience worse health status in all societies. The gap between those at the top and those at the bottom of the sociocultural ladder has widened over the years, and those towards the bottom experience much worse health status. For this reason, sociocultural factors have now become the focus of most health authorities, who are trying to narrow the gap.

#### 4.3.1 Socioeconomic status

Socioeconomic status (SES) refers to a person's position in society relative to other people based on three factors:

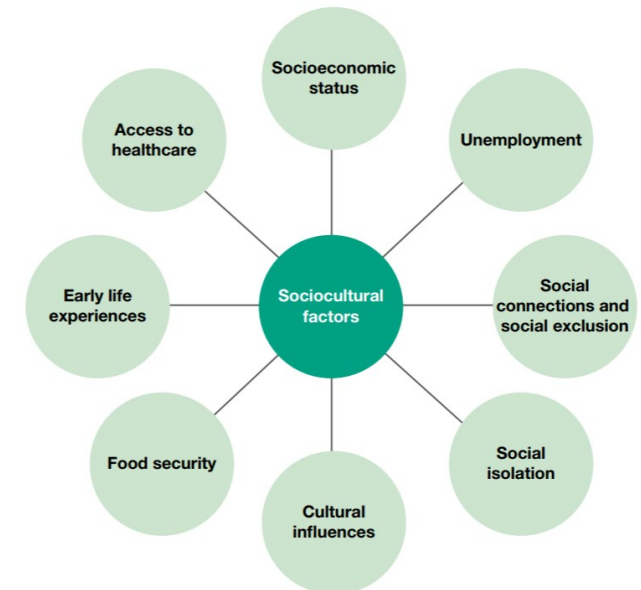
**FIGURE 4.11** The three factors that determine socioeconomic status



- Income
- Occupation
- Education

People who are more socioeconomically disadvantaged have poorer health status across most countries and cultures. All three components of socioeconomic status are related and affect each other. For example, a person who has a high level of education is more likely to work in a higher paying job. Such jobs usually carry greater status than lower paying jobs. As the level of education increases (for example, high school versus tertiary), in general, so does the status of occupation and the average income. Income can influence people's ability to access resources such as adequate housing, food, healthcare (including private health insurance), recreation, transport and education. These resources can assist people in maintaining a healthy body weight and preventing disease, staying socially connected and accessing healthcare when required, which can reduce morbidity and mortality rates.

**FIGURE 4.10** The sociocultural factors that contribute to variations in health status



### 4.3.2 Unemployment

The link between unemployment and health status is undeniable. The unemployed have a higher chance of dying and [suffer from] more illnesses than those of similar age who are employed.

In fact, the rates of suicide, lung cancer and cardiovascular disease are higher for those who are unemployed.

The effects of long-term unemployment on health status can be particularly serious, mainly due to psychological and financial factors (especially if the person falls into debt). The effect on health status can start even while the person is still working. An employee concerned about job security may begin to experience elevated levels of stress and anxiety before they even become unemployed.

This can have a range of physiological implications, such as sleep problems and increased risk of cardiovascular disease. There is a two-way relationship between health status and unemployment. For some it is ill health that causes unemployment (such as an injury or illness), and for others it is unemployment that causes health problems (such as stress and depression).

**FIGURE 4.12** Unemployment can be stressful, and long-term unemployment can lead to a range of health issues, including a deterioration in mental health and wellbeing.

### 4.3.3 Social connections and social exclusion

Social connections relate to the bonds between an individual and their relations, friends and acquaintances and the ability to participate in the society in which they live. Being socially connected has been associated with lower morbidity and increased life expectancy.

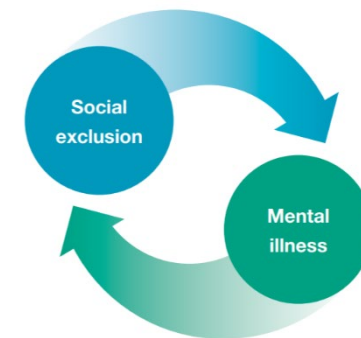
The opposite of social connectedness is *social exclusion*, which contributes to significant variations in health status.

Social exclusion refers to the segregation that people experience if they are not adequately participating in the society in which they live. It also includes those who experience feelings of disconnectedness and do not get opportunities to make use of the resources available to them in a society, such as education, employment, housing, healthcare and social security services.

In the past, such people have been referred to as 'social outcasts'. The causes of social exclusion are often the result of social exclusion as well. Therefore, the sufferer can find themselves in a vicious cycle. Social exclusion exists when individuals or groups face a number of issues, such as:

- Poor physical and mental health and wellbeing
- Disability
- Inability to access services such as healthcare, education, employment and social security
- Family breakdown
- Homelessness
- Discrimination, including racism
- Low income.

**FIGURE 4.15** One example of how social exclusion can form part of a cycle with other areas of health and wellbeing



#### 4.3.4 Social isolation

Social isolation refers to not being in regular contact with others.

Geographical barriers can prevent people from being able to interact with others and is an issue particularly for many people in remote areas. Disability, illness, lack of transport, and communication barriers can also prevent people from socialising and contribute to social isolation, especially among the elderly and those from non-English speaking backgrounds.

Regular social contact gives people the opportunity to communicate and socialise, which can promote physical, social, emotional, mental and spiritual health and wellbeing. People who are isolated from others lack the emotional, psychological and health-related support that can improve health status. In times of difficulty, people who are socially isolated can feel they have no-one to turn to, and this can contribute to a range of mental health problems such as depression and stress.

#### 4.3.5 Cultural influences

Cultural influences relate to customs, ideas, values, and traditions of a particular society that are passed through generations.

Cultural influences that impact health status include gender stereotypes, food intake, attitudes and beliefs.

Gender stereotypes relate to behaviours that are culturally acceptable for males and females. Although many of these roles and expectations have broken down over the past decades, some cultures still retain distinct roles for males and females. These roles are learned from a very young age and shape many aspects of the wider society.

Examples of stereotypes related to gender include:

- Males working and females staying at home to look after the children
- Males being 'macho' and needing to feel strong.

The dietary intake of cultural groups often evolves over a long period of time and influences the sorts of foods people consume. Changes to traditional diets can contribute to differences in health status.

The traditional diet of Indigenous Australians, for example, included low-fat meats and a range of fruits and vegetables. The change in diet that accompanied European settlement contributes significantly to the high rates of obesity seen today in Indigenous Australians.

#### 4.3.6 Food security

The quality, availability and affordability of the food supply all affect what people eat. A shortage of such products (called food insecurity) can lead to deficiency diseases and other health complications. The other end of the scale is food plenty, which can contribute to people eating too much and therefore putting themselves at risk of diet-related diseases such as type 2 diabetes and cardiovascular disease.

Although the environment impacts food availability (for example, when people live too far away from food outlets), sociocultural factors such as income and nutritional knowledge also have an effect. People who are unable to afford healthy foods may be forced to buy cheaper processed foods.

#### 4.3.7 Early life experiences

Every person is, in part, a product of their past experiences. Such experiences help to shape each individual, their outlook on life and the behaviours they engage in throughout their lives.

Behaviours of women, while they are pregnant, are early life experiences for unborn babies that can contribute to a range of health issues. Maternal tobacco, alcohol and drug use, and maternal nutrition and exposure to certain chemicals, bacteria and viruses during pregnancy, can all have significant impacts on the individual after birth and into adulthood. Possible impacts on the baby include low birth weight, increased risk of infections and higher under-five mortality rates (U5MR). In later life, some of these experiences can contribute to higher rates of cardiovascular disease and diabetes.

#### 4.3.8 Access to healthcare

Healthcare refers to services that promote and preserve health and wellbeing. These services diagnose, treat and/or manage disease and illness.

In Australia, these services are carried out by doctors, nurses, scientists, dentists, pharmacists and other health professionals such as physiotherapists and naturopaths.

These health professionals often work together in a hospital or medical centre. Numerous factors can limit an individual's ability to access healthcare.

Geographical access or proximity to health services is an environmental factor and will be explored in section 4.4.3, but there are many cultural, financial and other socio-cultural barriers that prevent many Australians from accessing services they might otherwise use. Some people who have geographical access to health services fail to use them.

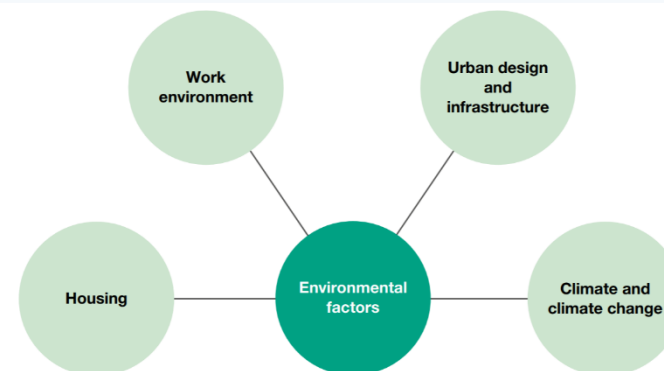
This may result from a lack of health literacy. Cultural barriers may influence an individual's access. Women from some cultures will not visit a male GP, and this reduces the number of health professionals they have access to.

### 4.4 Factors contributing to variations in health status — environmental factors

Environmental factors, in the context of this course, relate to the physical features that surround us.

These can be natural features or those built by people. As with all factors, the relationship between the physical environment and health status is complex, but there is growing evidence to suggest that the way people interact with the physical environment can increase or decrease the risk of negative health outcomes.

FIGURE 4.19 Environmental factors that impact health status



#### 4.4.1 Housing

Most people spend more time in their house than in any other environment. The housing environment therefore plays a significant role in determining health status. Some of the specific concerns of the home environment that contribute to variations in health status include:

**Ventilation and hygiene** - Inadequate housing has been linked to increased rates of morbidity from infectious and chronic diseases. For example, a house that is damp and has poor ventilation can promote the growth of mould, which can increase the risk of developing respiratory and asthma-related symptoms such as coughing, wheezing and irritation of the upper respiratory tract by 30–50 per cent (AIHW, 2010).

**Design and safety** - If not adequately maintained, features of houses such as stairs, floor surfaces (especially those that may become slippery when wet), bodies of water (such as ponds, dams and pools), balconies, electrical wiring and furniture can increase the risk of falls, cuts, drowning and electrocution. Young children and the elderly are often the most at risk of these injuries.

**Overcrowding** - Those living in overcrowded housing experience higher rates of mental health issues because occupants find it difficult to find their own space. Overcrowded conditions also place added strain on bathroom, kitchen and laundry facilities, which can lead to unsanitary conditions and increases the risk of infectious diseases. Education and employment opportunities can also be impacted by overcrowded living conditions.

**Sleeping conditions** - Sleep is an important aspect of good health and wellbeing, and sleeping conditions should promote restful sleep. Noise and overcrowding can impact on sleeping conditions and contribute to mental health issues.

**Security** - Having a house that is not seen as secure from the elements and intruders can promote fear among the residents and lead to high levels of stress and anxiety.

**Pollutants** - Environmental tobacco smoke, asbestos, dust, pet hair and other pollutants can lead to respiratory conditions such as asthma.

**Resources conducive to eating a nutritionally sound diet** - Refrigeration for storing food, and adequate cooking appliances, are examples of resources that promote healthy eating. If individuals do not have access to such resources, they may rely on takeaway foods. Such foods may be high in fat and contribute to obesity and related conditions such as cardiovascular disease and type 2 diabetes.

**Access to water and sanitation facilities** - An adequate water supply and the infrastructure to deliver clean water to homes are required to access clean water, and this decreases the risk of infectious diseases. Sanitation facilities are essential to remove human waste from the immediate environment. This reduces the risk of infectious diseases, such as cholera, that are spread by contact with human waste.

#### 4.4.2 Work environment

Many Australians spend a significant amount of time in their place of employment. As a result, the physical environment of the workplace plays a significant role in determining health status. Examples of how the physical environment of the workplace can impact on health status include:

**UV exposure** - Those working outdoors are more exposed to UV radiation. This can increase the risk of skin cancer among these workers.

**Accidents and injuries** - According to the ABS (2014), around 4.3 per cent of all employees aged 15 and over sustained a work-related injury in the previous year. Many workplaces have risks associated with the specific environment in which the work is carried out. People working on farms, fishing trawlers and mining operations, for example, often use heavy machinery, which can increase the risk of injuries.

Those working in transport, such as truck drivers and taxi drivers, may have an increased risk of road trauma as a result of spending extended periods on the roads. Those working with tools such as sewing machines and saws may have an increased risk of lacerations.

**Exposure to hazardous substances** - Hazardous substances such as paint, asbestos, fuels, gases, acids and corrosive chemicals are used in many workplaces; for example, those used for manufacturing and building. Although the use of protective equipment can reduce the risks associated with handling such substances, they still contribute to morbidity and mortality in the workplace.

**FIGURE 4.21** Australia has a large farming industry that has a range of associated workplace hazards, including UV exposure and injuries associated with the use of heavy machinery.



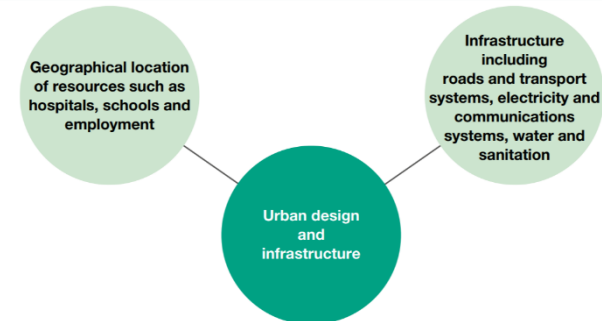
**FIGURE 4.22** The use of protective equipment, such as hazardous materials suits and gas masks, can reduce the effects of exposure to dangerous substances in the workplace.



#### 4.4.3 Urban design and infrastructure

Urban design and infrastructure relate to the features and structures of the suburbs, towns, regions and cities in which people live. Features of such areas that contribute to variations in health status for a range of population groups include the aspects summarised in figure 4.23.

**FIGURE 4.23** Factors relating to urban design and infrastructure



#### Geographical location of resources

Having access to goods and services can increase the ability of many people to access resources required for good health and wellbeing. Being close to supermarkets, shops and hospitals, and having the means to reach these resources, can decrease morbidity and mortality rates, because people can access the resources required to obtain adequate food and healthcare.

Being in close proximity to fast-food outlets may increase the frequency at which people consume such products. This can increase energy intake and contribute to overweight and obesity.

## Infrastructure

Having adequate infrastructure such as sealed roads, public transport systems, information and communication technologies such as telephone and internet connections, electricity grids and supply, clean water facilities and sanitation systems, and adequate parks, gardens and recreation facilities, assists in promoting health status.

Adequately maintained roads and traffic systems such as traffic lights, signage and road lighting can improve safety and decrease the risk of morbidity and mortality from road trauma. Public transport systems can help people to access resources that can promote health status, such as food, employment, healthcare and social interaction. People living outside of Australia's major cities may be particularly vulnerable to transport issues.

Electricity is required for heating and cooling, cooking and refrigeration, telecommunications and recreation. All of these resources can assist in promoting health and wellbeing.

Water is essential for life. It is required for drinking, bathing, cooking and sanitation. Having access to a clean and reliable water supply reduces the risk of infectious diseases such as dysentery and promotes health and wellbeing.

Adequate sanitation infrastructure, such as sewerage systems, eliminates waste from the environment. Removing substances such as faeces, solid wastes and domestic wastewater reduces the risk of infectious diseases such as cholera.

Having access to adequate public spaces such as parks and gardens, and recreation facilities such as walking paths, cycling tracks and basketball and tennis courts, means people are more likely to be physically active. This can reduce the risk of mental health problems and obesity.

**FIGURE 4.25** The availability of public transport increases access to goods and services for many Australians.



**FIGURE 4.26** Access to information and communication technologies can assist in maintaining social connections and promotes educational outcomes.



## 4.4.4 Climate and climate change

Geographically, Australia is a large country and experiences a range of climates as a result. Rainfall, temperature and wind patterns vary across the country, producing different impacts on health status. Weather patterns have been changing in Australia over the past century, and such changes also bring about impacts on health status.

## Climate

Australia is the driest inhabited continent on Earth and is more susceptible to bushfires than many other countries as a result. As well as the loss of human and animal life that occurs with bushfires, houses and infrastructure can also be destroyed, limiting the availability of goods and services that are required for optimal health and wellbeing. Access to resources such as water, food and healthcare can all be affected, further increasing morbidity and mortality rates in affected areas. Ultraviolet radiation levels are also comparatively high in Australia, contributing to Australia having the highest rates of skin cancer in the world.

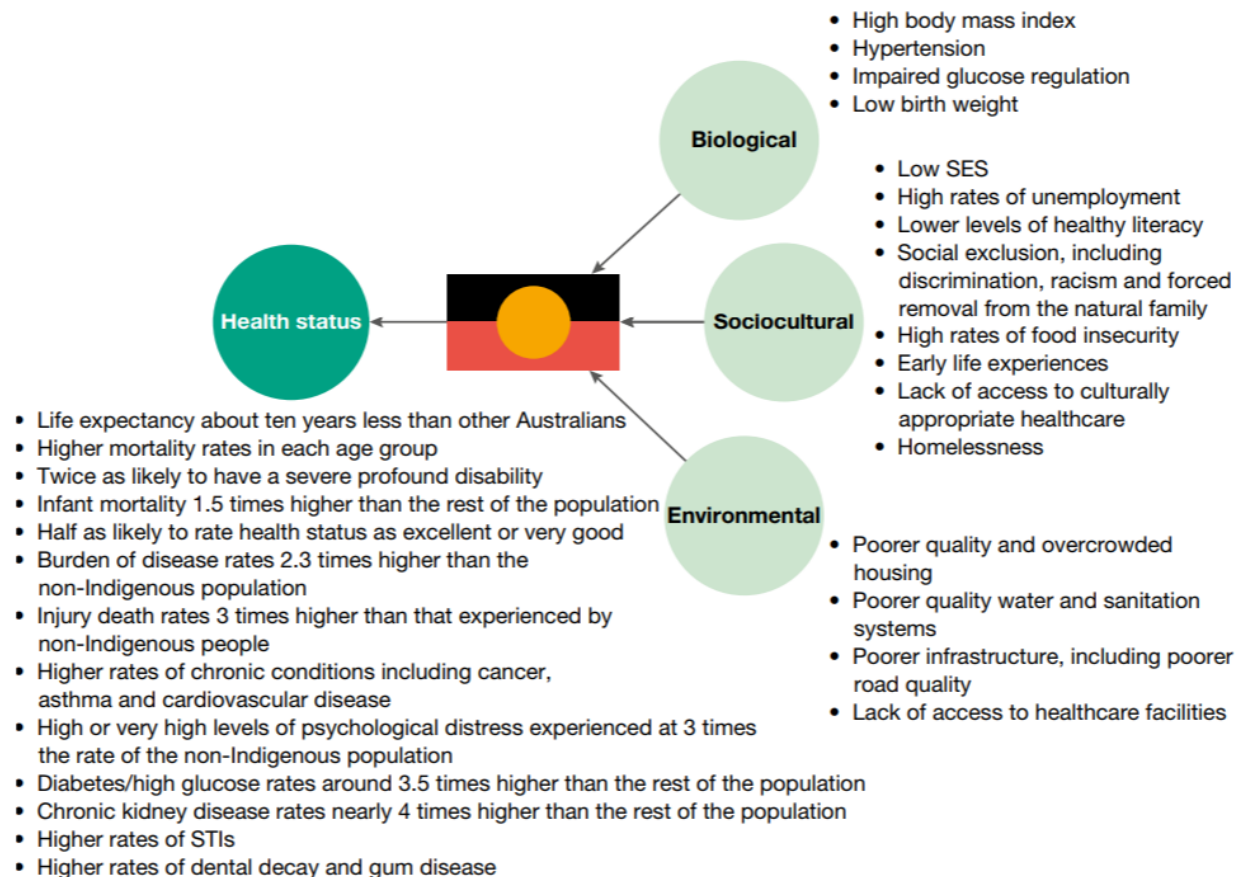
## Climate change

There is increasing concern that changes to the environment are contributing to climate change, resulting in extreme temperatures, rising sea levels, and increases in the occurrence of natural disasters and the spread of vector-borne diseases such as dengue fever and Ross River fever, which are spread by infected mosquitoes.

Human settlement, industrialisation, land clearing and farming practices all affect environmental systems, including climate systems (AIHW, 2010). The impacts of climate change on the health status of individuals and population groups will vary depending on a range of factors. However, according to the Australian Institute of Health and Welfare (2012), 'the most vulnerable groups will be those living in remote areas, on lower incomes or with poor housing; the young and elderly; and the sick.

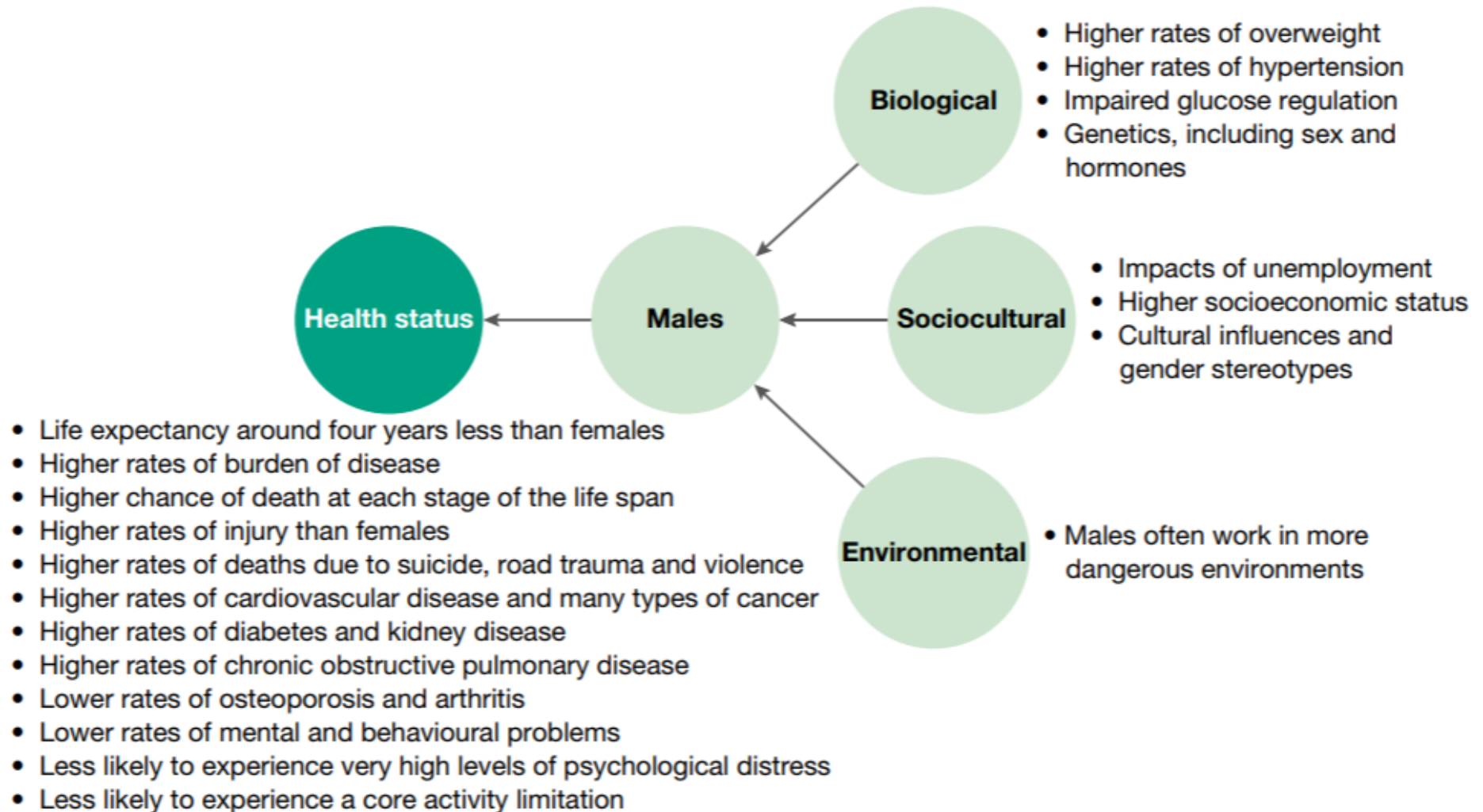
### 4.5 Differences between population groups — Indigenous and non-Indigenous Australians

**FIGURE 4.36** Factors contributing to variations in the health status of Indigenous Australians

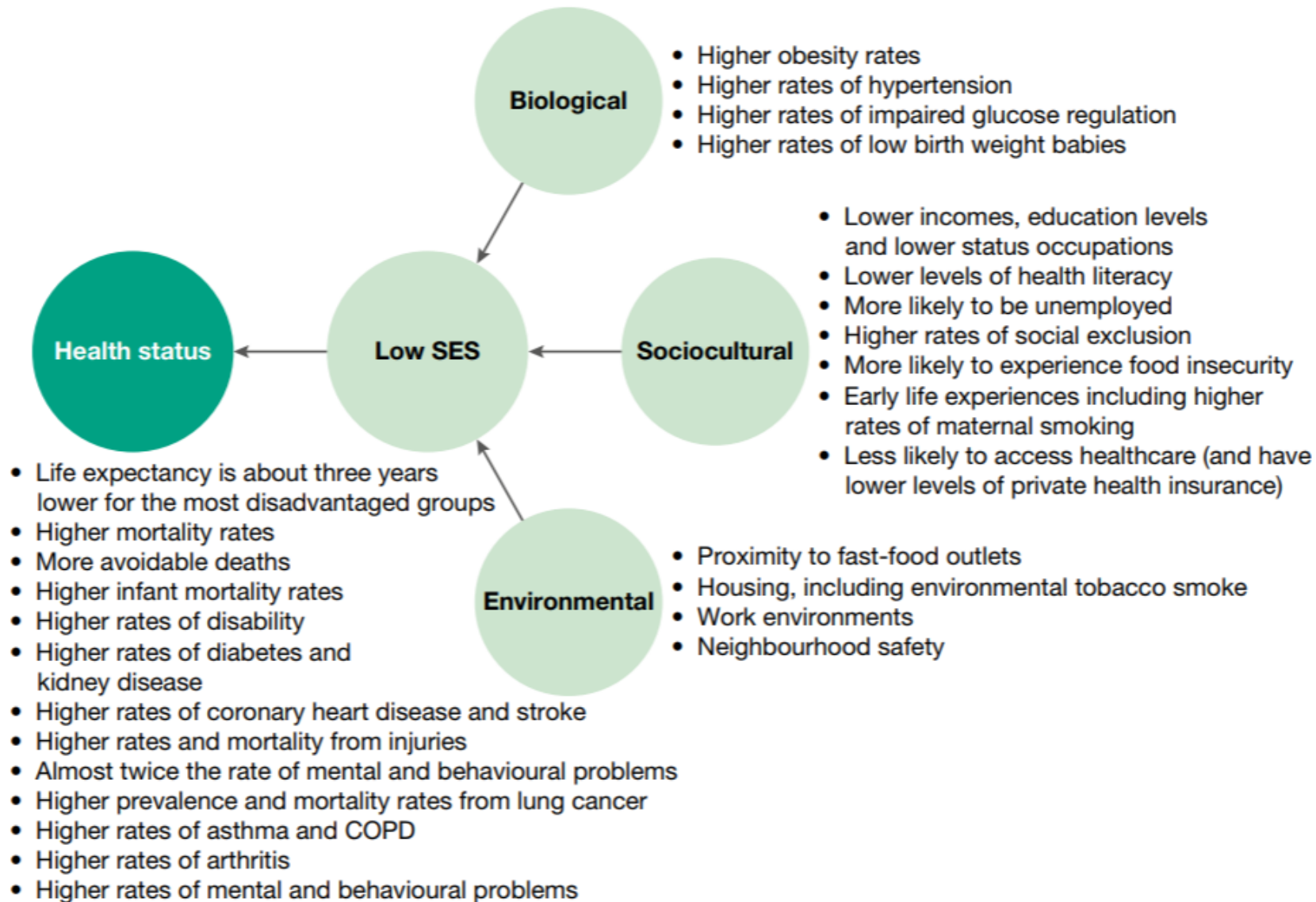




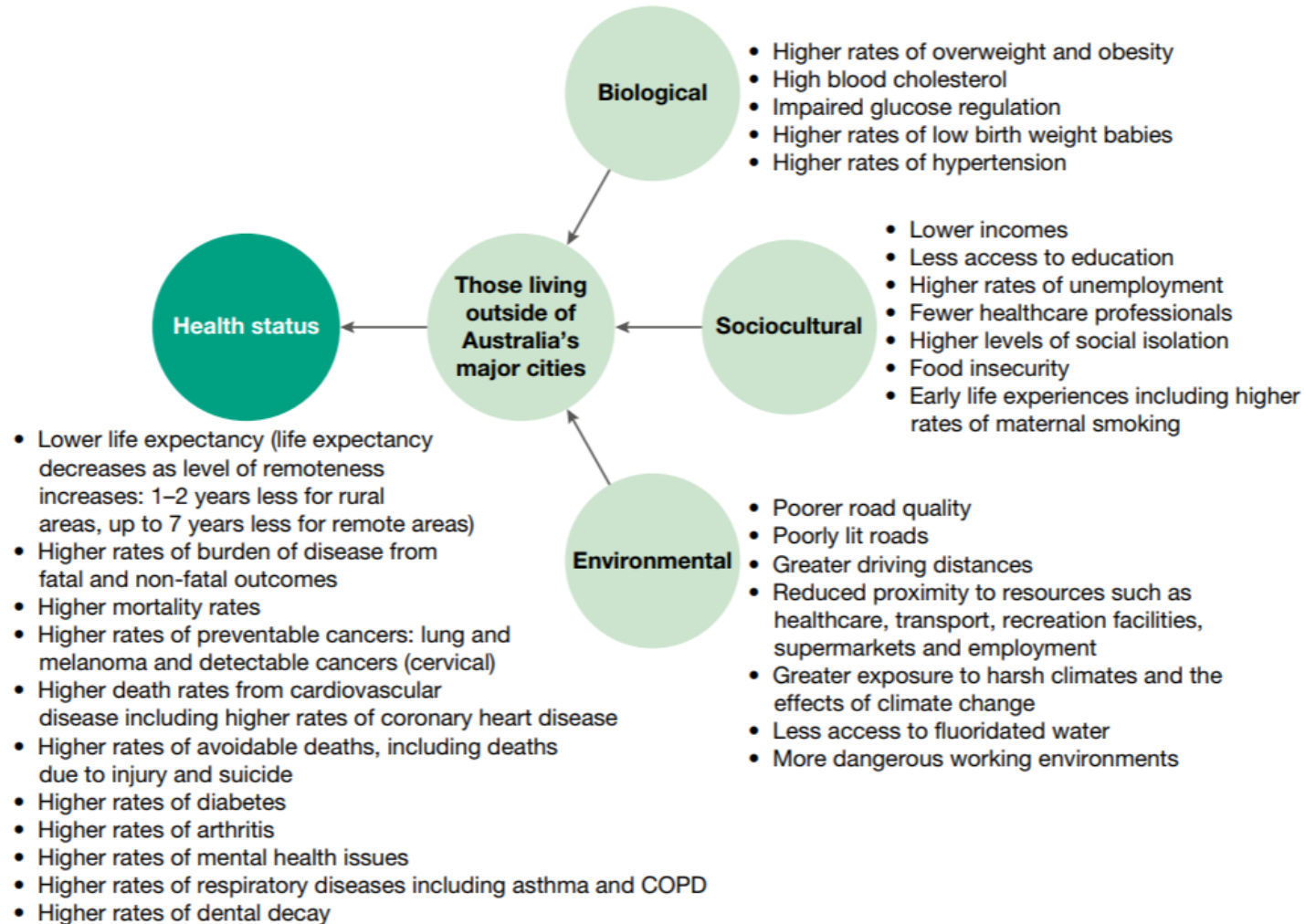
**FIGURE 4.42** The biological, sociocultural and environmental factors contributing to the health status of males



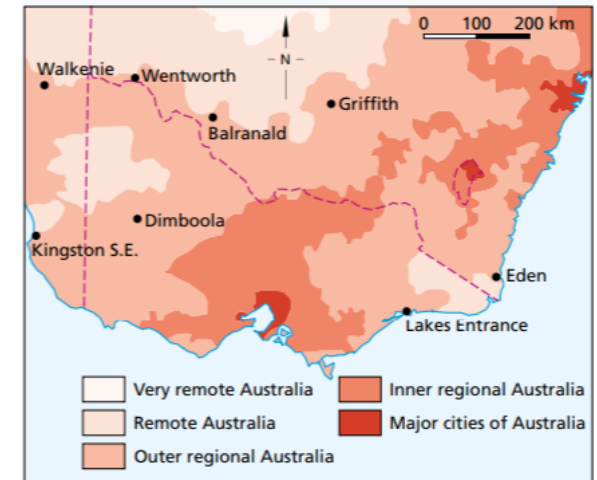
**FIGURE 4.51** Factors contributing to variations in health status between high and low socioeconomic groups



**FIGURE 4.56** Factors contributing to variations in health status for those living within and outside of Australia's major cities



**FIGURE 4.52** Only small areas of Victoria are considered remote.



# Chapter 5

## 5 - Changes in Australia's health status over time

Term	Definition
<b><i>Biomedical Model of Health</i></b>	focuses on the physical or biological aspects of disease and illness. It is a medical model practised by doctors and health professionals and is associated with the diagnosis, treatment and cure of disease.
<b><i>Health Promotion</i></b>	the process of enabling people to increase control over, and to improve, their health
<b><i>New Public Health</i></b>	an approach to health that expands the traditional focus on individual behaviour change to one that considers the ways in which physical, sociocultural and political environments impact on health. Also referred to as the social model of health.
<b><i>Old Public Health</i></b>	government actions that focused on changing the physical environment to prevent the spread of disease, such as providing safe water, sanitation and sewage disposal, improved nutrition, improved housing conditions and better work conditions
<b><i>Ottawa Charter for Health Promotion</i></b>	an approach to health developed by the World Health Organization that aims to reduce inequalities in health. It reflects the social model of health and provides five action areas that can be used as a basis for improving health status, all of which are centred around three strategies for health promotion which are enabling, mediating and advocacy.
<b><i>Public Health</i></b>	the ways in which governments monitor, regulate and promote health and wellbeing and prevent illness
<b><i>Social Model of Health</i></b>	an approach that recognises improvements in health and wellbeing can only be achieved by directing effort towards addressing the physical, sociocultural and political environments of health that have an impact on individuals and population groups

## 5.2 Questions

2. Outline the changes in life expectancy that occurred between 1900 and 2015.

- Life expectancy has increased overtime, with males expected to live 80.9 years in 2015 compared to 53.8 years in 1900. Females in 2015 have a life expectancy of 84.8 years compared to 57.5 years in 1900. The main reason for this trend has been the massive decline in mortality among children aged 0–4 years, particularly for infants aged under one year.

6. What are five examples of infectious diseases?

- small pox
- chicken pox
- flu
- STI's
- Spanish flu
- Cold
- Whooping cough
- Polio

7. What percentage of deaths did infectious diseases contribute in the first part of the twentieth century?

- 13%

8. Which infectious diseases were responsible for the increase in death rates in the early part of the twentieth century?

- Polio
- Whooping cough

9. When did cancer death rates reach their peak and what was the reason for this peak?

- 1980s, due to the uptake of smoking in the 1920s

10. List the two most significant types of cardiovascular diseases.

- Ischemic heart disease
- Cerebrovascular disease

### 5.3 Policy and practice relating to the 'old public health' and the contribution of public health measures to improvements in Australia's health status

**Public health** is concerned with the organisation and collective effort to improve the health status of the entire population. It refers particularly to the ways in which governments monitor, regulate and promote health status and prevent disease.

#### Old public health

The first public health measures were introduced when it was understood that bacteria were a major cause of disease. At that time, the poor living conditions in which much of the population lived resulted in pressure being placed on governments to address the high rates of infectious diseases that were responsible for much of the death and disability. These measures focused on the establishment of government-funded water and sewage systems, so people had clean water to drink and better sanitation, improved nutrition, improved housing conditions and better work conditions.

These public health actions, which focused on the physical environment, became known as the old public health. They contributed to the reduction in deaths from infectious diseases, such as diarrhoea and cholera, particularly in children. Improved housing led to a reduction in respiratory diseases such as influenza and pneumonia. Improved nutrition meant that people had better established immune systems, enabling them to fight infectious diseases or recover more quickly from them. These actions brought about improvements in life expectancy and infant mortality rates.

#### The discovery of vaccines

Great gains were also made with the discovery of vaccines, which helped to treat a range of infectious diseases. Vaccines helped bring huge reductions in morbidity and mortality from diseases such as smallpox, polio, diphtheria, pertussis, tuberculosis, tetanus, polio, measles, mumps, rubella and hepatitis B. The Australian government undertook mass vaccinations in the 1930s for diphtheria; in the 1950s for pertussis, tetanus and poliomyelitis; and in the 1960s for measles. The success of vaccinations as a public health measure has resulted in

#### The shift to health promotion

As the patterns of disease and illness started to change, and understanding of diseases and their causes improved, so too did the range of public health actions. The emergence of the lifestyle diseases during the 1950s and 60s saw a shift towards the implementation of publicly funded health promotion campaigns. These were designed to bring about individual behaviour change by making people aware of the causes of ill health such as tobacco smoking, physical inactivity, poor diet and excessive alcohol consumption

### 5.3 Questions

4. How did the discovery of vaccines impact health status?

- They helped to treat a range of infectious diseases. Vaccines helped bring huge reductions in morbidity and mortality from diseases such as smallpox, polio, diphtheria, pertussis, tuberculosis, tetanus, polio, measles, mumps, rubella and hepatitis B.

5. What public health measure was introduced by the Commonwealth Government in response to the outbreak of the bubonic plague in 1900?

- An outbreak of the bubonic plague in 1900 triggered the introduction of strict quarantine laws which are still in place in Australia to protect the population from outbreaks of diseases in other countries. During World War I, the Commonwealth Government provided funding to the states for tuberculosis and venereal disease campaigns to address the high level of mortality and morbidity from these diseases. At the same time, the School of Tropical Health was established in Queensland to address the high rate of tropical diseases

6. When were publicly funded health promotion campaigns introduced and why? Apply your knowledge

- During the 1950s and 1960s saw the emergence of lifestyle diseases and the implementation of publicly funded health promotion campaigns

7. (a) Which factors were responsible for improvements in infant mortality rates towards the end of the 1930s?

- By 1937 there were over 200 infant welfare centres operating in Victoria. These measures — along with regulations that resulted in better quality milk, an increase in breast feeding rates and reduced fertility rates — were also responsible for improvements in infant mortality.

(b) Outline why each factor identified in part (a) would have been effective in reducing infant mortality rates.

- The welfare centres would be accessible for mothers who may have a worry or concern about their child, then if the concern was life threatening, it would be treated earlier.

### 5.4 The biomedical approach to health and its contribution to improving Australia's health status

- The term 'biomedical' comes from the Greek word bios (meaning 'life') and the Latin word medicus (meaning 'healing').
- The biomedical model of health, sometimes referred to as the 'band aid' or 'quick-fix' approach, focuses on the physical or biological aspects of disease and illness. It involves diagnosing and treating illnesses and conditions once symptoms are present.
- It focuses mainly on the use of technology to diagnose and cure disease, and on the services provided by doctors, specialists and hospitals. Individuals are the focus of the biomedical model, in contrast to the population-based focus of public health actions.



- The biomedical approach concentrates on disease, illness or disability, and works to return a person to a pre-illness state of health and wellbeing. Addressing the reasons for illness are not at the centre of the biomedical model; the condition itself is the focus, and treatments are considered the solution to the disease. As a result, education on the behavioural and sociocultural factors that can improve health status are generally excluded.

#### Advantages:

- *It creates advances in technology and research.* Without the biomedical model of health, there would be no x-rays, antibiotics or anaesthetics. There would also be relatively little knowledge about how to diagnose and treat illness.
- *It enables many common problems to be effectively treated.* Most people have had a range of medicines over the course of their lives. These are often taken for granted as they stop diseases that would otherwise develop and cause considerable ill health or death.
- *It extends life expectancy.* Many causes of death that were common in the past, such as some infectious diseases, can now be treated and cured.
- *It improves quality of life.* Many chronic conditions can be managed with medication, therapy or surgery.

#### Disadvantages:

- *It relies on professional health workers and technology and is therefore costly.* Because individuals are the focus of this model, people with specialist knowledge about disease and treatment are required to adequately treat the patient. As knowledge and technology have developed, the cost of training and equipment has also increased. Some machines required for diagnosis (such as MRI machines) and treatment (such as robotic surgery systems) can cost millions of dollars and only treat a small number of patients each day.
- *It doesn't always promote good health and wellbeing.* The biomedical model encourages a reliance on quick-fix solutions to health issues. As the focus is on the condition itself rather than the factors that caused it, the biomedical model does not encourage people to be responsible for their own health and wellbeing.
- *Not every condition can be treated.* Those relying on the biomedical model to restore optimal health and wellbeing may experience conditions that cannot be cured or treated effectively. These conditions may be preventable through behaviour change; however, this is not a focus of the biomedical model. Cancer is an example of a condition that has treatments available but, in many cases, no cure.
- *Affordability.* Not all individuals can afford the medical technologies and resources that are a part of the biomedical model of health. This is an important factor contributing to the differences experienced in health status between population groups.

## **5.5 Development of new public health and the social model of health**

### 5.5.1 New public health

- As medical technologies and knowledge of disease and illness developed, there was an expectation and belief that these would solve the health and wellbeing problems faced at that time. Towards the 1970s there was concern that, while the control of infectious diseases had been achieved, the leading causes of morbidity and mortality had changed.
- Lifestyle diseases, especially cardiovascular diseases, had become the leading cause of death and disability. Given that the cause of these diseases was lifestyle related, there was an understanding that individuals would change their behaviours if they were exposed to the necessary information. This saw the introduction of a range of health promotion strategies.

### Advantages:

- *It promotes good health and wellbeing and assists in preventing diseases.* As the social model focuses on the broader determinants of health and wellbeing, it can prevent conditions from developing in the first place, therefore improving health status.
- *It promotes overall health and wellbeing.* As the social model doesn't just focus on diseases that are present, it has the potential to promote the overall health and wellbeing of individuals.
- *It is relatively inexpensive.* Although health promotion programs can cost millions of dollars to implement, the investment is often significantly cheaper than treating conditions once symptoms arise.

### Disadvantages:

- *Not every condition can be prevented.* The causes of some conditions, including many genetic conditions, can be very difficult to prevent.
- *It does not promote the development of technology and medical knowledge.* As it focuses on the broader determinants of health and wellbeing, it does not promote medical advancements.
- *It does not address the health and wellbeing concerns of individuals.* Those who are sick, for example, are not a specific focus of the social model of health, which can impact negatively on their health and wellbeing and health status in the population.

### Principles of this model:

#### Acts to enable access to healthcare

- People having no money, not receiving culturally appropriate health care, geographical location
- Healthcare has a significant influence on health and wellbeing and is a contributing factor in the health status experienced by most people. There are many sociocultural and environmental factors that can impact access to healthcare. Some of these include cultural and language barriers, economic and geographical factors, and education levels.

#### Acts to reduce social inequities

- Levelling the playing field and making sure everyone has access to the things they need. Not what they deserve or are entitled to.
- To achieve this, the sociocultural factors that contribute to inequities in health status must be addressed. Many individuals and population groups are heavily influenced by sociocultural and environmental factors such as gender, culture, race, socioeconomic status, access to healthcare, social exclusion and the physical environment.

### Involves intersectoral collaboration

- Different sectors or professions working together towards the same goal
- There are many government and non-government organisations and stakeholders who have an influence over the sociocultural and environmental factors that influence health status. Some of these groups include government departments responsible for employment, education and finance, as well as the private sector, including service providers and manufacturers who sit outside the health system.

### Empowers individuals and communities

- Giving individuals or communities the tools or strategies to use and improve health
- Empowering individuals and communities means people can participate in decision making about their health and wellbeing. Individuals are more likely to participate in healthy behaviours if they feel they have a sense of power and control over their situation. Empowering individuals and communities with health knowledge and skills means they are more able to make positive changes to their health and wellbeing.

### Address the broader determinants (or factors) of health

- Tobacco smoking and food intake, are an important part of improving health and wellbeing, but these factors are often themselves influenced by other, broader determinants such as gender, culture, race or ethnicity, socioeconomic status, geographical location and the physical environment.
- Behavioural factors (also referred to as behavioural determinants), such as reducing tobacco smoking and food intake, are an important part of improving health and wellbeing, but these factors are often themselves influenced by other, broader determinants such as gender, culture, race or ethnicity, socioeconomic status, geographical location and the physical environment. These broader factors or determinants of health and wellbeing have been shown to have strong relationships with health status and are increasingly becoming the focus of health promotion strategies. Addressing these determinants is a key aspect of the social model of health.

## 5.6 The Ottawa Charter for Health Promotion

Good health and wellbeing is a major resource for individuals, countries and the world, and an important dimension of quality of life. Factors that influence health and wellbeing can all favour health and wellbeing or be harmful to it. Health promotion aims to make these factors favourable through advocacy for health and wellbeing.

### 5.6.1 Strategies for health promotion

- The three strategies for health promotion as outlined in the Ottawa Charter are advocate, enable and mediate.

#### Advocate:

- Advocacy for health and wellbeing refers to actions that seek to gain support from governments and societies in general to make the changes necessary to improve the factors that influence health and wellbeing for everyone. These actions can include media campaigns (including social media), public speaking, conducting and publishing of research and public opinion, and lobbying governments, in which individuals or groups try to change the opinions of those responsible for making public policies and laws.

#### Enable:

- Health promotion focuses on achieving equity in health and wellbeing by working with those who experience poorer health status. Health promotion aims to reduce differences in health status between population groups by ensuring equal opportunities and resources are available to enable all people to achieve optimal health and wellbeing. This includes ensuring access to education, employment, adequate housing, nutritious food and healthcare by empowering people, not by merely providing handouts. People cannot achieve optimal health and wellbeing unless they can take control of those things that influence their lives. This must apply equally to women and men, Indigenous and non-Indigenous people, those in low and high socioeconomic groups, and those living within or outside of Australia's major cities.

#### Mediate:

- The changes required to promote health and wellbeing include changes to funding, legislation and policies, and to the physical and sociocultural environment. Such changes will inevitably cause conflict between different individuals, groups, businesses and political parties. Mediating relates to helping these groups resolve such conflict and produce outcomes that promote health and wellbeing. Reducing speed limits is an example of a policy change that is not always supported by all members of the community. Working with groups that oppose such changes to ensure that lives are saved on the roads is an important role of social groups and health professionals.

## 5.6.2 Action areas of the Ottawa Charter

- The five action areas of the Ottawa Charter are to build healthy public policy, create supportive environments, strengthen community action, develop personal skills and reorient health services.
- **B**ad **C**ats **S**mall **D**ead **R**ats

### **Build healthy public policy:**

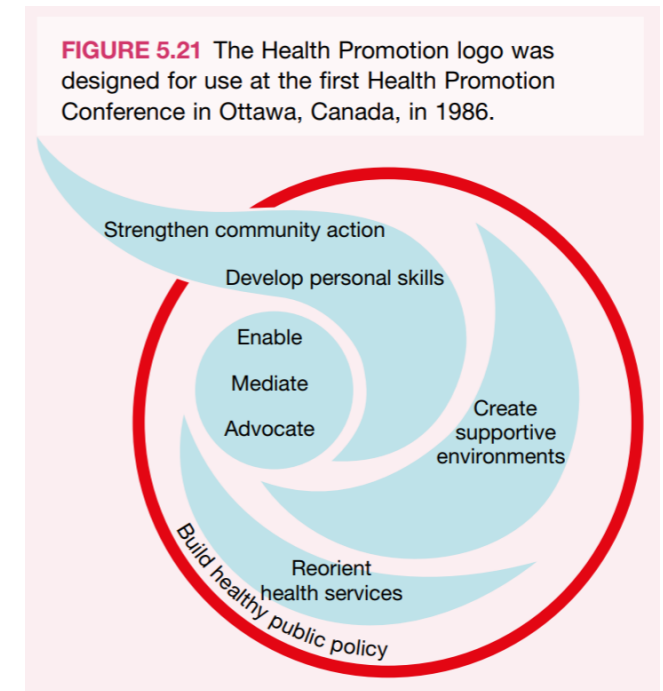
- This action area relates directly to the decisions made by government and organisations regarding laws and policies that affect health and wellbeing.
- Examples include removing the goods and services tax (GST) on unprocessed foods (which are healthier options than processed foods) and increasing the tax on certain alcoholic drinks. Policies and laws such as these make it more difficult for people to participate in unhealthy behaviours, thereby reducing exposure to factors that can cause ill health.
- Some of these (such as banning smoking in public places) are designed to make the environment healthier for those who choose not to participate in unhealthy behaviours, and others aim to directly influence behaviour (such as the compulsory wearing of seatbelts). In this capacity, laws and policies make healthier choices easier choices.

### **Create supportive environments:**

- A supportive environment is one that promotes health and wellbeing by being safe, stimulating, satisfying and enjoyable. Supportive environments promote health and wellbeing by helping people practise healthy behaviours.
- Examples of this include establishing Quitline (a support service for smokers wanting to quit, which provides a supportive social environment), providing shaded areas in school playgrounds (reducing the rate of UV exposure, which provides a supportive physical environment) and investing in sustainable energy production (ensuring that future generations also have access to a healthy environment). This action area recognises the impact that the broader determinants have on health status and aims to promote a healthy physical and sociocultural environment for all members of the community.
- A healthy physical and sociocultural environment includes a satisfying and fulfilling work and social life (including support for those who need it). This action area also emphasises the importance of ensuring that health promoting resources associated with the physical and sociocultural environment will be available to promote the health and wellbeing of future generations.

### **Strengthen community action:**

- This action area focuses on building links between individuals and the community, and centres around the community working together to achieve a common goal. Giving the community a sense of ownership of a health and wellbeing strategy increases the likelihood of its effectiveness.



- The Central Australian Aboriginal Congress (CAAC) in Alice Springs is an example of this. CAAC is a health service provider and educator run by Aboriginal people for Aboriginal people. The rates of participation in the CAAC program are high because people feel a connection. A range of Aboriginal people in central Australia work together to promote the health and wellbeing of their community. The service provides healthcare, education and advocacy.
- The more people work together towards a common goal, the greater the chance of success. Another example of this is the government's immunisation strategy. This strategy involves media, doctors, schools and parents working together to achieve higher immunisation rates.

#### **Develop personal skills:**

- Education is the key aspect of this action area. Education refers to gaining health-related knowledge (such as attending classes teaching healthy cooking techniques) and gaining life skills that allow people to make informed decisions that may indirectly affect health and wellbeing (such as talking to people to resolve conflict rather than using violence).
- Many parts of society have a role in achieving adequate education for citizens, including school and work settings, families, and government and non-government organisations.

#### **Reorient health services:**

- This action area refers to reorienting the health system so that it promotes health and wellbeing as opposed to focusing only on diagnosing and treating illness, as is the case with the biomedical model. To reorient health services, the health system must encompass all members of the community including individuals, community groups, health professionals, health service institutions and governments.
- The social model of health sees an individual as a whole person, not just a physical being. A health system that reflects the social model of health must address all of the factors that influence health and wellbeing, not just diseases. This requires a shift towards health promotion, which includes doctors taking on the role of educator.
- This action area does not suggest neglecting the biomedical model, but rather incorporating health promotion to play a more significant role. Examples of this action area include focusing on healthy eating rather than surgery to reduce the impact of cardiovascular disease, and having doctors recommend physical activity to prevent the development of damaging conditions such as type 2 diabetes.

# Chapter 6

## 6.2 Australia's health system — Medicare

Term	Definition
<b><i>Bulk-billing</i></b>	is when the doctor or specialist charges only the schedule fee. The payment is claimed directly from Medicare so there are no out-of-pocket expenses for the patient.
<b><i>Patient co-payments</i></b>	is the payment made by the consumer for health products or services in addition to the amount paid by the government
<b><i>Premium</i></b>	is the amount paid for private health insurance.
<b><i>Schedule Fee</i></b>	is the amount that Medicare contributes towards certain consultations and treatments. The government decides what each item is worth and that's what Medicare pays. Doctors and private hospitals may choose to charge more than the schedule fee.

According to the World Health Organization, a health system is

- 'all the activities whose primary purpose is to promote, restore and/or maintain health'.

Common elements of health systems include:

- funding models
- a professional and well-trained workforce
- reliable information on which to base decisions and policies
- up-to-date facilities
- logistics to deliver quality medicines and technologies.

Australia's health system is the responsibility of all levels of government — federal, state and local — as well as the private sector. It is comparable to that of other, similar nations with regard to its structure and function, and generally provides a high quality of care.

Australia's health system is made up of two main components — public and private healthcare. The public component includes public-sector health services and schemes that are provided by the Australian, state/territory and local governments, and include:



- public hospitals
- Medicare
- the Pharmaceutical Benefits Scheme
- the National Disability Insurance Scheme.

The private sector includes:

- private health insurance
- private hospitals
- medical practitioners in private practices.

The Australian government and state/ territory governments fund and deliver a range of other services, including population health programs, health and medical research, and Aboriginal and Torres Strait Islander health services. Medicare is Australia's universal health insurance scheme.

Established in 1984, Medicare gives all Australians, permanent residents and people from countries with a reciprocal agreement (New Zealand, the United Kingdom, the Republic of Ireland, Belgium, Sweden, the Netherlands, Finland, Italy, Malta, Slovenia and Norway) access to healthcare that is subsidised by the government.

### 6.2.1 What does Medicare cover?

#### Out-of-hospital expenses

Medicare will pay all or some of the fees relating to many essential healthcare services. This includes consultation fees for doctors (general practitioners or GPs) and specialists, tests and examinations needed to treat illnesses, such as x-rays (see figure 6.3) and pathology such as blood tests, and eye tests performed by optometrists. Most surgical and other therapeutic procedures performed by general practitioners are also covered.

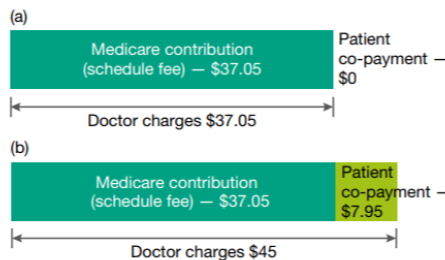
Although most basic dental services are usually not covered by Medicare, some dental procedures can be covered, including:

- some surgical procedures performed by approved dentists
- services for some children aged 2–17. Under the Child Dental Benefits Scheme, some children are eligible for Medicare-funded dental procedures.

## In-hospital expenses

As a public patient in a public hospital, accommodation and treatment by doctors and specialists is covered by Medicare, including initial treatment and aftercare. If an individual chooses to be admitted to a private hospital or as a private patient in a public hospital, Medicare will pay 75 per cent of the schedule fee (see figure 6.4) for treatment by doctors and specialists but will not contribute to accommodation or other costs such as theatre fees and medication. A summary of the in- and out-of-hospital services covered by Medicare is shown in figure 6.5.

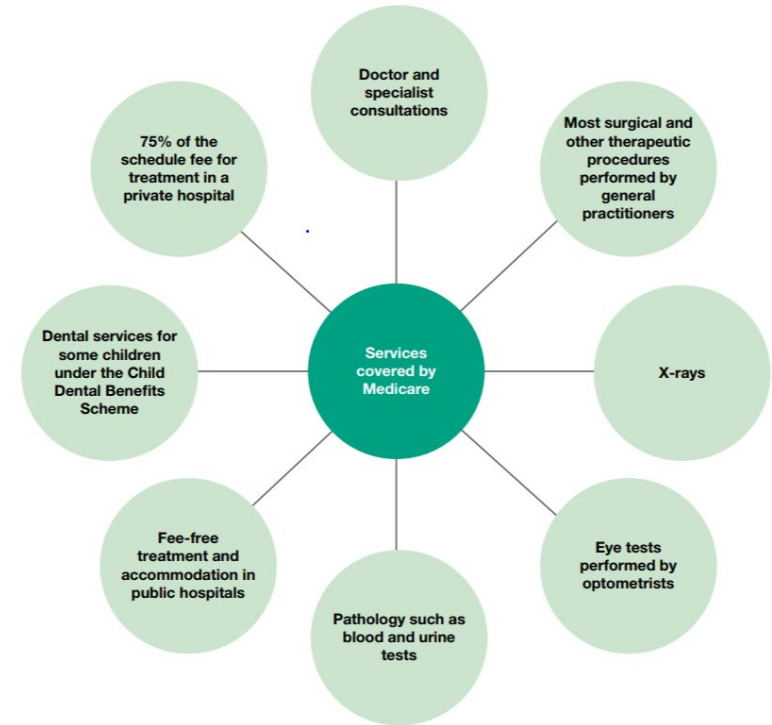
**FIGURE 6.4** (a) A bulk-billed GP consultation and (b) a GP consultation requiring patient co-payment



Source: www.health.gov.au.

The schedule fee indicates the amount that Medicare will contribute to selected procedures. The Medicare Benefits Schedule is a document that lists the range of services covered and the amount that Medicare will contribute to each. The schedule fees are based on the amount that is thought to be 'reasonable' on average, for that particular service. For example, the schedule fee for a GP's visit in January 2017 was \$37.05. Based on this contribution, every time an individual goes to the doctor for a standard consultation, Medicare will contribute \$37.05. This does not necessarily mean that the doctor will only charge that amount. Depending on the individual doctor's policy, the fee may be more than the schedule. If this is the case, the patient is responsible for paying the difference (known as the **patient co-payment**). If the doctor charges only the schedule fee, the patient does not have any out of pocket expenses and is said to have been **bulk-billed**. Examples of the contributions of both Medicare and the individual are outlined in the hypothetical situations on the left.

**FIGURE 6.5** Summary of services covered by Medicare



## Medicare Safety Net

The Medicare Safety Net provides extra financial assistance for those that incur significant out of pocket costs for Medicare services. Once an individual or family has contributed a certain amount out of their own pocket to Medicare services in a calendar year (\$700 for singles and \$1000 for couples and families in 2017), further financial support is provided by the government, making Medicare services cheaper for the remainder of that year.

### 6.2.2 What is not covered by Medicare?

Medicare covers most 'clinically necessary' hospital and doctors' fees. Any cosmetic or unnecessary procedures are generally not covered. Other services not covered by Medicare include:

- most costs associated with private hospital care. Medicare will pay 75 per cent of the schedule fee for treatment in private hospitals but will not contribute to accommodation and other costs.
- most dental examinations and treatment. Although some children aged 2–17 can qualify for Medicare-funded dental care, most individuals are responsible for meeting their own costs associated with dental healthcare.
- home nursing care or treatment
- ambulance services
- most allied health services (unless referred by a GP or carried out in a public hospital).

### 6.2.3 The advantages and disadvantages of Medicare

The advantages and disadvantages of Medicare are summarised in table 6.1.

**TABLE 6.1** The advantages and disadvantages associated with Medicare

Advantages	Disadvantages
<ul style="list-style-type: none"><li>• Choice of doctor for out-of-hospital services</li><li>• Available to all Australian citizens</li><li>• Reciprocal agreement between Australia and other countries allows Australian citizens to access free healthcare in selected countries</li><li>• Covers tests and examinations, doctors' and specialists' fees (schedule fee only), and some procedures such as x-rays and eye tests</li><li>• The Medicare Safety Net provides extra financial contributions for medical services once an individual's or family's co-payments reach a certain level</li></ul>	<ul style="list-style-type: none"><li>• No choice of doctor for in-hospital treatments</li><li>• Waiting lists for many treatments</li><li>• Does not cover alternative therapies</li><li>• Often does not cover the full amount of a doctor's visit</li></ul>

## 6.2.4 How is Medicare funded?

Medicare is funded through three sources of income:

- the Medicare levy
- the Medicare levy surcharge
- general taxation.

The Medicare levy is an additional 2 per cent tax placed on the taxable income of most taxpayers. Those with low incomes or with specific circumstances may be exempt from paying the levy. People without private health insurance earning more than a certain amount (\$90000 a year for individuals and \$180000 for families in 2017–18) have to pay an extra tax called the Medicare levy surcharge.

The Medicare levy surcharge increases as income increases; for example, an individual without private health insurance earning more than \$90000 will pay an extra 1 per cent of their income to Medicare, and an individual without private health insurance earning more than \$140001 will pay an extra 1.5 per cent of their income to Medicare. This is an incentive for those on higher incomes to take out private health insurance, which takes some of the financial pressure off Medicare. The Medicare levy surcharge aims to encourage individuals to take out private hospital cover and, where possible, to use the private system to reduce the demand on the Medicare-funded public system. The revenue collected from the Medicare levy and the Medicare levy surcharge does not meet the full operating costs of Medicare.

Therefore, income collected through general taxation is also used to help fund the cost of Medicare

## 6.2 Questions

### Test your knowledge

#### 1 (a) Define Medicare.

- Medicare gives all Australians, permanent residents and people from countries with a reciprocal agreement (New Zealand, the United Kingdom, the Republic of Ireland, Belgium, Sweden, the Netherlands, Finland, Italy, Malta, Slovenia and Norway) access to healthcare that is subsidised by the government.
- It gives certain people or groups free healthcare
- Australia's publicly funded healthcare system

#### (b) What does Medicare cover?

- X-rays
- Eye tests performed by optometrists
- Pathology such as blood and urine tests
- Fee-free treatment and accommodation in public hospitals
- Dental services for some children under the Child Dental Benefits Scheme
- 75% of the schedule fee for treatment in a private hospital

- Doctor and specialist consultations
- Most surgical and other therapeutic procedures performed by general practitioners

(c) What does Medicare not cover?

- Unnecessary procedures
- Cosmetic procedures
- Dental
- Private hospital care
- Ambulances
- Alternative therapies (physiotherapy, chiropractor, massage)

2. (a) What is meant by the term 'schedule fee'?

- The amount that Medicare contributes towards certain consultations and treatments.

(b) What is bulk-billing?

- when the doctor or specialist charges only the schedule fee. The payment is claimed directly from Medicare so there are no out-of-pocket expenses for the patient.

3. What percentage of the schedule fee does Medicare pay if individuals are treated as private patients?

- 75%

4. What is the Medicare Safety Net?

- provides extra financial assistance for those that incur significant out of pocket costs for Medicare services. Once an individual or family has contributed a certain amount out of their own pocket to Medicare services in a calendar year (\$700 for singles and \$1000 for couples and families)

5. Explain how the Medicare Safety Net may promote health status in Australia.

- Can promote health status by increasing access to healthcare and receive treatment for ongoing or chronic conditions, therefore increasing life expectancy

6. Outline how Medicare is funded.

- Through general tax, Medicare levy surcharge and Medicare levy

### 6.3 Australia's health system — the Pharmaceutical Benefits Scheme and the National Disability Insurance Scheme

In addition to Medicare, the federal government is responsible for the Pharmaceutical Benefits Scheme (PBS) and plays a key role in administering the National Disability Insurance Scheme (NDIS). The PBS and NDIS are two key components of Australia's health system and work to promote health and wellbeing in Australia.

#### 6.3.1 Pharmaceutical Benefits Scheme (PBS)

The PBS is a key component of the federal government's contribution to Australia's health system. The PBS has been evolving since 1948, when the government provided lifesaving and disease-preventing medication to the community free of charge. The aim was to provide essential medicines to people who needed them, regardless of their ability to pay.

The purpose of the PBS remains the same today, but instead of being free, medicines are now subsidised, and consumers must make a patient co-payment. As at 1 January 2017, the patient co-payment for most PBS-subsidised medication was \$38.80 or \$6.30 for concession cardholders. The government pays the remaining cost. These costs are adjusted each year on 1 January to stay in line with inflation.

In addition to the initial subsidy, individuals and families are further protected from large overall expenses for PBS-listed medicines through the PBS Safety Net. Once they (or their immediate family) have spent \$1494.90 within a calendar year on PBS-listed medicine, the patient pays only a concessional co-payment rate of \$6.30 rather than the normal \$38.80.

#### 6.3.2 National Disability Insurance Scheme (NDIS)

The NDIS is a national insurance scheme that provides services and support for people with permanent, significant disabilities, and their families and carers. The National Disability Insurance Agency (NDIA) was established in 2013 by the federal government as an independent agency responsible for implementing the NDIS. Funded by the federal and state/territory governments, the NDIS works to assist individuals with disabilities to live an ordinary life. To be eligible for the NDIS, a person must be aged under 65 and meet both the residency and disability requirements. The residency requirements are twofold:

- be an Australian citizen or hold a permanent visa or a Protected Special Category visa
- live in Australia where the NDIS is available. The disability requirements are fourfold:
- you have an impairment or condition that is likely to be permanent (i.e. it is likely to be lifelong)
- your impairment substantially reduces your ability to participate effectively in activities, or perform tasks or actions unless you have: – assistance from other people or – you have assistive technology or equipment (other than common items such as glasses) or – you can't participate effectively even with assistance or aides and equipment
- your impairment affects your capacity for social and economic participation
- you are likely to require support under the NDIS for your lifetime.

*Through the individualised plan, the NDIS assists participants to:*

- **Access mainstream services and supports.** These are the services available for all Australians from people like doctors or teachers through the health and education systems. It also covers areas like public housing and the justice and aged care systems. The NDIS provides information about appropriate support options and assists participants in accessing such services.
- **Access community services and supports.** These are activities and services available to everyone in a community, such as sports clubs, community groups, libraries or charities. Many individuals wish to be socially connected by accessing services and supports within the community.
- **Maintain informal support arrangements.** This is the help that people get from their family and friends. It is support people don't pay for and is generally part of most people's lives.
- **Receive reasonable and necessary funded supports.** The NDIS can pay for supports that are reasonable and necessary. This means they are related to a person's disability and are required for them to live an ordinary life and achieve their goals. Funding is provided for assistive technology such as a mobility cane, nonslip bathmat, talking watch, shower stool/chair, over-toilet frame, bed rails and wheelchairs. Funding is also provided to pay for carers if the individual requires assistance with daily tasks

### **6.3 Questions and Case Study**

CASE STUDY Sarah's story — How we might provide a personal plan and supports over a lifetime Sarah is 24 and was born with cerebral palsy. Prior to her contact with the National Disability Insurance Agency, she had no job or friends. Sarah has limited mobility and uses an electric wheelchair. Her parents provide her with most of her support. She had outgrown her wheelchair, which she had had for over eight years.

After her initial contact, Sarah worked with us to develop an individual plan. She was asked to think about her goals and aspirations, not just her physical needs. Sarah said she wanted to socialise more, and she was really interested in film.

Sarah's plan identified that she would benefit from physiotherapy and she could have daily in-home assistance with some tasks and help improve her independence. She was provided with funding for a new wheelchair.

The biggest change in Sarah's life came when we helped her locate a film club and worked with the club to support her involvement. Sarah's plan also included transport to and from these events.

#### **Case study review**

Explain how the NDIS assisted Sarah.

- They got her a new wheelchair
- They helped her locate a film club
- They helped her with transport to the film club

2. Discuss how the NDIS may have promoted Sarah's health and wellbeing.

- Providing her with things making her more independent improving self-esteem and her mental health and wellbeing
- By Sarah going to a community group, her social health and wellbeing is promoted

### Test your knowledge

4. What is the National Disability Insurance Scheme (NDIS)?

- A national scheme that provides services and support to people with permanent disabilities and their families and carers around them

5. What are the eligibility criteria for the NDIS?

- The disability requirements – must have a significant permanent disability that hinders the person doing everyday tasks
- Residency requirements – must be an Australian citizen or have a certain VISA
- Age requirements – under the age of 65

11. Explain how assistive technology could promote the health and wellbeing of individuals in Australia.

- The devices that assist and engage in daily activities
- The technologies assist Australians by allowing and assisting them to live out their everyday tasks. Such as Sarah getting a new wheelchair, she is able to travel around easier and see her friends and family better. Improving her health and wellbeing.
- By providing these technologies, they can improve physical health and wellbeing by increasing exercise rates.

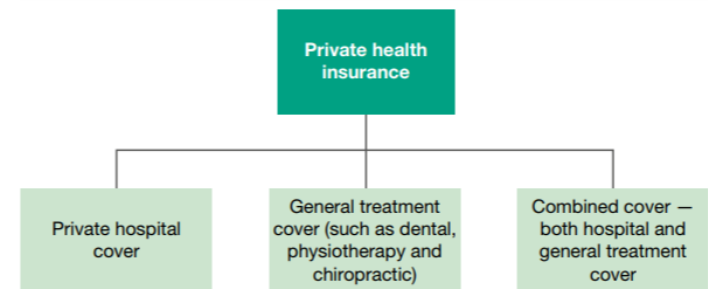
## 6.4 Australia's health system — private health insurance

Private health insurance is a type of insurance under which members pay a premium (or fee) in return for payment towards health-related costs not covered by Medicare. It is an optional form of health insurance that can be purchased in addition to Medicare.

Private health insurance is an important part of Australia's health system. As well as contributing much of the necessary healthcare funding, it gives Australians more choice in the sort of care they wish to access. Private hospitals (which are largely funded by private health insurance companies) provide about one-third of all hospital beds and 40 per cent of hospital separations. As well as private hospital cover, people can receive cover for general treatment (also known as 'extras' cover) to pay for services provided by dentists, physiotherapists and chiropractors, which are generally not covered by Medicare.

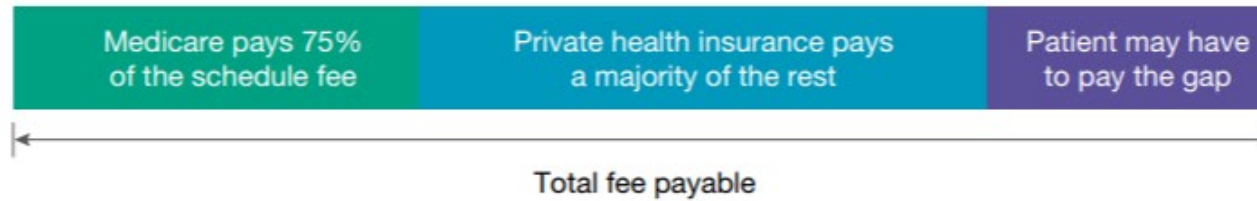
The individual can choose which extras are covered, but the premium increases with each addition.

**FIGURE 6.11** Private health insurance options





**FIGURE 6.13** Breakdown of fees paid for using private hospitals

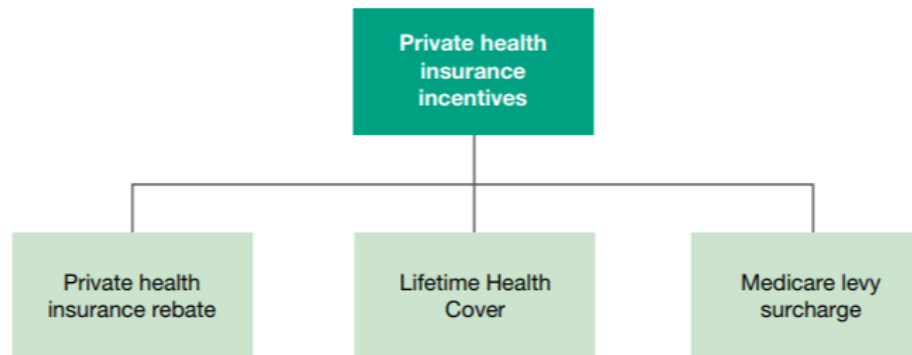


#### 6.4.1 Private health insurance incentives

The proportion of people who have private health insurance has fluctuated over the years. When Medicare was introduced, many people opted out of private health insurance because they could access essential treatments without having to pay expensive private health insurance premiums. This put a strain on the public health system as fewer people were using private hospitals.

In order to encourage people back into private health insurance, the government introduced three main incentives (see figure 6.14.)

**FIGURE 6.14** The three incentives put in place to encourage people to take out private health insurance



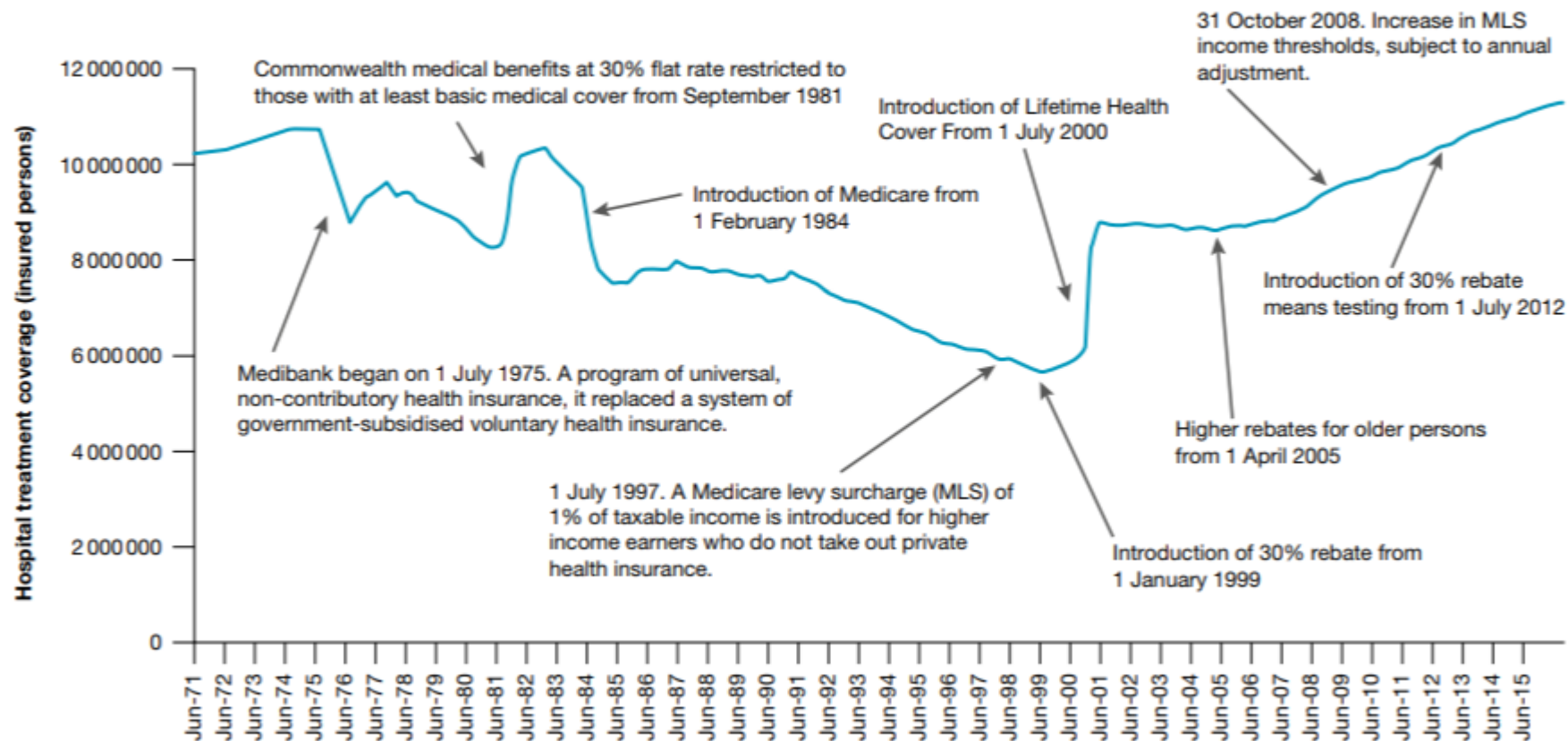
**Private health insurance rebate:** 30 per cent rebate incentive. Under this scheme, policyholders received a 30 per cent rebate (or refund) on their premiums for private health insurance.

**Lifetime health cover:** People who take up private insurance after the age of 31 pay an extra 2 per cent on their premiums for every year they are over the age of 30. For example, a person who takes out private health insurance at age 40 will pay 20 per cent more for their private health insurance than someone who first takes out hospital cover at age 30. This encourages younger people to take up private health insurance and keep it for life

**Medicare levy surcharge:** People earning more than \$90 000 a year (\$180 000 for families) pay an extra tax as a Medicare levy surcharge if they do not purchase private health insurance. The Medicare levy surcharge is calculated according to income and ranges from 1 per cent to 1.5 per cent. This encourages high income earners to take out private health insurance.

Private health insurance overtime:

**FIGURE 6.15** Changes in private health insurance membership over time



**TABLE 6.3** The advantages and disadvantages of private health insurance

Advantages	Disadvantages
<ul style="list-style-type: none"> <li>• Enables access to private hospital care</li> <li>• Choice of doctor while in public or private hospital</li> <li>• Shorter waiting times for some medical procedures such as elective surgery</li> <li>• Depending on the level of cover purchased, services such as dental, chiropractic, physiotherapy, optometry and dietetics could be paid for</li> <li>• Helps to keep the costs of operating Medicare under control</li> <li>• High income earners with private health insurance do not have to pay the additional tax, called the Medicare levy surcharge</li> <li>• Government rebate for eligible policy holders</li> <li>• 'Lifetime Health Cover' incentive</li> </ul>	<ul style="list-style-type: none"> <li>• Costly in terms of the premiums that have to be paid</li> <li>• Sometimes have a 'gap', which means the insurance doesn't cover the whole fee and the individual must pay the difference</li> <li>• Qualifying periods apply for some conditions (such as pregnancy)</li> <li>• Policies can be complex to understand and so create confusion for the average person</li> </ul>

6.5 The role of Australia's health system in promoting health — funding, sustainability, equity and access

	Funding	Sustainability	Access	Equity
Medicare	<ul style="list-style-type: none"> <li>- Medicare provides the necessary funds to maintain Australia's health system and.</li> <li>- It subsidises healthcare</li> <li>- Medicare levy, Medicare levy surcharge and general taxation</li> </ul>	<ul style="list-style-type: none"> <li>- The Medicare levy increased from 1.5 to 2 per cent in July 2014 to assist in providing the necessary funds to maintain Australia's health system and introduce the National Disability Insurance Scheme.</li> </ul>	<ul style="list-style-type: none"> <li>- It covers the cost of healthcare in public hospitals, making it more accessible for Australians</li> </ul>	<ul style="list-style-type: none"> <li>- The Medicare safety net makes healthcare cheaper for people that have to spend more money on healthcare, making it more equitable</li> <li>- Medicare allows for any Australian to access healthcare, regardless of their ability to pay</li> </ul>
PBS	<ul style="list-style-type: none"> <li>- Medical supplies and essential medicines are subsidised</li> <li>- General taxation</li> </ul>	<ul style="list-style-type: none"> <li>- If someone needs medication, they are able to afford it easier making their lifetime more sustainable</li> </ul>	<ul style="list-style-type: none"> <li>- The PBS Safety Net further protects individuals and families from large overall expenses for PBS-listed medicines, ensuring everyone has access to medicines needed</li> </ul>	<ul style="list-style-type: none"> <li>- The PBS safety net makes the already subsidises medicines cheaper for people who spend over \$1490 in one year on medications, making it more equitable</li> </ul>
Private Health Insurance	<ul style="list-style-type: none"> <li>- Staying and receiving care from private hospitals</li> <li>- Through the premium that individuals pay to the company</li> </ul>	<ul style="list-style-type: none"> <li>- If someone has private health insurance they don't have to wait, increasing the sustainability of someone's lifetime</li> </ul>	<ul style="list-style-type: none"> <li>- subsidised private health insurance through the private health insurance rebate</li> </ul>	<ul style="list-style-type: none"> <li>- People who use private health insurance, it takes the stress of the public system</li> </ul>
NDIS	<ul style="list-style-type: none"> <li>- Support and assistive technologies</li> <li>- Through general tax and Medicare levy</li> </ul>	<ul style="list-style-type: none"> <li>- If someone has a disability, then they can use the NDIS making their lifetime more sustainable</li> </ul>	<ul style="list-style-type: none"> <li>- The introduction of the NDIS helps in those with severe disabilities receive the care and support they need to lead an ordinary life that everyone should have access to.</li> <li>- support provided through the National Disability Insurance Scheme.</li> </ul>	<ul style="list-style-type: none"> <li>- Assists people with disabilities with things they need and individualised plans are more equitable</li> </ul>

# Chapter 7

#### Why is smoking targeted?

Smoking is a preventable risk factor, so all smoking-related diseases and impacts are considered to be avoidable. Smoking affects vulnerable population groups disproportionately, with people living outside major cities and people from Indigenous and low socioeconomic backgrounds being more likely to smoke tobacco, contributing to the lower levels of health and wellbeing experienced by these groups.

Australia's relatively low smoking rate is the result of ongoing, focused health promotion efforts from all levels of government and action from public health organisations. A range of health promotion interventions have been particularly successful at promoting health and wellbeing in relation to smoking, including government laws and policies, National Tobacco Campaigns and state and territory QUIT campaigns. The Ottawa Charter for Health Promotion is increasingly used to guide the development of health promotion interventions and, as a result, the action areas of the Ottawa Charter will be used to identify key aspects of each strategy:

- build healthy public policy
- create supportive environments
- strengthen community action
- develop personal skills
- reorient health services



#### Government laws and policies

Many of the most successful health promotion activities regarding smoking relate to the introduction of smoking-related laws and policies. Laws on advertising, packaging, smoke-free environments and tobacco taxes that work to increase the price of tobacco have been used since 1973 to reduce smoking rates. Reducing the risk of exposure to environmental tobacco smoke is an example of creating a *supportive physical environment* for those who choose not to smoke. Anti-smoking laws are examples of *healthy public policies* that work to make not smoking the easier and healthier choice.

#### National Tobacco Campaigns

A number of National Tobacco Campaigns have been implemented in Australia since the 1970s, contributing to the decrease in smoking rates. These campaigns are developed by the national and state/territory governments to work together with the private sector to reduce smoking rates and associated consequences in Australia. A number of interventions make up these campaigns and have been shown to be successful in a number of ways:

- *Anti-smoking media campaigns*. These campaigns work to develop personal skills by educating the population on the dangers and consequences of smoking. A recent campaign is 'Don't make smokes your story'. These campaigns also create supportive environments by providing information on how to access resources to assist in quitting.

- *Quitnow*. The Quitnow website is the website of the National Tobacco Campaign. The website strengthens community action by providing links to the Quit organisation in each state and territory. Users can then access resources available in their location.

- *My QuitBuddy*. Developed as part of the National Tobacco Campaign, the My QuitBuddy free smartphone app was created to assist Australian smokers of any age, gender and socioeconomic status to quit smoking.

- *Quit for you, quit for two app*. Developed as part of the National Tobacco Campaign, the Quit for you, quit for two free smartphone app was created to assist Australian smokers who are pregnant, or planning to be, to quit smoking. The app creates a *supportive environment* and It develops personal skills by providing practical quit tips and advice to quit smoking.

### **QUIT campaigns**

Quit campaigns are run in each state and territory, sometimes as a joint venture between the state or territory government and the Cancer Council for the respective state or territory, although other organisations may be involved. This section focuses on the actions of Quit Victoria.

Quit Victoria is a program of the Cancer Council Victoria, which is funded by the Victorian Government and VicHealth, is an example of strengthening community action. Quit Victoria aims to decrease the prevalence of smoking by assisting smokers to quit and preventing the uptake of smoking in non-smokers. To achieve their aims, Quit employs a range of actions.

Quit develops personal skills by providing information regarding tobacco smoking and the benefits associated with smoking. This is achieved through public education using mass media advertising campaigns, public relations and downloadable information on its website. Funded by state and territory governments and implemented by Quit-like organisations around Australia, Quitline is a telephone service that people can use to receive advice and behaviour change support to quit smoking. Quitline is a clinical service, staffed by highly trained specialists, that creates a supportive environment by providing support throughout the quitting process and also develops personal skills by providing advice and practical strategies for quitting.



Initiatives	Summary on Initiative	Improvement in Indigenous Health and Wellbeing	How they reflect the Ottawa Charters Action Areas
Delivering Deadly Services initiative	The Delivering Deadly Services initiative develops personal skills by focusing on cultural awareness training for staff and promoting effective identification of Indigenous clients.	This creates a supportive environment and leads to Indigenous clients reporting that staff were 'generally more aware and supportive', with nurses demonstrating greater cultural awareness when engaging with clients.	Deadly Services initiative <i>develops personal skills</i> and <i>creates a supportive environment</i> . Culturally appropriate healthcare has been shown to increase the rate at which Indigenous Australians access healthcare.
Learn Earn Legend!	'Learn Earn Legend!' is a program launched by the Australian government in February 2010. The program's message encourages and supports young Indigenous Australians to stay at school to develop personal skills	The program's message encourages and supports young Indigenous Australians to stay at school to develop personal skills such as literacy and numeracy, so they can get a job and be a legend for themselves, their family and their community.	Learn Earn Legend! is <i>strengthening community action</i> as it is delivered by community leaders, sport stars and local community members whom young Indigenous Australians respect and aspire to emulate.
2 Spirit Program	The '2 Spirits' program embraces a 'whole of community approach' to improve the sexual health and wellbeing of Indigenous gay men and sisters through education, prevention, health promotion, and community development activities.	The program reorients health services by working in consultation with community members to identify appropriate means of addressing sexual health issues in this population, promotion, and community development activities.	The program <i>reorients health and strengthens community action</i> and <i>develops personal skills</i> and <i>increase knowledge and understanding</i> within Indigenous communities.
	The 'Be Deadly, Get Healthy' program aims to reorient health services and improve the health and	The program involves an initial health status assessment on joining and requires participation in regular physical activity sessions. These	The program also <i>strengthens community action</i> by strengthening the relationship between RDAC and



Be Deadly, Get Healthy Program	wellbeing of Indigenous families and reduce chronic disease in the Baw Baw Shire in the Gippsland area of Victoria.	weekly sessions include group walks, gym circuits and cardio- strengthening exercises.	WGHG and <i>develops personal skills</i> as they learn long-term healthy behaviours.
Aboriginal Road to Good Health Program	The 'Aboriginal Road to Good Health' program is a type 2 diabetes prevention program for Victorian Indigenous people and their families.	The program aims to develop personal skills, so people can make sustainable lifestyle changes. Key messages from the program include: <ul style="list-style-type: none"> <li>- how different foods affect health and wellbeing</li> <li>- what food is good, cheap and easy to make</li> <li>- how to spend food money wisely</li> <li>- how to maintain a healthy weight</li> <li>- what to look for on a food label</li> </ul>	The program creates a <i>supportive environment</i> by being free for participants. It is run in a number of communities across Victoria by Indigenous health workers and other health professionals, and therefore also works to reorient health services.
Aboriginal Quitline	Aboriginal Quitline is a telephone counselling service that creates a supportive environment by providing confidential support for Indigenous Australians who want to quit smoking.	Aboriginal Quitline staff are professionals with specialist training to help people quit smoking in a culturally appropriate way. Counsellors provide callers with a plan for quitting that is tailored to their individual needs, as well as information on different quitting methods and products.	The counselling service creates a <i>supportive environment</i> by providing confidential support for Indigenous Australians who want to quit smoking.
Feedin' the Mob	'Feedin' the Mob' is a nutrition, physical activity and healthy lifestyle program for Indigenous Australians.	It's funded by the federal government and through its Healthy Communities initiative. This commitment to funding represents <i>a healthy public policy</i> .	Feedin' the Mob <i>strengthens community action</i> by encouraging the community to be involved in activities that draw on local culture <i>to develop personal skills</i> by teaching the benefits of healthy eating and lifestyle.

Healthy eating is associated with lower rates of disease and increased health status. Inadequate food intake is emerging as a key factor contributing considerably to the burden of disease in Australia, particularly as related to obesity, cardiovascular disease and type 2 diabetes. The prevalence of these conditions is high and is predicted to increase if food behaviours are not modified among many Australians.

### The Australian Dietary Guidelines

The Australian population has experienced an increase in diet-related conditions and diseases, and the guidelines are designed to address the causes of the increase.

The Dietary Guidelines have been developed to provide advice relating to the types and amounts of foods, food groups and dietary patterns that will help Australians to:

- develop healthy dietary patterns that will promote health and wellbeing in the community
- reduce the risk of developing a range of diet-related conditions such as hypertension (high blood pressure) and impaired glucose regulation
- reduce the risk of developing chronic conditions such as type 2 diabetes, cardiovascular disease and some cancers.

**Guideline 1** - relates to **energy balance** and encourages individuals to only consume the amount of energy they require for their specific energy needs. A positive energy imbalance occurs when people consume too much energy for their needs, increasing the risk of obesity and associated conditions such as cardiovascular disease, type 2 diabetes and some cancers. Energy comes from foods rich in carbohydrates, fats and protein, and these should be moderated to ensure energy intake is balanced.

GUIDELINE 1	<p>To achieve and maintain a healthy weight, be physically active and choose amounts of nutritious food and drinks to meet your energy needs.</p> <ul style="list-style-type: none"> <li>• Children and adolescents should eat sufficient nutritious foods to grow and develop normally. They should be physically active every day and their growth should be checked regularly.</li> <li>• Older people should eat nutritious foods and keep physically active to help maintain muscle strength and a healthy weight.</li> </ul>
GUIDELINE 2	<p>Enjoy a wide variety of nutritious foods from these five groups every day:</p> <ul style="list-style-type: none"> <li>• Plenty of vegetables, including different types and colours, and legumes/beans</li> <li>• Fruit</li> <li>• Grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties, such as breads, cereals, rice, pasta, noodles, polenta, couscous, oats, quinoa and barley</li> <li>• Lean meats and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans</li> <li>• Milk, yoghurt, cheese and/or their alternatives, mostly reduced fat (reduced fat milks are not suitable for children under the age of 2 years)</li> </ul> <p>And drink plenty of water.</p>

**Guideline 2** - provides advice relating to the consumption of the five food groups. Consuming a range of foods from the five food groups is associated with lower levels of mortality and morbidity compared to diets in which a range of foods is not consumed. The benefits to health and wellbeing from consuming the five food groups are outlined below:

- **Vegetables and legumes/beans** —these foods are low in fat and relatively low in energy while also providing carbohydrates
- **Fruit** —low in fat and provide carbohydrates for energy while also being a major source of fibre and antioxidants

- **Grain (cereal) foods** — wholegrain and/or high cereal fibre foods are good sources of carbohydrates and fibre while being low in fat.
- **Lean meats and alternatives** — lean meats and poultry, fish, eggs, tofu, nuts and seeds, and legumes/ beans are major sources of protein as well as vitamins, minerals and essential fatty acids.
- **Dairy products and alternatives (reduced fat)** — milk, yoghurt, cheese and/or their alternatives are high in many nutrients including protein and calcium.
- **Water** — water is required for many bodily processes including digestion, waste removal and chemical reactions

### Advantages

Includes advice is also provided on individual differences among the population that contribute to different needs and choices regarding food intake, including for:

- those at different lifespan stages, such as childhood and late adulthood
- pregnant and lactating women
- vegetarians and vegans
- people from different backgrounds, such as Australians of Asian origin
- Indigenous Australians
- people living in rural and remote areas
- people living in socioeconomic disadvantage
- individuals aiming to lose weight
- Individuals aiming to maintain their weight.

### Australian Guide To Healthy Eating

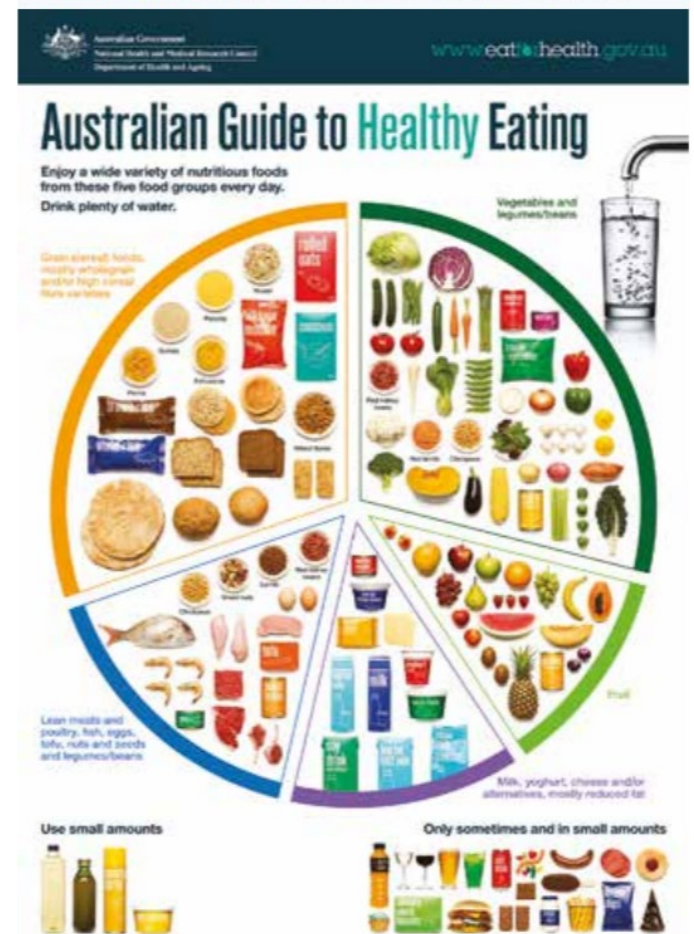
The Australian Guide to Healthy Eating is a visual tool that reflects the recommended dietary advice detailed in Australian Dietary Guidelines and assists consumers in planning, selecting and consuming adequate proportions of foods from the five food groups.

The Australian Guide to Healthy Eating shows a circle divided into five wedges, each representing one of the five food groups. The size of each wedge reflects the proportion of each food group that should be consumed on a daily basis.

### Advantages:

- takes into account some specific lifespan
- useful for health professionals when working with clients
- knowledge needed about fat, salt and sugar levels in foods
- deals with foods, not nutrients

FIGURE 7.42 The Australian Guide to Healthy Eating



### Disadvantages:

- provide general advice about healthy eating
- broad and general advice only - no information food choices prevent nutrition related disease
- no information about number or size of servings
- uncertainty about the meaning of 'moderate', 'plenty', 'limit'

FOOD GROUP*	DAILY SERVES
Vegetables and legume/beans	5
Fruit	2
Grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties	7
Lean meat and poultry, fish, eggs, tofu, nuts and seeds and legumes/beans	2.5
Milk, yoghurt, cheese and/or alternatives (mostly reduced fat)	3.5
Approx. number of additional serves from the five food groups or fats/oils/spreads or discretionary choices**	0-2.5

to

means

## 7.7 Initiatives to promote healthy eating in Australia — the work of Nutrition Australia

Nutrition Australia is Australia's major community education body for nutrition. Nutrition Australia's mission is to promote optimal health and wellbeing for all Australians by encouraging food variety and physical activity. The objectives of Nutrition Australia are to:

- act as a source of scientific information on key nutrition issues
- produce and disseminate material on nutrition to policy makers, the media, educators, the food industry and consumers
- act as consultants to government departments, the food industry and consumer groups as required on issues related to food and nutrition
- encourage innovation in the dissemination of nutritional knowledge

### Nutrition Australia

Nutrition Australia acts to promote healthy eating by providing the latest information on nutrition research, and current food and health and wellbeing trends. This information is dispersed via media campaigns, the Nutrition Australia website and through seminars for health professionals and the general public.



## **Healthy Eating Advisory service**

The Healthy Eating Advisory Service is funded by the Victorian Government and delivered by Nutrition Australia Vic Division. The Healthy Eating Advisory Service works to promote consumption of healthy food and drinks in early childhood services, schools, hospitals and workplaces across Victoria.

Services provided include:

- phone advice and support to assist in providing nutritious, tasty and cost-effective food and drink choices, including assistance with menu planning
- staff training on developing and modifying menus
- training for cooks, chefs, food service
- advice to the food industry and health professionals

## **National nutrition week campaign**

Nutrition Australia coordinates the events and produces resources for the annual National Nutrition Week, which runs during the week of 16 October each year. Information, recipes and resources can be downloaded from the Nutrition Australia website to support schools, health centres, community fairs and shopping centres in promoting healthier eating in line with the annual theme.

## **Educational resources**

Nutrition Australia produces a wide range of publications and resources, including nutrition books, portion bowls and plates, booklets, posters, fact sheets, leaflets and webinars, each of which is designed to encourage individuals, families and communities to enjoy optimal health and wellbeing through food variety. Nutrition Australia has produced resources to address each lifespan stage:

- For schools, Nutrition Australia provides DVDs, teacher resources and incursions, posters and publications that include activities and games for students relating to healthy eating
- For childcare centres, Nutrition Australia produces resources on meeting accreditation and menu planning, as well as stickers and puzzles designed to entertain and educate children about healthy eating.
- For adults, Nutrition Australia provides a range of healthy recipes, resources and fact sheets containing nutrition information for adults and seniors.

## **Nutrition seminars and workshops**

Nutrition Australia dietitians and nutritionists conduct a range of seminars to provide education to workplaces and members of the public wanting to improve their diet.

Examples of seminar topics include:

- Nutrition 101
- Healthy eating for corporate lifestyles
- Nutrition for shift workers

- Understanding food labels
- Healthy habits for a healthy heart. Nutrition Australia dietitians and nutritionists provide healthy eating demonstrations in workplaces.

### Webinars for health professionals

Webinars are developed for health professionals to provide training and education to assist them in promoting healthy eating in the community. The webinars cover a range of topics, including:

- The Modern Mediterranean Diet
- Communicating the Australian Dietary Guidelines
- Unpacking the Health Star Rating
- Food and fitness — nutrition update for fitness professionals.
- 

### Publication of recipes

Hundreds of healthy recipes are provided free of charge on the Nutrition Australia website, and cookbooks reviewed by Nutrition Australia are available for purchase.

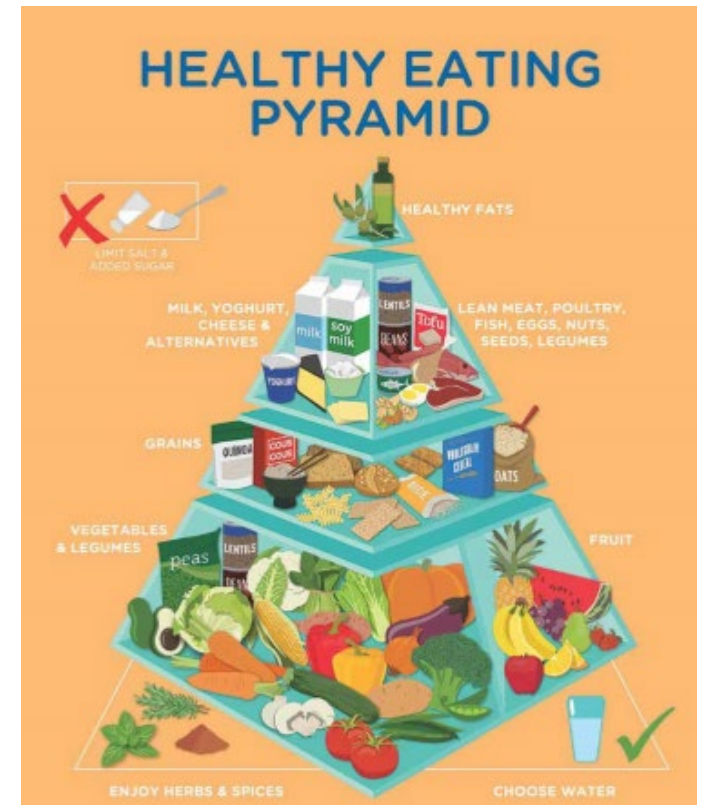
### Healthy Eating Pyramid

The Healthy Eating Pyramid is a simple visual guide to the types and proportion of foods that individuals should eat every day for good health and wellbeing.

The first two layers of the Healthy Eating Pyramid are known as the ‘foundation layers’ and include the three plant-based food groups:

- vegetables and legumes
- fruits
- grains.

The first foundation layer contains vegetables and legumes, and fruits. Vegetables and legumes account for the majority of this layer with fruits making up a smaller portion, reflecting the fact that vegetables and legumes should be consumed in greater amounts than fruits. The second foundation layer contains the grains group, which is represented by whole grains (such as brown rice, oats and quinoa) and wholemeal/wholegrain varieties of bread, pasta, crisp breads and cereal foods, instead of highly processed, refined varieties such as white bread and pasta.



## Advantages

- Showed variety- The Food Guide Pyramid emphasized the importance of eating a balanced, varied diet by depicting five main food groups
- Set limits- The tip of the Food Guide Pyramid depicted fats, oils and sweets and recommended limiting them
- Easy to understand- pyramid shape has a benefit in being clear and easy to understand
- Shows examples- The Food Guide Pyramid shows visuals by showing examples of foods that might be healthy choices from each main group

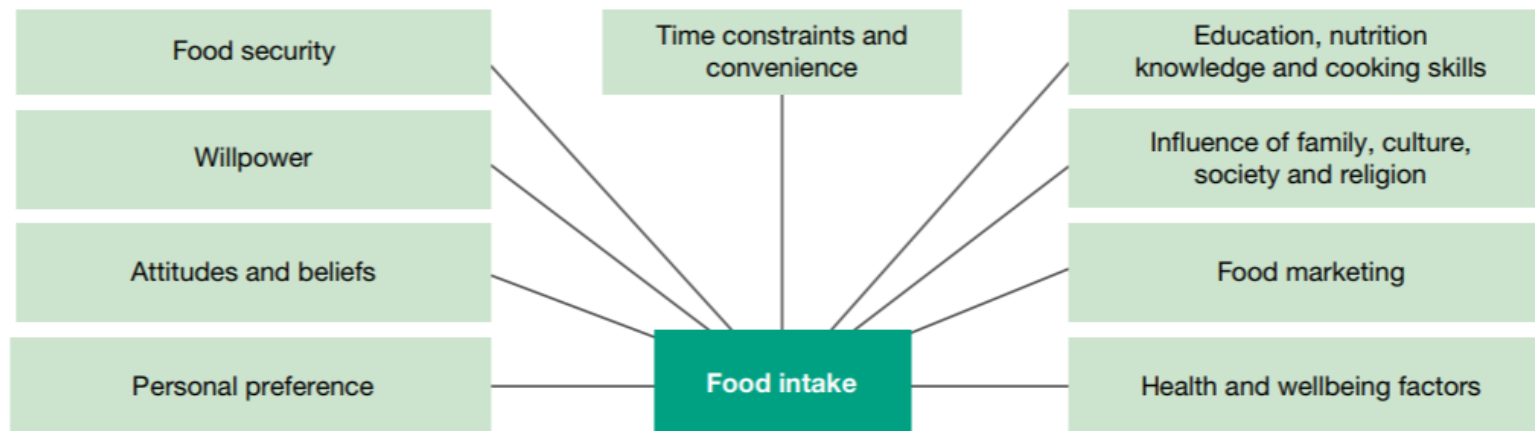
## Disadvantages

- Doesn't show exercise
- Gives people a standard diet
- Doesn't account for dietary needs

### 7.8 The challenges in bringing about dietary change

Food intake in Australia has changed significantly in recent decades with a significant shift away from nutrient-dense, whole foods to energy-dense, processed foods. This change has contributed to the increasing rates of obesity and associated diet-related diseases in Australia over time. Although there are a range of health promotion activities designed to address food intake in Australia, bringing about dietary change can be difficult to achieve. The foods people consume are a result of a complex set of factors that provide a range of challenges in improving dietary behaviour.

**FIGURE 7.50** Food intake is the product of a range of factors



**Personal preference:** this refers to what people like to eat, certain diets they may be on for personal reasons or health related reasons. This factor can also include allergies.

**Food security:** This includes having enough money to afford nutritious foods and the means to access them, including geographical access and transport.

**Willpower:** Related to self-control, willpower is defined by the American Psychological Association as ‘the ability to resist short-term temptations in order to meet long-term goals’.

**Attitudes and beliefs:** If an individual has not tried a variety of healthier food options, they may believe that they are bland or tasteless. Many people also feel that the negative effects of consuming unhealthy foods will not happen to them, both of which can reduce the likelihood of these individuals trying new, healthier foods.

**Time constraints and convenience:** Meals are often planned with consideration of the time available and the convenience of the foods to be consumed. For many families where both parents are employed, more time is spent working and less time is spent preparing food. As a result, convenience foods are often consumed in the home because there is a lack of time to purchase fresh ingredients and prepare a meal from scratch

**Education, nutrition knowledge and cooking skills:** lack of nutritional knowledge and cooking skills often predisposes people to consume unhealthy meals. Lack of education can also lead to consumers believing that they are consuming healthy foods as they do not have the skills to accurately assess their current food intake.

**Influence of family, culture society and religion:** the earliest food experiences most people have is shaped by family. The cultural and religious background of the family may include ties to traditional foods that have been consumed through generations.

**Food marketing:** The food industry actively markets its goods to consumers in a variety of ways including: advertisements in newspapers and magazines, and on television, radio and the internet; supermarket and point-of-sale promotions; sponsorships; websites; the use of celebrities, including celebrity chefs; product placement on cooking programs; emails and text messages.

**Health and wellbeing factors:** The health and wellbeing experienced by individuals can also influence the foods they consume. In the Australian Health Survey (2011–12), 3.7 million people reported avoiding a food due to allergy or intolerance.



# Chapter 8

Term	Definition
<b>Economic sustainability</b>	encompasses financial costs and benefits. Economic indicators that are considered in this paper as factors included in economic sustainability indicators are capital costs and operating costs
<b>Environmental sustainability</b>	Is the rates of renewable resource harvest, pollution creation, and non-renewable resource depletion that can be continued indefinitely. If they cannot be continued indefinitely then they are not sustainable.
<b>Social sustainability</b>	occurs when the formal and informal processes; systems; structures; and relationships actively support the capacity of current and future generations to create healthy and liveable communities. Socially sustainable communities are equitable, diverse, connected and democratic and provide a good quality of life
<b>Human Development Index</b>	A summary measure of average achievement in key dimensions of human development; a long healthy life, being knowledgeable and have a decent standard of living
<b>Human Development</b>	defined as the process of enlarging people's freedoms and opportunities and improving their well-being. Human development is about the real freedom ordinary people have to decide who to be, what to do, and how to live.
<b>Safe Water</b>	refers to water that is not contaminated with disease-causing pathogens such as bacteria and viruses, or chemicals such as lead and mercury.
<b>Sanitation</b>	refers to the provision of facilities and services for the safe disposal of human urine and faeces, but can also refer to the maintenance of hygienic conditions through services such as garbage collection and wastewater disposal.
<b>Poverty</b>	the lack of access to resources, often as the result of a lack of access to money.
<b>Extreme Poverty</b>	relates to those living on less than US\$1.90 per day
<b>Communicable Disease</b>	infectious diseases which are transmitted from the environment; including through air, water, food and other infected organisms (including other humans)

<b>Gender Equality</b>	when males and females have the same opportunities in society in relation to the goods and services available
<b>Globalisation</b>	the process whereby boundaries between countries are reduced or eliminated allowing individuals, groups and companies to act on a global scale. It can be described as transforming the different societies of the world into one global society. A reduction in barriers to trade, communication and transport contributes to this process
<b>Gross Domestic Product (GDP)</b>	a measure that reflects the economic state of a country. GDP is the value of all goods and services produced in a country in a 12-month period.
<b>Gross National Income (GNI)</b>	the total value of goods and services a country's citizens produce, including the value of income earned by citizens who may be working in an overseas country
<b>Human Rights</b>	relates to the freedoms and conditions to which every person is entitled
<b>Non-communicable disease.</b>	conditions that are usually long lasting, and generally progress slowly. Noncommunicable diseases are not spread through the environment and include cardiovascular disease, cancer, respiratory diseases and diabetes.

## 8.2 Economic characteristics of high-, middle- and low-income countries

Classifying countries into groups allows countries that experience similar characteristics to be grouped together for the purpose of guiding policies and interventions that may improve the level of health and wellbeing experienced.

### **Classifying countries**

Numerous systems have been developed to classify countries over time. Developed countries were considered to have a high level of economic development and certain industries, and were not solely reliant on primary production such as mining and farming. Developing countries, on the other hand, had a low level of economic development and relied largely on primary production and subsistence farming.

Although still used in some instances, this system of classification is now seen as outdated as it is quite subjective and agreement could not be made on the specific criteria that should be met to classify a country as either developed or developing. As a result, a more modern system of classifying countries was developed by the World Bank and uses a country's Gross National Income (GNI) per capita, or average income, to classify countries into one of three main groups:

- high-income
- middle-income
- low-income.

Middle-income countries are often broken down into two further groups:

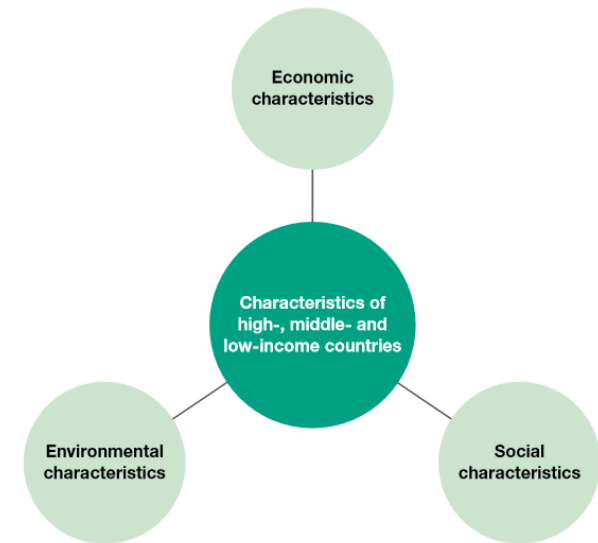
- upper middle income
- lower middle income

**WORLD BANK INCOME TABLE →**

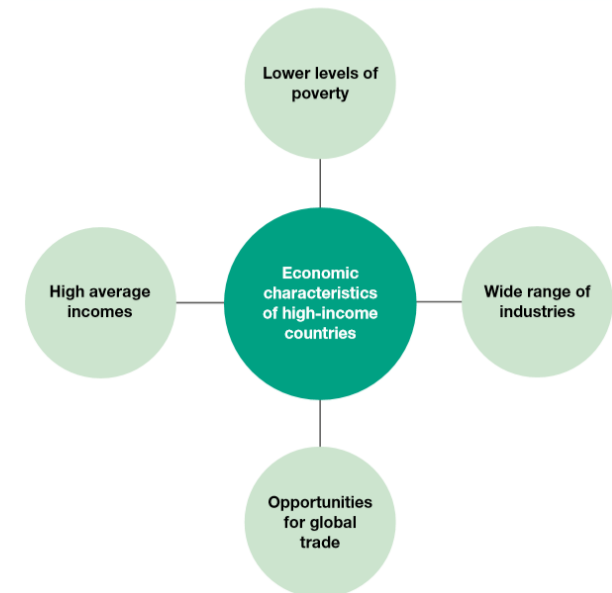
	<b>GNI per capita range</b>	<b>Examples of countries in this grouping</b>
High Income	\$12,476	Australia, Canada, Chile, Greece, Ireland, Japan, USA, United Kingdom
Upper Middle Income	\$4036–\$12 475	China, Cuba, Fiji, Mexico, South Africa, Turkey, Russian Federation
Lower Middle Income	\$1026–\$4035	Cambodia, India, Indonesia, Pakistan, Papua New Guinea
Low Income	\$1025 or less	Mali, Nepal, Zimbabwe, Uganda, Rwanda, Somalia

**Characteristics of high, middle and low income countries**

The characteristics of high-, middle- and low-income countries can be classified into three categories. The characteristics discussed here are not necessarily common to all high, middle or low income countries, but they represent differences that are often experienced between the three groups. The extent of these differences will vary depending on which countries are being compared.



**FIGURE 8.5** Economic characteristics of high-income countries



## Economic characteristics

A range of factors relating to the financial or economic state of a country can influence the opportunities and resources that are available for its citizens. 'Poverty' is a term commonly used to describe the lack of access to resources, often as the result of a lack of access to money. Low-income countries and, to a lesser extent, middle-income countries, often have a large proportion of their population living in poverty compared to high-income countries.

### 8.3 Social and environmental characteristics of high-, middle- and low-income countries

#### SOCIAL CHARACTERISTICS

There are many social factors associated with high-, middle- and low-income countries.

#### Gender equality

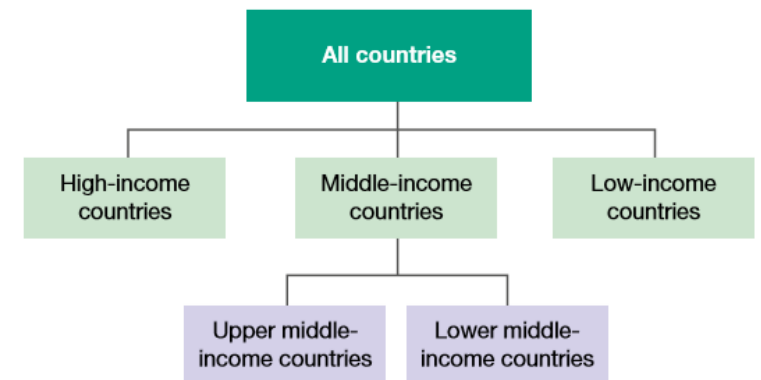
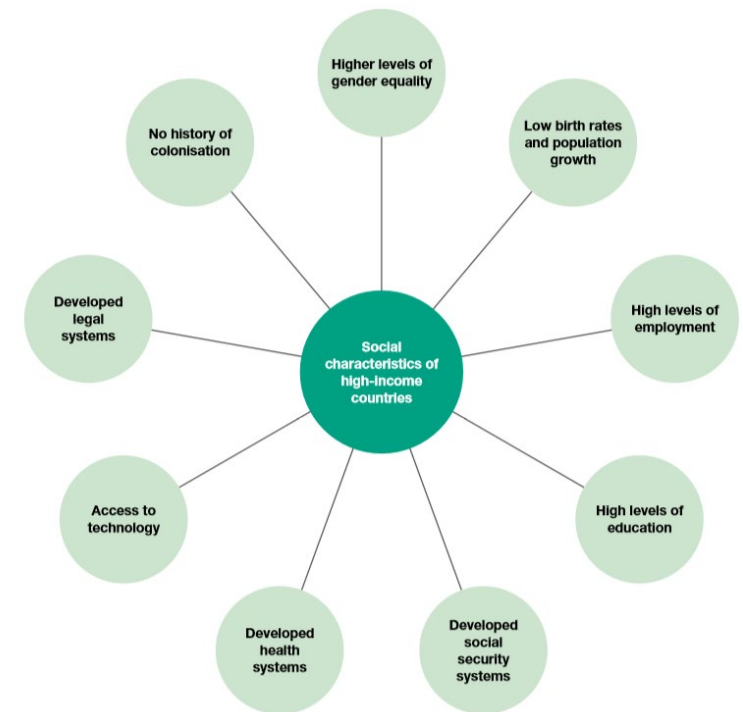
High-income countries often experience high levels of gender equality. In these countries, both males and females have opportunities and choices in education, employment, community participation, family planning and recreation. In many low-income countries, however, females do not have the same opportunities as males in society.

#### Birth and population rates

Low birth rates and slow rates of population growth are characteristic of many high-income countries compared to middle-income — and especially low-income — countries. Access to contraception, choice in family planning, career choices, education, gender equality and culture contribute to this difference. High birth rates in many low- and middle-income countries can limit the ability of parents to care for all of their children and provide them with the resources required to live a healthy life. High population growth rates limit the ability of governments to provide services for its citizens such as education, healthcare and social security.

#### Education and employment levels

High rates of education and employment are characteristic of most high-income countries. People often have choices about the level of education and the type of career they pursue. Many low-income countries do not have a developed education system, so career options are often limited.



## Social security systems

High levels of economic development and stable political systems increase the ability of governments in high-income countries to provide social security payments for those in need. Individuals who are unemployed, or unable to work due to illness or disability, are often provided with financial support to assist in promoting their wellbeing.

## Health systems

High-income countries generally have public health systems. People are usually able to access basic healthcare when they need it regardless of their ability to pay. Those in low- and middle-income countries often lack access to suitable healthcare, which affects the level of health and wellbeing they experience.

## Access to technology

Technology includes access to communication systems, the internet and medical technologies. It can be used to assist countries in developing their economies, building trade opportunities, furthering education and treating ill-health. Technology is more accessible in high- income countries due to a combination of economic resources, infrastructure and education. Low-income countries often lack access to technology, and this impacts on the ability of citizens to gain an education and earn an income.

## Legal systems

Most high-income countries experience strong and stable political and legal systems. Unstable governments and political unrest are characteristic of many low-income and some middle-income countries and increase the risk of civil conflict, which is also more common in low-income countries.

## History of colonisation

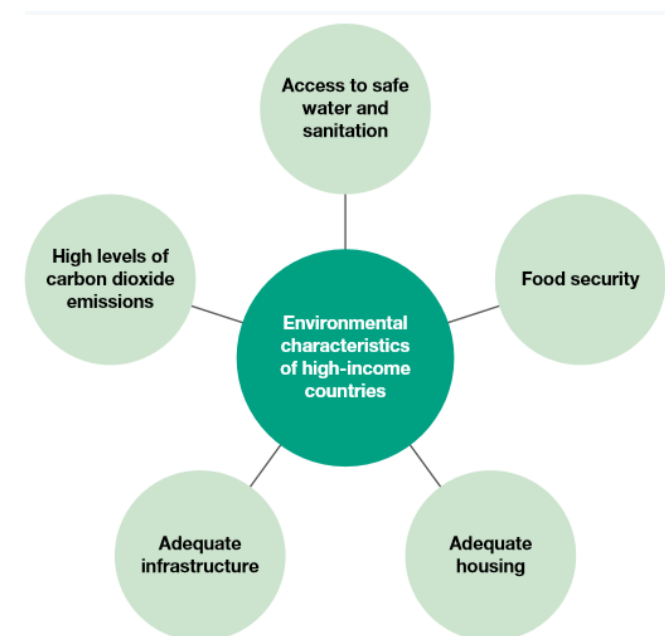
Many low- and middle-income countries have a history of colonisation. Throughout history, many western European nations, including Britain, France, Spain, Portugal, Germany and Belgium, colonised many countries in Africa and Asia. The countries that were colonised often had their natural resources exploited by the colonisers.

## ENVIRONMENTAL CHARACTERISTICS

Characteristics of the environment contribute to the level of health and wellbeing experienced in all countries. Aspects of the environment that are often characteristic of high-, middle- and low-income countries include the accessibility of food, water and sanitation, adequate housing, infrastructure, and carbon dioxide emissions

## Safe water and sanitation

Safe water and sanitation are characteristics of high-income and many middle-income countries. Access to safe water and sanitation is responsible for a large proportion of the variations in health and wellbeing between the three groups and will be explored in more detail later.



## **Food security**

People in high-income countries generally have access to a quality food supply. Those in low-income countries, however, often lack food security. Natural disasters such as floods and droughts tend to have a more pronounced impact on the availability of food for those in low-income countries, as they lack the financial resources to purchase food in emergency situations.

## **Adequate housing**

Compared to high-income countries, many people in low- and middle- income countries lack access to adequate housing. They often live in substandard housing with poor ventilation, lack of heating and cooling, poor resistance to infestation of disease- carrying organisms such as insects.

## **Adequate infrastructure**

Infrastructure is responsible for many differences between high-, middle- and low-income countries. High-income countries usually have adequate roads, piped water, sewerage systems, electricity grids and telecommunication systems.

## **Levels of carbon dioxide emissions**

Due to the range of industries in high-income countries, these countries emit greater amounts of carbon dioxide (CO<sub>2</sub>) per person into the atmosphere. Carbon dioxide emissions have been linked to climate change and the associated effects on sea levels and changing weather patterns.

## 8.4 Similarities and differences in health status and burden of disease in low-, middle- and high-income countries

### **Life expectancy**

Life expectancy has increased in most countries over time (see figure 8.17). Globally, life expectancy has more than doubled since 1900 with the most significant gains being achieved since 2000. However, there are occasionally fluctuations in life expectancy within countries. For example, war, conflict and the spread of infectious diseases can have a significant impact on life expectancy in a relatively short period of time. Low- and middle-income countries are more susceptible to such issues and generally experience more severe fluctuations in life expectancy than high-income countries such as Australia.

### **Mortality and morbidity**

There are huge differences in mortality rates between countries with different income levels. Many factors account for these differences, and these will be discussed in detail later. Mortality and morbidity rates give valuable information not only about the causes of death and illness, but about the resources that might be employed to close the gap between high-, middle- and low-income countries.

### **Child mortality and morbidity**

The under-five mortality rate is one of the most important indicators of the level of health and wellbeing experienced in a country. The survival of a child is reliant on numerous factors. U5MR reports the number of deaths that occur in children under five years of age (per 1000 live births), and is a reflection of the:

- nutritional health status of mothers
- health literacy of mothers
- level of immunisation available
- availability of maternal and child health services
- income and food availability in the family
- availability of clean water and safe sanitation
- overall safety of the child's environment.

### Adult mortality and morbidity

Child mortality and morbidity patterns provide a valuable indicator of the overall health and wellbeing of a country. However, some countries experience low child mortality but high levels of adult mortality. This can be due to the impact of lifestyle factors such as tobacco smoking, excessive alcohol consumption and unsafe sex leading to HIV/AIDS.

### Burden of disease

As discussed earlier, the rates of communicable diseases, non-communicable diseases and injuries are higher in middle- and particularly low-income countries when compared to high-income countries like Australia, contributing to higher rates of morbidity and mortality.

### Similarities and differences in health status and BOD:

Health Status - you can use any health status term

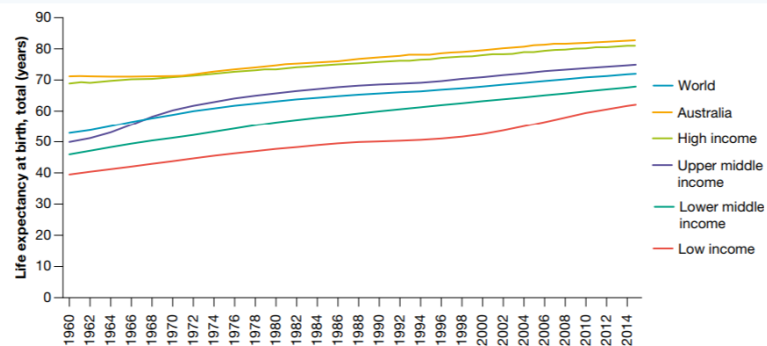
Burden of Disease - you can only use DALY, YLL, YLD

### Life expectancy

What has been the general global trend in life expectancy since 1900?

- it has generally been increasing, for some countries at a fast pace and some at a slow pace.

FIGURE 8.17 Life expectancy at birth over time — globally, in Australia and in the World Bank income groups



*Similarities and differences in life expectancy among the income groups shown in figure 8.17.*

#### Similarities include:

- It has been increasing since 1960

#### Differences include:

- Australians life expectancy at birth is on average 20 years higher than the world average.
- Upper and high-income countries have a higher life expectancy than the world average
- Lower and low-income countries have a lower life expectancy than the world average



How does Australia's life expectancy and health-adjusted life expectancy compare to low- and middle-income countries?

- Australia's life expectancy and health-adjusted life expectancy are higher compared with middle- and low-income countries.

**Compare:**

**Life expectancy**

- It is 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. It is the number of years of life spent in good and poor health

**WHEREAS!!!!**

**Health-adjusted life expectancy (HALE)**

- Is 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 and good healthy life that a person can expect to live, based on current rates of ill health and mortality

**Mortality and Morbidity:**

Leading causes of mortality and morbidity in low- and middle-income countries:

- Tobacco smoking
- Excessive alcohol consumption
- Unsafe sex leading to HIV/AIDS.

**Children (table 8.19, 8.2)**

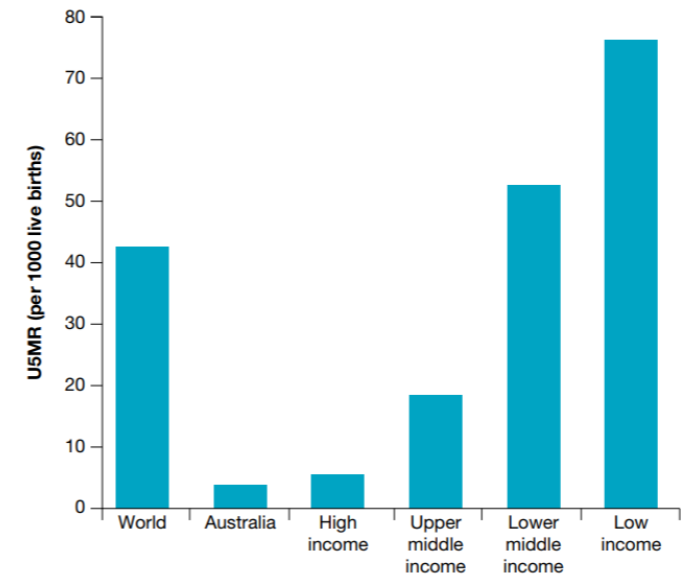
How does the U5MR of Australia compare to low- and middle-income countries?

- The Australian U5MR is approximately 4 deaths for every 1000 live births. Compared to low income countries which have approximately 78 deaths for every 1000 live births. Middle income countries have an average of 36 deaths for every 1000 live births. This showcases Australia, being a high-income country has a hugely significant difference to low and middle income countries

**TABLE 8.2** Under-five mortality rates for selected conditions, per 100000, 2015

	Diarrhoeal diseases	HIV/AIDS	Malaria	Injuries	Respiratory infections	Prematurity	Birth asphyxia and birth trauma	Congenital malformations
World	74.3	13.2	70.6	46.6	6.3	120.0	110.3	73.9
Australia	0.7	0.1	0	7.7	0	9.8	8.7	24.1
High income	1.2	0.2	0	10.8	0.05	22.9	7.0	32.6
Upper middle income	10.7	9.0	6.6	36.1	0.5	58.4	32.7	65.9
Lower middle income	96.8	13.5	7.9	47.1	11.7	173.1	171.3	73.5
Low income	167.2	28.8	231.5	87.8	4.0	131.0	129.6	117.4

**FIGURE 8.19** Under-five mortality rate (U5MR) — globally, in Australia and in the World Bank income groups, 2015



Explain why malnutrition is an underlying factor in many causes of mortality and morbidity in low- and middle-income countries.

- Malnutrition decreases the immune system functioning, which increases the risk of infection and premature death, especially among children, increasing mortality and morbidity rates and increasing the under 5 mortality rate. Pregnant women who cannot access nutritious foods are more likely to die as a result of their pregnancy and have babies who are more susceptible to premature mortality due to underdeveloped body systems.

Reasons for the differences in U5MR experienced by low- and middle-income countries include:

- This can include not having as much access to high quality, culturally appropriate healthcare
- Not having as much access to vaccinations
- Diarrhoeal diseases
- Malaria
- Prematurity
- Birth asphyxia and birth trauma

### Adult

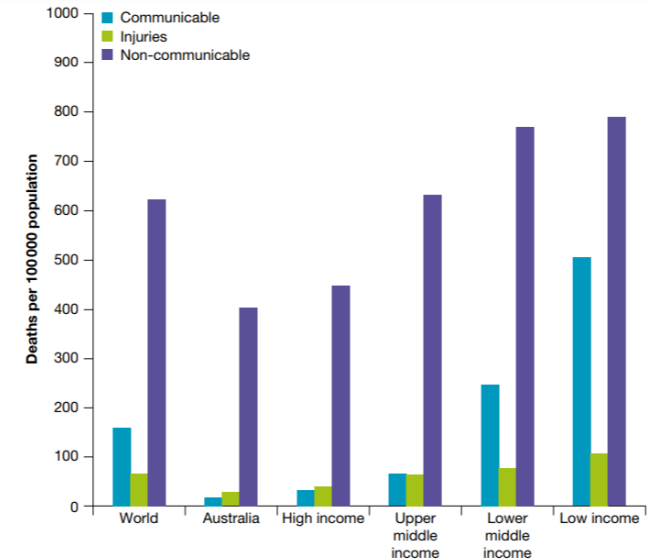
Reasons that non-communicable diseases don't receive a lot of attention in low-income countries include:

- Cancer, heart disease and type 2 diabetes are also high in countries with lower incomes (see **figure 8.23**) and have increased in line with increasing life expectancies. This creates a 'double burden' in many countries.
- It puts an added strain on the relatively basic healthcare available and contributes to poorer health status. When adults in a family become ill, the children may have to take care of the adults and themselves. This adds to the cycle of *poverty* and *ill health*.

Reasons that communicable diseases spread further in low- and middle-income countries include:

- They do not have as much access to vaccinations, resulting in a higher chance of communicable diseases such as HIV/AIDS, tuberculosis and influenza spreading and infecting large portions of populations.

**FIGURE 8.23** Mortality rates for selected conditions — globally, in Australia and in the World Bank income groups, 2015



There are many factors that contribute to the similarities and differences in health status and burden of disease experienced in high-, middle- and low-income countries. An understanding of these factors is essential in reducing the inequalities that exist globally.

### Access to safe water

Sometimes referred to as ‘clean water’, safe water refers to water that is not contaminated with disease-causing pathogens such as bacteria and viruses, or chemicals such as lead and mercury. Safe water is required for a number of purposes, including:

- Consumption Water is a significant component of many body tissues and is essential for the optimal functioning of every cell in the body.
- Food preparation and cooking — clean water is essential to wash food products and remove harmful pathogens that could otherwise lead to illness. Cooking often requires clean water to ensure food items are safe for human consumption.
- Washing and hygiene — clean water is required to maintain high levels of personal hygiene and prevents infection through handwashing, bathing and showering.
- Agriculture and production — clean water is required for the production of food and other products such as clothing and electricity.

### Access to sanitation

Sanitation generally refers to the provision of facilities and services for the safe disposal of human urine and faeces, but can also refer to the maintenance of hygienic conditions through services such as garbage collection and wastewater disposal. Adequate sanitation requires a flushing toilet or covered latrine and the hygienic removal or containment of the waste products.



## Sanitation in India activity

Watch the following clip and respond to the questions:

<https://www.youtube.com/watch?v=orIFs72HGmM>

- a.** Discuss how the lack of sanitation impacts on life in India.
  - Without adequate sanitation, this results in people not having toilets for their needs. This can increase the bacteria rate and increase the chance of infection.
- b.** What proportion of people in India have access to a toilet?
  - 31%
- c.** How much does it cost to use the public toilet?
  - Less than 10c
- d.** Why doesn't everyone use these facilities?
  - because they are not affordable for everyone

## Water activity

Watch the following clip and respond to the questions:

<https://www.youtube.com/watch?v=BCHhwxvQqyg>

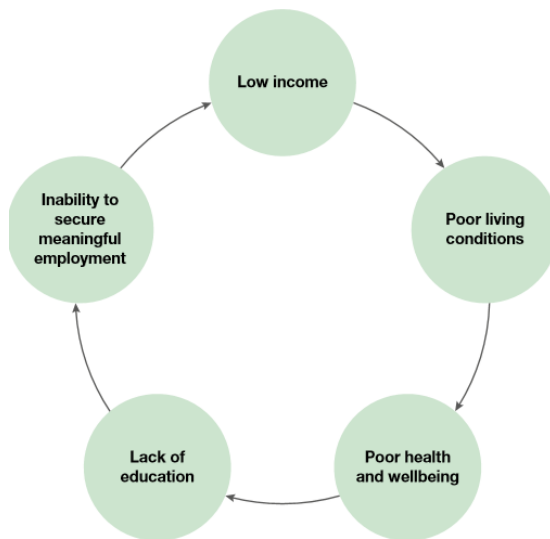
- a.** Who is generally responsible for collecting water?
  - The women and children
- b.** How long do some of them walk each day to collect water?
  - Up to 3 hours a day
- c.** How does collecting water impact on education and employment?
  - By walking up to 3 hours a day, that is time spent that could be used to get an education, attend school and learn to read and write. By collecting water, that is time spent that could be used to gain an income and provide for your family.

- d. Discuss why the walk to collect water is dangerous.
  - The women are alone and are burdened with 40 pounds of water. They often get attacked
- e. What are the impacts of drinking dirty water?
  - This can lead to things such as diarrhoea, dehydration and even death
- f. At what rate do children die as a result of drinking dirty water?
  - 1 death every 19 seconds
- g. Explain how having access to clean water close to the home can enhance human development.
  - It gives people freedom to attend school, gain an education, get a job, earn an income. it also means less disease which means less mortality.

8.6 Factors that contribute to similarities and differences in health status and burden of disease — poverty

**How poverty affects burden of disease**

Government services, social protection measures and infrastructure Recall that Gross National Income (GNI) is the total value of goods and services a country's citizens produce, including the value of income earned by citizens who may be working in an overseas country. It is a reflection of the wealth of a country and indicates how much money the government is able to spend on services and infrastructure.

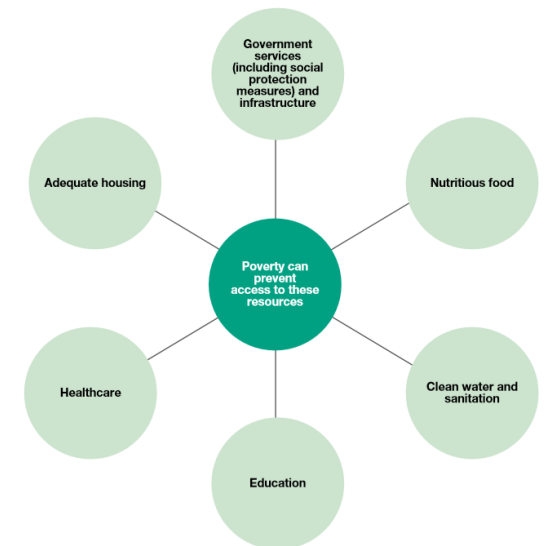


**Nutritious food**

Malnutrition is often the result of an inability to afford nutritious foods. Malnutrition decreases immune function, which increases the risk of infection and premature death, especially among children. Pregnant women who cannot access nutritious foods are more likely to die as a result of their pregnancy and have babies who are more susceptible to premature mortality due to underdeveloped body systems.

**Access to clean water and sanitation**

Poverty also restricts the ability of governments to provide resources such as clean water and sanitation. This further increases the risk of infectious diseases including diarrhoeal disease, which is a leading cause of death among children in low- and middle-income countries.



## **Education**

Reduced access to education results in lower literacy rates. This reduces opportunities for employment, perpetuating the cycle of poverty and the associated impacts such as limited access to food, water and healthcare, which contributes to higher rates of morbidity and premature mortality. Lower literacy rates result in lower levels of health literacy, which is a risk factor for ill-health and premature mortality from conditions associated with poverty such as HIV/AIDS.

## **Healthcare**

Poverty usually results in the inability of individuals, including children and pregnant women, to afford healthcare. Medicare and the Pharmaceutical Benefits Scheme ensures all Australians have access to a range of health professionals and services such as doctors, hospitals and essential medicines. Few countries have a universal healthcare scheme such as Medicare, so only those who can afford to pay for healthcare can receive treatment.

## **Housing**

For many people, more time is spent in the home than anywhere else. In many populations, especially in low- and middle-income countries, poverty means that many people live in inadequate housing which contributes to ill health.

### Explain the term Poverty:

- the lack of access to resources, often as the result of a lack of access to money.

### How can poverty be measured?

- Those living on less than a certain amount per day (often US\$1.90 a day). This is referred to as absolute poverty or extreme poverty (see figure 8.37).
- Those living on less than 50 per cent of their country's average income. This is referred to as relative poverty

### Explain the poverty cycle:

- The cycle of poverty can be broken with education, but education often requires payment. Without an education, you are less likely to gain employment, meaning less likely to have a steady income. Without a steady income, you are more likely to live in inadequate housing conditions, which can decrease your health and wellbeing. By having poor health and wellbeing, whilst also having access to schooling and education, you are less likely to go due to illness or disease

Poverty reduces access to a range of resources that contribute to differences in BOD between high-, middle- and low-income countries. Provide a brief explanation on how Poverty can prevent access to these resources and how they can impact on health status.

<u>Resource</u>	<u>Explanation</u>	<u>Impact on Health Status</u>
<u>Nutritious Foods</u>	<ul style="list-style-type: none"> <li>- Malnutrition is often the result of an inability to afford nutritious foods.</li> </ul>	<ul style="list-style-type: none"> <li>- Malnutrition decreases immune function, which increases the risk of infection and premature death, especially among children.</li> <li>- Pregnant women who cannot access nutritious foods are more likely to die as a result of their pregnancy and have babies who are more susceptible to premature mortality due to underdeveloped body systems.</li> </ul>
<u>Clean water and sanitation</u>	<ul style="list-style-type: none"> <li>- Poverty also restricts the ability of governments to provide resources such as clean water and sanitation.</li> </ul>	<ul style="list-style-type: none"> <li>- This further increases the risk of infectious diseases including diarrhoeal disease, which is a leading cause of death among children in low- and middle-income countries</li> </ul>
<u>Education</u>	<ul style="list-style-type: none"> <li>- Reduced access to education results in lower literacy rates.</li> </ul>	<ul style="list-style-type: none"> <li>- Reduced literacy rates reduces opportunities for employment, perpetuating the cycle of poverty and the associated impacts such as limited access to food, water and healthcare, which contributes to higher rates of morbidity and premature mortality.</li> <li>- Lower literacy rates result in lower levels of health literacy, which is a risk factor for ill-health and premature mortality from conditions associated with poverty such as HIV/AIDS</li> </ul>
<u>Healthcare</u>	<ul style="list-style-type: none"> <li>- Poverty usually results in the inability of individuals, including children and pregnant women, to afford healthcare.</li> </ul>	<ul style="list-style-type: none"> <li>- Few countries have a universal healthcare scheme such as Medicare, so only those who can afford to pay for healthcare can receive treatment. As a result, children in low- and middle-income countries are much more likely to die from conditions that are often easily treatable in high-income countries like Australia</li> </ul>
<u>Adequate housing</u>	<ul style="list-style-type: none"> <li>- For many people, more time is spent in the home than anywhere else. In many populations, especially in low- and middle-income countries, poverty means that many people live in inadequate housing which contributes to ill health.</li> </ul>	<ul style="list-style-type: none"> <li>- Many houses rely on solid fuels such as coal and wood for indoor heating but do not have adequate ventilation, such as chimneys, and therefore have high levels of indoor air pollution. As a result, the World Health Organization says it is responsible for 2.7 per cent of the global burden of disease.</li> <li>- Indoor air pollution has been shown to increase the risk of pneumonia among children under five years, and chronic respiratory disease and lung cancer among adults over thirty.</li> </ul>
<u>Government services</u>	<ul style="list-style-type: none"> <li>- The level of GNI affects the government's ability to provide access to clean water, sanitation, health services, public education and social protection measures (such as pensions, welfare and disability payments). The more money, the greater the opportunity it has to provide these resources to its citizens.</li> </ul>	<ul style="list-style-type: none"> <li>- However, the GNI of a country does not determine how the wealth is distributed. In many countries, it is common for a few people to control most of the wealth, leaving a majority of the country with living standards well below the wealthy few.</li> <li>- This divide in wealth means that low- and middle-income countries experience the concerns associated with poverty, such as high rates of communicable diseases and higher rates of child and adult mortality, which most high-income countries do not experience</li> </ul>

8.7 Factors that contribute to similarities and differences in health status and burden of disease — inequality and discrimination

Equality and freedom from discrimination are basic human rights. According to the United Nations Universal Declaration of Human Rights:

- All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood.
- Everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status.

	<u>What is meant by the Inequity or discrimination term?</u>	<u>Examples of Inequity and Discrimination</u>	<u>How Examples impact on Health status &amp;/or BOD</u>
<b>Race</b>	<ul style="list-style-type: none"> <li>- when a person is treated less favourably than another person in a similar situation because of their race, colour, descent, national or ethnic origin or immigrant status</li> </ul>	<ul style="list-style-type: none"> <li>- Discrimination, racism and a lack of cultural understanding and sensitivity prevent access to healthcare for many indigenous people. Many health systems do not reflect the social and cultural practices and beliefs of indigenous peoples.</li> </ul>	<ul style="list-style-type: none"> <li>- This can result in poorer health for Indigenous and Torres Strait islander people due the lack of access to healthcare. This can decrease life expectancy</li> </ul>
<b>Religion</b>	<ul style="list-style-type: none"> <li>- many members of religious or belief communities face discrimination based on their religion or belief.</li> </ul>	<ul style="list-style-type: none"> <li>- This often results in an inability to realise their human rights and participate in the community in which they live in terms of accessing public education, health services and employment. In extreme cases, some people are arrested or killed due to their religious beliefs.</li> </ul>	<ul style="list-style-type: none"> <li>- This can result in higher incidence rates of mental disorders</li> <li>- This can result in lower life expectancy</li> </ul>
<b>Sex</b>	<ul style="list-style-type: none"> <li>- Sex refers to the physiological characteristics, including the DNA and sex organs, present in an individual at birth.</li> </ul>	<ul style="list-style-type: none"> <li>- In developing countries, females often do not have the same access to opportunities and rights that males do</li> </ul>	<ul style="list-style-type: none"> <li>- This can result in females being less educated than males, resulting in lower health literacy rates, decreasing life expectancy due to lesser knowledge of health</li> </ul>



<p><b>Forced Marriage</b></p>	<ul style="list-style-type: none"> <li>- Forced marriage occurs when one or both of the parties is married against his or her will. Forced marriage is considered a violation of human rights and viewed by some as a form of slavery</li> </ul>	<ul style="list-style-type: none"> <li>- When girls are forced into marriage, they often withdrawn from school and regularly become pregnant before their bodies are adequately developed to deal with pregnancy and childbirth.</li> </ul>	<ul style="list-style-type: none"> <li>- This can lead to higher incidence rates for obstetric fistula <ul style="list-style-type: none"> <li>- And lower life expectancy</li> </ul> </li> </ul>
<p><b>Female genital mutilation</b></p>	<ul style="list-style-type: none"> <li>- Female genital mutilation (FGM) describes procedures that intentionally alter or cause injury to the female genital organs for non-medical reasons. Knives, scissors, scalpels, pieces of glass or razor blades are used to cut or remove tissue such as the clitoris from the genitals</li> </ul>	<ul style="list-style-type: none"> <li>- In some countries such as Somalia, Egypt and Gambia, up to 90 per cent of females have been subjected to FGM. FGM is often carried out in the name of cultural or religion, but no religion specifies that this procedure should occur</li> </ul>	<ul style="list-style-type: none"> <li>- FGM can cause severe pain, excessive bleeding (haemorrhage), infections, shock, psychological problems and death. <ul style="list-style-type: none"> <li>- Leading to lower life expectancy</li> </ul> </li> </ul>
<p><b>Sexual orientation</b></p>	<ul style="list-style-type: none"> <li>- describes the sex that an individual is sexually and romantically attracted to. It is also associated with discrimination and inequality around the world.</li> <li>- Classifications of sexual orientation include heterosexual (those attracted to members of the opposite sex); homosexual — usually described as gay (males who are attracted to males) or lesbian (females who are attracted to females); bisexual (attracted to both sexes); or asexual (not attracted to either sex).</li> </ul>	<p>Those who do not identify as heterosexual are often subjected to discrimination, including being:</p> <ul style="list-style-type: none"> <li>- refused jobs</li> <li>- refused opportunities for education <ul style="list-style-type: none"> <li>- refused healthcare</li> </ul> </li> <li>- subjected to sexual assault</li> <li>- subjected to physical beatings</li> <li>- subjected to criminal proceedings</li> <li>- subjected to the death penalty</li> </ul>	<ul style="list-style-type: none"> <li>- this can lead to lower life expectancy</li> <li>- Lead to higher incidence rates fir mental disorders <ul style="list-style-type: none"> <li>- Higher rates of suicide</li> </ul> </li> </ul>
<p><b>Gender identity</b></p>	<ul style="list-style-type: none"> <li>- describes how individuals perceive themselves as male, female, a blend of both, or neither. One’s gender identity can be the same or different from the sex assigned at birth.</li> </ul>	<ul style="list-style-type: none"> <li>- Individuals who are transgender or gender non-conforming are at higher risk of mental disorders, physical and sexual assault, and self-harm including suicide.</li> </ul>	<ul style="list-style-type: none"> <li>- This can lead to higher incidence rates of mental disorders, due to assault <ul style="list-style-type: none"> <li>-</li> </ul> </li> </ul>

## **Race**

According to the Australia Human Rights Commission, 'racial discrimination is when a person is treated less favourably than another person in a similar situation because of their race, colour, descent, national or ethnic origin or immigrant status'. Racial discrimination occurs around the world and often results in social exclusion, preventing millions of people from participating in the society in which they live in relation to education, access to healthcare, community participation, employment and housing.

According to the State of the World's Indigenous Peoples (UN, 2009):

- Indigenous people suffer higher rates of ill health and disability, and have dramatically shorter life expectancy than other groups living in the same countries.
- Discrimination, racism and a lack of cultural understanding and sensitivity prevent access to healthcare for many indigenous people. Many health systems do not reflect the social and cultural practices and beliefs of indigenous peoples.
- The world's 370 million indigenous peoples are among the world's most marginalised people, and are often isolated politically and socially within the countries where they reside by the geographical location of their communities, and their separate histories, cultures, languages and traditions.
- Indigenous peoples are often among the poorest in the world, and the poverty gap between indigenous and non-indigenous groups is increasing in many countries around the world. This influences indigenous peoples' quality of life and their right to optimal health and wellbeing.

## **Religion**

Every day, many members of religious or belief communities face discrimination based on their religion or belief. This often results in an inability to realise their human rights and participate in the community in which they live in terms of accessing public education, health services and employment. In extreme cases, some people are arrested or killed due to their religious beliefs.

According to VicHealth, religious discrimination has been shown to contribute to increased rates of:

- Anxiety
- depression
- psychiatric disorders
- stress
- decreased life satisfaction
- self-rated poor health status
- cigarette smoking
- alcohol abuse
- drug use.

## Sex

Sex refers to the physiological characteristics, including the DNA and sex organs, present in an individual at birth. In most cases, people are born as either male or female, although some people are born with a combination of both male and female characteristics, referred to as 'intersex'.

## Forced marriage

Forced marriage occurs when one or both of the parties is married against his or her will. Forced marriage is considered a violation of human rights and viewed by some as a form of slavery. Although outlawed in many countries, forced marriage still occurs and can have devastating consequences for those involved, particularly females. Over 13 million girls under the age of 18 are estimated to be forced into marriage each year, quite often with much older men.

## Female genital mutilation

Female genital mutilation (FGM) describes procedures that intentionally alter or cause injury to the female genital organs for non-medical reasons. Knives, scissors, scalpels, pieces of glass or razor blades are used to cut or remove tissue such as the clitoris from the genitals. FGM is carried out in over 25 countries around the world on girls between infancy and the age of 15. In some countries such as Somalia, Egypt and Gambia, up to 90 per cent of females have been subjected to FGM.

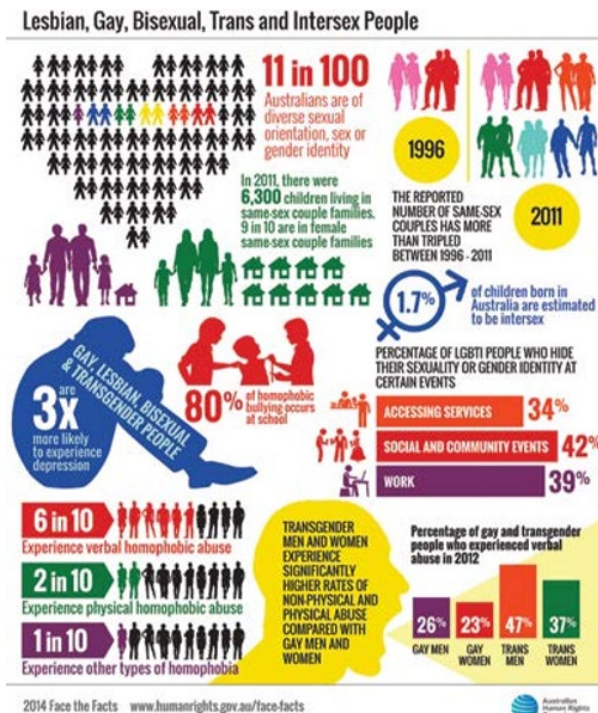
## Sexual orientation

Sexual orientation describes the sex that an individual is sexually and romantically attracted to. It is also associated with discrimination and inequality around the world. Classifications of sexual orientation include heterosexual, homosexual or lesbian; bisexual; or asexual (not attracted to either sex). Those who do not identify as heterosexual are often subjected to discrimination, including being:

- refused jobs
- refused opportunities for education
- refused healthcare
- subjected to sexual assault
- subjected to physical beatings
- subjected to criminal proceedings
- subjected to the death penalty

## Gender identity

Gender identity describes how individuals perceive themselves as male, female, a blend of both, or neither. One's gender identity can be the same or different from the sex assigned at birth.



## 8.8 Factors that contribute to similarities and differences in health status and burden of disease — global distribution and marketing of tobacco, alcohol and processed foods

### Globalisation

The process whereby boundaries between countries are reduced or eliminated allowing individuals, groups and companies to act on a global scale.

### Tobacco

Many tobacco manufacturers have been targeting low- and middle-income countries in an attempt to make up lost revenue experienced in high-income countries. The laws, taxes, regulations and public awareness campaigns that operate in many high-income countries such as Australia are often non-existent in low- and middle-income countries. As smoking rates have decreased in many high-income countries as a result of these interventions, distribution and marketing has increased in low- and middle-income countries in an attempt to increase global sales.

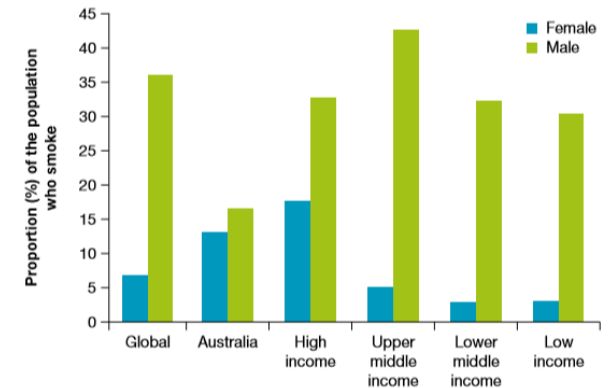
### Alcohol

Global alcohol consumption has increased in recent decades, with most or all of this increase occurring in low- and middle-income countries. Like tobacco companies, alcohol manufacturers are increasingly marketing their products towards people in low- and middle-income countries. Many alcohol producers would have neglected this market in the past, but low- and middle-income countries now provide them with an additional source of income.

### Processed foods

Companies producing processed foods have been marketing their products in low- and middle-income countries for years. Increasing incomes, and the migration of many people from rural areas to major cities, has increased access to processed foods, while the marketing of these products has increased their consumption in many low- and middle-income countries.

**FIGURE 8.52** Prevalence of tobacco use for those aged 15 and over, 2012



**TABLE 8.3** Global and regional per capita food consumption (kJ per capita per day), actual and estimated

Region	1964–1966	1974–1976	1984–1986	1997–1999	2015	2030
World	9 865	10 188	11 109	11 728	12 301	12 761
Low- and middle-income countries	8 594	9 004	10 251	11 217	11 924	12 468
High-income countries	12 330	12 824	13 414	14 142	14 403	14 644

	Health status	Burden of Disease	Indirect costs	Difference between High and Mid/low
<u>Tobacco</u>	Through the advertising of tobacco, smoking rates have significantly increased, lowering life expectancy and increasing incidence rates of lung cancer	Higher rates of smoking in low- and middle-income countries is contributing to an increased burden of disease, particularly an increase in premature death. Many of these are the result of cancer, cardiovascular disease and respiratory conditions associated with smoking.	As financial resources are often scarce, money that is spent on tobacco may leave less money available to spend on food, clothing, education and basic healthcare. This increases the risk of conditions that are not necessarily caused by tobacco use itself, such as infectious diseases.	<ul style="list-style-type: none"> <li>- 80% of the 1 billion smokers in the world live in low/middle income countries.</li> <li>- In high income countries, there are often bans on smoking and restrictions, whereas in low/middle income countries cigarettes are easily accessible to anyone.</li> </ul>
<u>Alcohol</u>	suffering the negative effects associated with excessive drinking, such as liver disease, cardiovascular disease and cancer	if an individual's limited income is spent on alcohol, there may be less available to spend on food, clothing, shelter and healthcare. This directly impacts on the standard of living and increases the burden of disease.	Alcohol misuse can lead to a range of conditions such as cardiovascular disease, liver disease and cancer. There is a cost for treating and medicating these diseases, which people may not realise by misusing alcohol.	<ul style="list-style-type: none"> <li>- In some high-income countries as well as Australia, there is easily accessible healthcare that can reduce the impact of alcohol misuse</li> <li>- In low and middle-income countries, these are specifically targeted by alcohol companies</li> </ul>
<u>Processed foods</u>	By consuming and over consuming processed foods this leads to an increased incidence of lifestyle diseases such as obesity, hypertension and cardiovascular disease.	Many low- and middle-income countries now face a 'double burden' of disease. They are still experiencing high rates of malnutrition and other conditions associated with poverty in addition to high rates of conditions associated with wealth such as obesity and cardiovascular disease.	Under-resourced health systems in many low- and middle-income countries mean that treatment for conditions related to obesity may not be available	<ul style="list-style-type: none"> <li>- Low and middle income countries have been increasingly exposed to processed foods and the advertisement of processed foods</li> <li>- However, most high-income countries have health promotion programs to try and combat this.</li> </ul>

# Chapter 9

<b>Term</b>	<b>Definition</b>
<b><i>Economic sustainability</i></b>	ensuring that average incomes in all countries are adequate to sustain a decent standard of living and continue to rise in line with inflation and living costs in the future
<b><i>Environmental sustainability</i></b>	ensuring the natural environment is used in a way that will preserve resources into the future
<b><i>Human development</i></b>	creating an environment in which people can develop to their full potential and lead productive, creative lives according to their needs and interests. It is about expanding people's choices and enhancing capabilities (the range of things people can be and do), having access to knowledge, health and a decent standard of living, and participating in the life of their community and decisions affecting their lives
<b><i>Human development index</i></b>	a tool developed by the United Nations to measure and rank countries' levels of social and economic development. It provides a single statistic based on three dimensions — a long and healthy life, knowledge and a decent standard of living — and four indicators — life expectancy at birth, mean years of schooling, expected years of schooling and Gross National Income per capita
<b><i>Social sustainability</i></b>	creating an equitable society that meets the needs of all citizens and can be maintained indefinitely
<b><i>Sustainability</i></b>	meeting the needs of the present without compromising the ability of future generations to meet their own needs
<b><i>Mass migration</i></b>	Mass migration refers to movement of large groups of people from one geographical area to another
<b><i>Internal displacement</i></b>	persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed people
<b><i>Refugee</i></b>	a person who has been forced to leave their country in order to escape war, persecution, or natural disaster
<b><i>World trade</i></b>	The exchange of goods between countries
<b><i>ehealth</i></b>	a relatively recent healthcare practice supported by electronic processes and communication

## 9.2 The dimensions of sustainability - economic sustainability

### Define or explain 'Sustainability':

- meeting the needs of the present without compromising the ability of future generations to meet their own needs.

### Explain the difference between economic, social and environmental Sustainability?

- Economic relates to the capacity of future generations to earn an income and the efficient use of resources to allow economic growth over time. Social relates to creating an equitable society that meets the needs of all citizens and can be maintained indefinitely. Environmental relates to ensuring the natural environment is used in a way that will preserve resources into the future.

### Economic Sustainability:

Explain what is meant by Economic Sustainability: Economic relates to the capacity of future generations to earn an income and the efficient use of resources to allow economic growth over time

	<b>How &amp; Why are they important for sustainability?</b>	<b>What role does it play in the promotion of health and wellbeing?</b>
<b>Innovation &amp; Diversity of Industries</b>	Countries require a range of industries to promote economic growth and stability. Many low- and middle-income countries rely on agriculture as their sole industry, which is heavily dependent on factors such as weather patterns and global markets, which are unstable and can prevent the economy from growing. By having a diverse range of industries, this ensures a more stable GNI for that country	By having a diverse range of industries, this can improve mental health and wellbeing as it allows for less financial stress in an individual.
<b>Employment</b>	Adequate employment is a particular concern in low- and middle-income countries, but all countries experience the negative impacts of unemployment. Adequate employment opportunities are a vital component of economic sustainability because people can earn a wage, avoid poverty and contribute to their country's economy.	By having adequate employment, people are able to earn an income and avoid poverty. Allowing them to purchase housing, increasing physical health and wellbeing.
<b>Economic Growth</b>	Ensuring economic sustainability requires sustained growth in Gross National Income (GNI) per capita to counter the impact of inflation, and to ensure that governments can continue to provide services, infrastructure and developments relating to industry.	By having economic growth, this allows for future generations to access health care, improving the physical health and wellbeing of those individuals.



<b>Trade</b>	Producers in low- and middle-income countries must be able to trade their goods on the global market to increase their incomes and assist in growing their country's economy. In an attempt to keep prices low in high-income countries, producers in low- and middle-income countries have traditionally been paid less than what their products are worth. This unfair trading model has made it difficult for lower income countries to promote their economy and reduce poverty.	By having fair and adequate trade, this allows for people to earn a better income, promoting mental health and wellbeing.
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Questions:

Q1 - Explain why the development of new industries is important for:

- Low and Middle income countries.
- High income countries.

### 9.3 The dimensions of sustainability - social sustainability

**Social Sustainability:**

Explain what is meant by Social sustainability?

- creating an equitable society that meets the needs of all citizens and can be maintained indefinitely.

	<b>How &amp; Why are they important for sustainability?</b>	<b>What role does it play in the promotion of health and wellbeing?</b>
<b>Elimination of Poverty &amp; Social protection systems</b>	Social protection systems provide support for vulnerable people who are unable to earn an income, including as the result of illness or unemployment. Social protection systems assist in providing access to essential resources such as housing, food and basic healthcare.	By having social protection systems, this allows for people who are unable to earn an income to provide them with access to healthcare, promoting physical health and wellbeing.
<b>Gender Equality</b>	Women and girls must be able to access the same opportunities as men and boys in relation to education, employment, leadership and decision making. Gender equality means more educated people working productively, which promotes economic sustainability, an essential component of overall sustainability.	As well as contributing to economic growth, gender equality can promote spiritual health and wellbeing, as females feel more a part of the society in which they live if they are socially included.
<b>Access to safe &amp; decent working conditions</b>	Safe and decent working conditions ensure that all people can access meaningful employment, including women, young people and those with disabilities. Currently, billions of people are either unemployed or working in conditions that violate their basic human rights and destroy their dignity.	By having access to safe and decent working conditions, this promotes physical health and wellbeing as it reduces the risk of injury.

<b>Promotion of political and legal rights</b>	The opportunities available in a society must be equitable for all people. Women, indigenous populations and ethnic minorities are often under-represented in governments, and often do not have their rights upheld	Improving political and legal rights can promote health and wellbeing by: developing policies that prevent discrimination and promote equal opportunity for education and employment. This can reduce anxiety as people feel socially included which promotes mental health and wellbeing.
<b>Peace and Security</b>	A peaceful environment and society are essential for promoting optimal health and wellbeing. On the other hand, when a country is in conflict, its level of health and wellbeing may be significantly lower than in times of peace	People are more likely to receive protection under law during times of peace. This can promote feelings of security, which promotes mental health and wellbeing.

#### 9.4 The dimensions of sustainability — environmental sustainability

##### **Environmental Sustainability:**

Explain what is meant by Environmental sustainability?

- relates to ensuring the natural environment is used in a way that will preserve resources into the future.

Explain what is meant by Biodiversity?

- relates to the variety of all forms of life: the different plants, animals and micro-organisms, the genes they contain and the ecosystems of which they form a part.

	<b>How &amp; Why are they important for sustainability?</b>	<b>What role does it play in the promotion of health and wellbeing?</b>
<b>Biodiversity</b>	<p>The world's ecosystems provide many of the processes and resources required for human health and wellbeing, including:</p> <ul style="list-style-type: none"> <li>- provision of oxygen and removal of carbon dioxide</li> <li>- protection of water resources</li> <li>- soil formation, including nutrient storage and recycling</li> <li>- nourishment of plants and animals that are used for food</li> </ul>	<p>By having stable ecosystems, such as bees, this allows for many crops to even grow in the first place, allowing access to naturally nutritious food, promoting physical health and wellbeing</p>
<b>Use of natural resources</b>	<p>The manner in which natural resources are used must be considered to ensure sustainable biodiversity. The natural resources that humans use can be classified as either renewable or non-renewable.</p>	<p>The sustainable use of renewable resources allows future generations to be able to earn an income by utilising natural resources, which can assist in providing a range of goods and services required for optimal health and wellbeing such as food, shelter and healthcare</p>

<b>Waste removal and pollution</b>	<p>Maintaining clean ecosystems is important in maintaining environmental sustainability. As discussed earlier, ecosystems are responsible for producing clean water and air. Industry, agriculture and human waste can degrade the quality of these resources by contaminating the ecosystems that produce them.</p>	<p>By ensuring sustainable access to clean water. This can prevent infectious diseases and promote physical health and wellbeing.</p>
<b>Climate Change</b>	<p>The global average surface temperature has increased by approximately 0.65 degrees Celsius over the past 50 years and will increase even more rapidly over the next century.</p> <p>The rate at which sea levels have risen has also increased in recent decades and is also expected to continue over the coming century. These changes in climate will in turn affect weather patterns such as rainfall, drought, wind patterns and heat waves.</p>	<p>Weather and rainfall patterns will stabilise, which may reduce the rate and severity of natural disasters. This will reduce the number of injuries and deaths that occur as a result of these events, which will promote physical health and wellbeing.</p>

### 9.5 The concept of human development

**Human Development:** creating an environment in which people can develop to their full potential and lead productive, creative lives according to their needs and interests. It is about expanding people's choices and enhancing capabilities (the range of things people can be and do), having access to knowledge, health and a decent standard of living, and participating in the life of their community and decisions affecting their lives

**Purpose of human development:** The basic purpose of [human] development is to enlarge people's choices. In principle, these choices can be infinite and can change over time. People often value achievements that do not show up at all, or not immediately, in income or growth figures: greater access to knowledge, better nutrition and health services, more secure livelihoods, security against crime and physical violence, satisfying leisure hours, political and cultural freedoms and sense of participation in community activities.

**Human development means being able to:**

- lead long healthy lives
- have access to knowledge (education)
- Have access to resources needed for 'decent standard of living' (food, water, etc)
- Participate in the community
- Participate in decisions that affect their lives

## What each components of human development relate to:

### Develop to their full potential:

- Being free from diseases and disabilities that would prevent people from adequately growing up and living up to the full potential that they otherwise would have been able to.

### Lead productive and creative lives in accordance to their needs and interests:

- Being free from disease and illnesses that would inhibit people from being able to work, socialise with their friends and families, have hobbies, follow their passions.

### Expand peoples choices and enhance their capabilities:

- Through education, people learn and can develop their literacy and numeracy skills, enhancing the things they are capable of doing. In doing so, they increase their employment prospects, therefore expanding the choices (what field of jobs they want to go into) they have.

### Access to knowledge, health and a decent standard of living:

- This notion relates to having access to quality education, health services, an equitable health care system, food security, shelter, water, and hence, good living conditions

### Participate in the community and decisions affecting their lives:

- Having the opportunity to participate in the community (e.g both men and women can have a say in the community) and the ability to make decisions for themselves. For example, in many developing countries, women are not able to make decisions about their own lives; fathers usually marry their daughters off at a young age.

## 9.5.1 case study on human development

Lackistan has a high average income and the economy is growing, but the wealth is distributed unequally. The major cities are sufficiently developed with access to public services and adequate infrastructure. As a result, those living in the major cities have access to education, healthcare, transport systems, adequate housing and safe water and sanitation. Those in rural areas, however, often experience food insecurity, lack of access to healthcare, education, safe water and sanitation. Lackistan is typical of many countries in that the average incomes are high, but this hides the fact that not everyone is enjoying the benefits that can come with a growing economy and high incomes.

Ken lives in the capital of Lackistan with his parents. They live in a safe neighbourhood where crime rates are low and resources such as healthcare, safe water and adequate sanitation are readily available. Ken recently graduated from a public secondary school and has been accepted by the local university to study law. Ken's family belong to the ethnic majority of Lackistan and enjoy the freedoms that the country has to offer, such as being able to vote and participate in other aspects of community life. Ken wants to finish his law degree and then work either in law or politics, as he has always dreamed of being a minister for justice. Ken wants to have a family eventually, but is going to wait until his career is established before committing to a serious relationship

Ken appears to be experiencing a high level of human development. He has received an education and has chosen to study law at university. Ken has choices in relation to his career and is focusing on working in a field that he has been interested in for some time. Ken thinks he would like to have a family, but has the freedom to wait until the time is right. He lives in a safe community where he can access the resources required for a decent standard of living such as healthcare, water and sanitation. Ken enjoys freedoms such as being able to vote and participating in the life of the community in which he lives.

Briony lives in a rural region of Lackistan with her mother. When Briony was three years old, her father died. He was 28 years old, and died as the result of an infectious disease that could have been prevented with access to basic healthcare. Briony spent a large portion of her childhood collecting water as her mother worked in the fields trying to grow enough food for Briony and herself. Educational opportunities are limited in rural areas of Lackistan, but Briony would not have been able to attend school because she was responsible for collecting water.

Because she is illiterate, Briony's employment opportunities are limited to unskilled jobs in her community, which she finds physically demanding and unrewarding. Briony belongs to an ethnic minority that is often discriminated against by other groups in relation to basic rights such as voting and participating in the life of the community. In line with cultural traditions, Briony was married at the age of 15 to a man chosen by her uncle. In the years that followed, she had three children and now works in agriculture trying to grow enough food to feed her family.

Although she lives in the same country, Briony's level of human development is much lower than Ken's. Her father died at a young age from a preventable disease, which indicates that people in Briony's community may not be able to lead long and healthy lives. Safe water is not readily available, indicating that the resources required for a decent standard of living are not universally accessible. Briony was unable to access education and now her choices in relation to employment are limited. Briony did not have the freedom to make decisions affecting her life in relation to when and to whom she got married.

#### Explain the difference in human development experienced by Ken + Briony in the case study

- Ken is experiencing a high level of human development as he has choices in relation to his life and more specifically his career and education. By gaining an secondary school education and going to university to study law, this "expands his choices in fields of work" and in turn increases his chances of earning a high income. Ken has "access to resources need for a decent standard of living" such as healthcare, food and water. Ken is able to "participate in his community" and do things such as vote and have a say and express his opinion. Whereas Briony has a lower level of human development than Ken, even though they live in the same country. Briony is unable to gain an education as she has to collect water for her mother and family. She was coercively married at the age of 15 and had children in the coming years, showing she "didn't have a choice in decisions that affect her life". She doesn't have access to safe water, this indicates that the "resources required for a decent standard of living aren't accessible". Since she was unable to gain an education, Briony's "choices in relation to employment are limited".

#### Explain likely differences in the human development experienced in a country classified as low-income compared to a country classified as high income

- Human development in high-income countries is often higher as the access to safe water, adequate infrastructure, adequate housing, food security, education and healthcare are higher than those in low-income countries. Human development in low-income countries is often lower as the access to safe water, adequate infrastructure, adequate housing, food security, education and healthcare are lower. And the rates of participation in the community, forced marriage and equity are lower in low-income countries

#### Why is GNI not an adequate way of measuring human development?

- Because people in countries have varying incomes. Showing inconsistencies and demonstrating that GNI is not an adequate way of measuring human development

PRACTICE SAC QUESTION:

Q1

a) Using examples, explain the difference between social and economic sustainability (4 marks)

Social sustainability refers to an creating an equitable society that meets the needs of all citizens and can be maintained indefinitely. For example, gender equality allows for women and girls to access the same opportunities as men and boys in relation to education, employment, leadership and decision making. Whereas economic sustainability refers to ensuring that average incomes in all countries are adequate to sustain a decent standard of living and continue to rise in line with inflation and living costs in the future. For example, employment allows people to earn a wage, avoid poverty and contribute to their country's economy.

b) Outline 2 reasons why environmental sustainability is important for the promotion of health and wellbeing in a global context (4 marks)

It allows for the protection and conservation of ecosystems and the biodiversity of the earth. It allows for the present to use resources and develop technology, without compromising the needs of the future to do so as well

9.6 The advantages and limitations of the Human Development Index

Measuring the total level of human development of a country is impossible. There are many aspects of people's lives that need to be taken into account, and to collect all of this information on a global scale is not possible. The United Nations has, however, developed a measurement system that attempts to reflect the level of human development being experienced in different countries and regions.

It is known as the Human Development Index (HDI) and it uses three dimensions and four indicators to create an index that estimates the level of human development experienced in different countries.

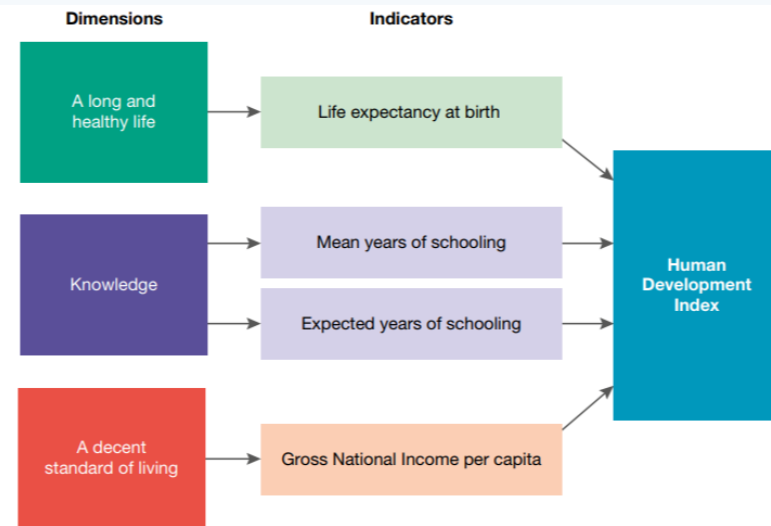
The dimensions relate to broad concepts that have an impact on the level of human development experienced. These are:

- A long and healthy life
- Knowledge
- A decent standard of living

Whereas the indicators are the measurable aspect of each dimension. The four indicators relate to:

- life expectancy at birth. An indication of how long a person can expect to live; it is the number of years of life remaining to a person at birth if death rates do not change (AIHW, 2008).
- mean years of schooling. The average number of years of education achieved by those aged 25 years and over.
- expected years of schooling. The number of years of education expected for a child of school entrance age.
- Gross National Income per capita. The overall income of a country after expenses owing to other countries have been paid, divided by the population of the country

**FIGURE 9.20** The Human Development Index is based on three dimensions and four indicators.



[This is a link to all the countries HDI](#)

Country	Human Development Index (HDI)	HDI rank	A long & healthy life (life expectancy at birth – years)	Knowledge (mean years of schooling)	Knowledge (expected years of schooling)	A decent standard of living (GNI per capita)
Australia	0.939	3	83.1	12.9	22.9	43,560
Japan	0.909	19	83.9	12.8	15.8	38,986
Sierra Leone	0.419	184	52.2	3.5	9.8	1,240
Sudan	0.502	167	57.3	3.7	7.4	4,119
New Zealand	0.917	16	82	12.5	18.9	33,970
Netherlands	0.931	10	82	12.2	18	47,900

**Exam Style Question:**

- Briefly explain the HDI. **(2 marks)**
  - It uses three dimensions and four indicators to create an index that estimates the level of human development experienced in different countries
- Identify the country that would have the lowest HDI and justify your choice. **(3 marks)**
  - Central African Republic. *(YOU CAN ONLY USE LIFE EXPECTANCY AND GNI PER CAPITA AS EXAMPLES AS THEY ARE THE ONLY ONES IN THE HDI)*
- Outline one advantage and one limitation of the HDI. **(2 marks)**
  - A limitation of the HDI is that human development is very complex and is hard to measure, making the HDI somewhat inaccurate. An advantage is that it takes more than just income and wealth into account, it takes health (life expectancy) and education into account as well.

	U5MR (per 1000 live births)	Life expectancy	Maternal mortality ratio (per 100 000 live births)	Incidence rate for HIV (per 100 000 population per year)	Births attended by skilled health personnel (%)	Percentage of 1-year-olds immunised against measles	Population with access to safe water (%)	GNI per capita (&#x0024;PPP)
Australia	4	83	6	5.1	99	94	100	42 540
Burundi	82.9	56	740	21	60	98	75	820
Central African Republic	139.2	51	880	167	40	25	68	600
Kenya	70.7	61	400	229	44	93	62	2 250

# Chapter 10



10.2 The implications for health and wellbeing of climate change

Climate Change	Summary	Physical H&W	Emotional H&W	Mental H&W	Social H&W	Spiritual H&W
<b>Changing Weather Patterns &amp; Extreme Weather Events</b>	The weather and climate are changing due to global warming. Oceans play an important role in determining the climate system, and the increasing temperature of the oceans has brought about changing weather patterns	Without safe housing, the risk of injury and violence is also increased which reduces physical health and wellbeing	the number of people who are killed, injured or become homeless may increase due to changing weather patterns. Homelessness is a major cause of poor emotional health and wellbeing	the number of people who are killed, injured or become homeless may increase due to changing weather patterns. Homelessness is a major cause of poor mental health and wellbeing	Extreme temperatures reduces social connection and belonging and, therefore, reduces social health and wellbeing	Extreme temperatures reduces social connection and belonging and, therefore, reduces spiritual health and wellbeing
<b>Rising Sea Levels</b>	The two major causes of rising sea levels are the expansion of the water that occurs as it warms and the increase in the volume of water that results from the melting of ice in the Earth's polar regions and glaciers.	Relocation can also place strain on existing infrastructure, such as safe water and sanitation services, housing and healthcare services. This can lead to poor physical health and wellbeing	Water scarcity can also lead to increased levels of poverty, because people must pay large amounts of money to purchase clean water for drinking. This will affect emotional health and wellbeing	Having to relocate houses and farms could be stressful and increases the risk of people suffering from poor mental health and wellbeing.	Relocating can interfere with social networks within the community and reduce levels of social health and wellbeing.	By relocating homes due to rising sea levels, this can displace the feelings of spiritual connection or moving away from places of worship, negatively affecting spiritual health and wellbeing

**Rising sea levels:**

Increased greenhouse gas emissions have contributed to global warming and rising sea levels. The average sea level has increased at a rate of around 1.8 millimetres per year from 1961 to 2003, and more recently has been reported to have increased at a rate of 3.2 millimetres each year. It has been predicted that if greenhouse gas emissions continue at the same rate, the average sea level could increase by almost one metre by 2100. This would mean that approximately 150–200 million people would have to relocate, as their land would be under water. Currently in some low-lying coastal cities, rising sea levels are already having an impact on the availability of land for farming.

The two major causes of rising sea levels are the expansion of the water that occurs as it warms and the increase in the volume of water that results from the melting of ice in the Earth's polar regions and glaciers.

The impact:

- The relocation of farms and villages
- Reduction in the availability of fresh water
- Reduction in agriculture and food supplies
- Changes in biodiversity

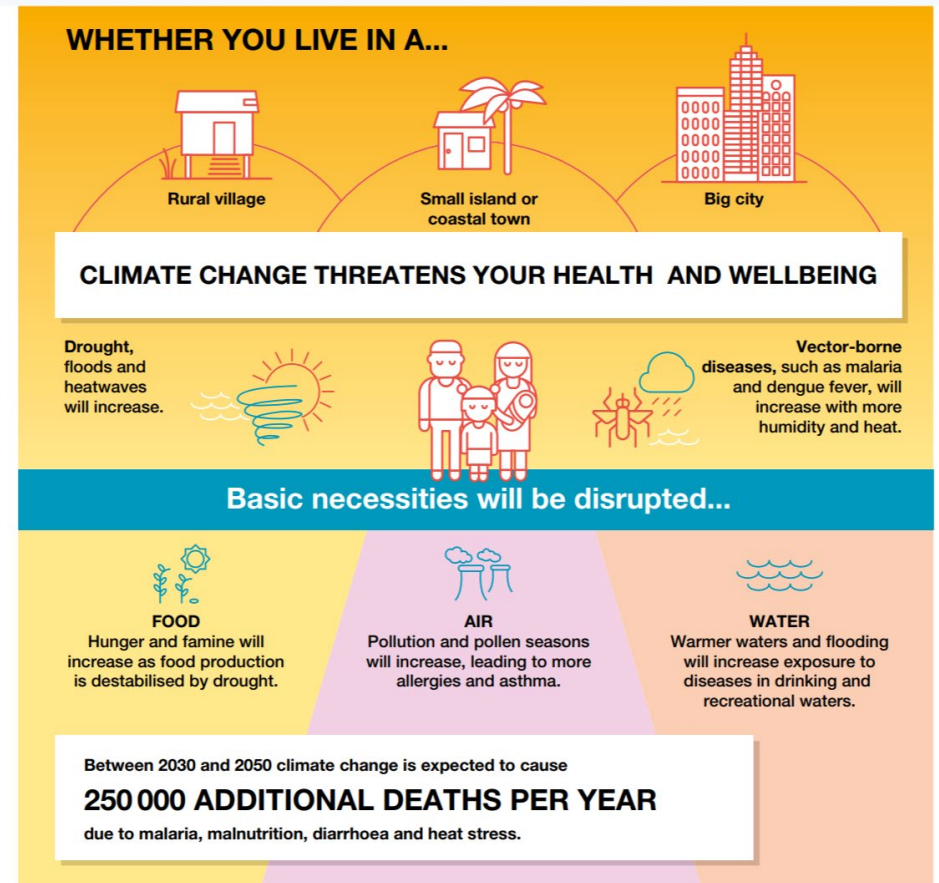
**Changing weather patterns and extreme weather events:**

The weather and climate are changing due to global warming. Oceans play an important role in determining the climate system, and the increasing temperature of the oceans has brought about changing weather patterns. With temperatures expected to increase we are likely to experience more extremely hot days and less extremely cool days. Rainfall patterns are also expected to change. Dry regions will become even drier and wet regions will become even wetter.

The impact:

- Increased incidence of infectious diseases
- Extremes in temperature
- Changes in the types of crops that can be grown
- Reduced access to fresh water
- 

**FIGURE 10.6** Climate change poses a threat to health and wellbeing worldwide.



## CASE STUDY: Climate Change and Australia's Health:

[Case study video:](#)

Q1. What has the ICPP reported that people will die from due to global warming?

- crop failures and food shortages, floods, cyclones, droughts leading to mass population displacements, and water contamination leading to diarrhoeal diseases like cholera and dysentery.

Q2. How many deaths are due to climate change-related events?

- 150,000

Q3. How is Australia placed in relation to Climate change?

- Australia is quite well placed and have substantial adaptive capacity due to well-developed economies and scientific and technical capabilities

Q4. What areas are for concerns for Australia's, that have been identified in the report?

- Heatwaves, mosquito-borne illnesses like malaria, Ross River fever, and Dengue fever.

Q5 Identify possible impacts climate change could have on all dimensions of health and wellbeing?

- Increase number of deaths significantly, decreasing physical health and wellbeing. Which in turn and decrease mental, emotional and spiritual health and wellbeing as the grief following the death of a loved one can be hard to process.

### 10.3 The implications for health and wellbeing of conflict and mass migration

Conflict & Mass Migration	Summary	Physical H&W	Emotional H&W	Mental H&W	Social H&W	Spiritual H&W
<i>Conflict</i>	Acts of terrorism that have deliberately targeted civilians have become more common and deadlier.	By having the physical environment destroyed, malnutrition is increased and conditions that may have been treatable during peaceful time. This decreases physical health and wellbeing	Women are at higher risk of rape and abuse when conflict occurs. Lack of protection from rival forces has an impact on the lives of women and children. Decreasing emotional health and wellbeing	Individuals can be living in fear and being concerned for the health and wellbeing of themselves and their families. Decreasing mental health and wellbeing	Women are at higher risk of rape and abuse when conflict occurs. Lack of protection from rival forces has an impact on the lives of women and children. Decreasing their social health and wellbeing	Women are at higher risk of rape and abuse during conflict. Lack of protection from rival forces has an impact on the lives of women and children. Decreasing their spiritual health and wellbeing

<p><i>Mass Migration</i></p>	<p>Mass migration refers to movement of large groups of people from one geographical area to another.</p>	<p>Refugees are often forced into crowded and unsanitary living conditions in refugee camps. This can lead to outbreaks of cholera, diarrhoea and other vaccine-preventable diseases that contribute to high rates of morbidity and mortality and reduced physical health and wellbeing.</p>	<p>Displaced women and children are particularly at risk of sexual and gender-based violence, which affects their emotional health and wellbeing.</p>	<p>Displaced women and children are particularly at risk of sexual and gender-based violence, which affects their mental health and wellbeing.</p>	<p>women may be forced into selling sex to get enough food to survive. Decreasing their social health and wellbeing, as they may feel uncomfortable in social situations</p>	<p>women may be forced into selling sex to get enough food to survive, decreasing their spiritual health and wellbeing, as they may not have a good sense of self</p>
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**Answer the following Questions, use your textbook to assist.**

1. Why would conflict be described as a global trend?
  - As the level of conflict worldwide has increased generally, whilst also becoming more common as well.
2. What is meant by 'the nature of conflict has changed'?
  - Because international humanitarian law now being largely ignored. There is deliberate bombing of healthcare facilities and siege and starvation are being used as weapons of war.
3. When conflict occurs, why are women at greater risk?
  - Because they are at higher risk of rape and abuse when conflict occurs and the lack of protection from rival forces has an impact on the lives of women and children
4. Which countries did most refugees come from in 2015?
  - The Syrian Arab republic

Explain what is meant by the term **world trade**:

- World trade is the exchange of goods and services between countries. It is driven by different production costs in different countries.

Some positives of world trade:

- Trade allows countries to specialise and enables technologies, skills and ideas to be shared
- It promotes competition, which helps boost innovation and productivity and foster economic growth.
- World trade provides job opportunities for local workers. Increased levels of employment lead to a higher standard of living and more consumer purchasing.

Some of the negatives of world trade:

- Multinational corporations put women in dangerous working conditions for very low pay
- There have also been instances where children have been used to work in very unsafe and poor conditions where safety standards are ignored to produce cheap goods.
- Other areas of concern have been the increasing use of pesticides by corporate farms in low- and middle-income countries, with host countries ignoring costly environmental standards. This contributes to environmental degradation.

**FIGURE 10.13** Why tourism matters.



**WHY TOURISM MATTERS**

**Tourism:**

	<b>Benefits</b>	<b>Challenges</b>
<u>Health and wellbeing</u>	With an income, families are more able to purchase the necessary food, water, clothing, shelter and healthcare that promotes physical health and wellbeing	Tourism increases international air travel, trade and tourism can result in disease-producing organisms being transported rapidly from one country to another. The possible threat to trade and tourism is high, which can lead to potential epidemics.
<u>Economic</u>	Tourism is one of the world's fastest growing industries worldwide. Tourism promotes inclusive and sustainable economic growth. Tourism accounts for 10 per cent of the world's GDP and this trend is set to continue. Economic growth is important if people and countries are to escape from poverty	While tourism can generate many benefits for local communities, it can bring about many challenges, particularly if it is unsustainable. It can pose environmental challenges, cause overcrowding and put pressure on local infrastructure and services; it can also place stress on fragile local ecosystems.
<u>Social</u>	Tourism contributes to social inclusiveness and employment. Almost twice as many women are employed in the tourism sector compared with any other sector. This increases female empowerment and gender equality. This promotes social health and wellbeing	Some people may enter into criminal activities to fetch easy money from tourists which leads to increased crime and anti-social activities and loss of moral and religious values
<u>Environmental</u>	Tourism promotes resource efficiency and environmental protection. Tourism is effective in raising money for the conservation of wildlife and the environment. It can be a way of protecting and restoring biodiversity.	Of tourism in a country is unsustainable, it can pose environmental challenges, cause overcrowding and put pressure on local infrastructure and services; it can also place stress on fragile local ecosystems.

World trade and tourism does not always promote health and wellbeing. Discuss:

- Because tourism can promote health and wellbeing in ways such as provide more jobs, allowing people to earn an income and provide themselves or their family with food, shelter and healthcare which promotes physical health and wellbeing. However, tourism increases international air travel, which can increase the risk of a disease epidemic such as ebola. This can decrease physical health and wellbeing.

10.5 The implications for health and wellbeing of digital technologies that enable increased knowledge sharing

Over the last ten years there has been considerable growth in digital technologies. The world has become increasingly more connected. People, businesses and governments are moving into the virtual world to deliver and access services, obtain and share knowledge, undertake transactions, shop, work and interact with each other. Digital media now allows people to selectively access information they need through multiple channels.

The expansion of digital technologies means mobile phone technology can be used not only for everyday communication but also for more complex data collection and sharing of health-related information. Many countries are using digital technologies in their health information systems.

Examples of how digital technologies can be used to promote health and wellbeing:	How they can promote health and wellbeing
Mobile phones help healthcare workers in the field gather population data such as the number and ages of men, women and children and the number of women who are pregnant and those who access healthcare before, during and after pregnancy.	Mobile phones can promote physical health and wellbeing as people to share data of their health with professionals, which in turn allows the professionals to be more accurate in treatment.
Digital technologies provide countries with the ability to register births, deaths and marriages, which ensures that people have access to legal protection, education and basic human rights.	Education helps promote social health and wellbeing. When children are educated, they build relationships and social networks.
Mobile phone technology can be used for disaster preparedness, and SMS services can be used to issue warnings of an impending emergency.	This promotes mental health and wellbeing as it provides a sense of security and safety knowing when a natural disaster is incoming.
Digital technologies can engage individuals and families more directly in their healthcare experience. People now have access to more self-care and diagnostic information that they can use at home to monitor and improve their health.	It can promote mental and emotional health and wellbeing by reassuring people that they are in a state of good health and wellbeing or by empowering them to take action to promote their health and wellbeing.

**CASE STUDY -** How digital technologies could promote health and wellbeing in low- and middle-income countries

- **FIGURE 10.15** A woman undergoes an eye examination using a smartphone at a temporary clinic by International Centre for Eye Health.

Mobile phone subscriptions now outnumber the number of people on earth. In low- and middle-income countries mobile phones offer great opportunities for people to gain access to healthcare at an affordable price. This is particularly true for countries where there are few health workers and a lack of healthcare facilities.

In 2014, 90 per cent of households globally had access to some form of mobile technology which provides an innovative way to provide health information and healthcare services, particularly to those living in low- and middle-income countries. SMS technology is already being used in some low- and middle-income countries to track malnutrition, to notify people when they need to take specific medication and to provide pregnant mothers with health information necessary to achieve a healthy pregnancy.



At a system level, mobile technology has successfully been used to replace paper-based records and improve the accuracy and efficiency of administration systems. Examples of this are where babies born outside of hospital in Africa can be documented and registered, and SMS is used to speed up the notification of test results for HIV.

There are now a range of smartphone apps that provide health information to users and empower them with valuable information about their health and wellbeing and how to prevent ill health. One app developed in Africa allows people to identify any symptoms of illness and contact the closest medical clinic for advice. Medical apps can also be used to monitor and report conditions such as heart disease and diabetes. As broadband services become more available in low- and middle-income countries, the potential of digital technologies to revolutionise healthcare in these countries is immense.

However, before this becomes possible to implement widely, there are a number of barriers that need to be overcome. The current digital technology solutions tend to be unique to the particular situations in which they have been developed to meet a local need. This means they are not yet able to be transferred more broadly, which is what is needed to revolutionise health systems. Most of the current systems are pilot projects rather than integrated systems. The development of solutions based on open source platforms would allow the applications to be used by anyone who uses a smartphone regardless of where they live.

Governments also need to develop policies and frameworks to regulate and control the use of digital technologies to ensure privacy and confidentiality of health records and information. One of the most significant barriers is money. Investment from the private sector is needed to sustain mobile health solutions, and this requires evidence that the digital technologies have the capacity to deliver better health outcomes and not just to collect health-related information. This requires more research on the costs and benefits of the use of digital technologies in health. It has been estimated that the use of digital technologies has the capacity to save more than one million lives in sub-Saharan Africa over the next few years.

- **Source:** Adapted from World Economic Forum 2015, 'How mobile technology could change healthcare in developing countries', [www.weforum.org](http://www.weforum.org).

### Case study review

1. What are the benefits of increased phone connectivity?  
-
2. How has mobile technology changed the way healthcare information and services are being delivered?  
-
3. How has the use of mobile technology increased the accuracy and timeliness of information while reducing its cost?  
-
4. What role do smartphone apps play in promoting health and wellbeing?  
-
5. What barriers need to be overcome before digital technologies can be used on a larger scale to promote health and wellbeing?



# Chapter 11

## 11.2 Objectives and rationale for the Sustainable Development Goals

### 11.2.1 What are the Sustainable Development Goals (SDGs)

- Goals and targets to achieve an optimal world by 2030

The 17 Sustainable Development Goals (SDGs), also referred to as the global goals, include 169 targets to be achieved by 2030. The goals were developed through a collaborative process by all United Nations member states, non-government organisations, and people around the world with an interest in making the world a better place. The goals include ambitious targets and plans about how each of them can be achieved. They tackle global challenges and aim to meet the needs of all people in all countries. They direct action in five areas of importance

- **People**. End poverty and hunger, in all their forms and dimensions, and ensure that all human beings can fulfil their potential with dignity and equality and in a healthy environment.
- **Planet**. Protect the planet from degradation through sustainable consumption and production, management of natural resources and acting on climate change to support the needs of present and future generations.
- **Prosperity**. Ensure all people can enjoy successful and fulfilling lives and that economic, social and technological progress occurs in harmony with nature.
- **Peace**. Foster peaceful, just and inclusive societies that are free from fear and violence. There can be no sustainable development without peace and no peace without sustainable development.
- **Partnership**. Implement the SDGs with a global partnership for sustainable development, focused on the needs of the poorest and most vulnerable, with the participation of all countries, stakeholders and people.

FIGURE 11.2 The five areas of importance for humanity and the planet



### 11.2.3 Objectives of the SDGs

The 17 global goals work together to achieve three major objectives:

- end extreme poverty
- fight inequality and injustice
- address climate change.

To achieve these objectives, the SDGs aim to:

- end poverty and hunger
- promote health and wellbeing
- address inequalities within and among countries
- build peaceful, just and inclusive societies
- protect human rights
- promote gender equity and the empowerment of women and girls, all underpinned by the promotion of a sustainable world.

A sustainable world means people can escape poverty and enjoy decent work without harming the Earth's essential ecosystems and resources; where people can stay healthy and get the food and water they need; where everyone has access to clean energy that doesn't contribute to climate change; and where women and girls are afforded equal rights and equal opportunities. The three dimensions of sustainability underpinning the goals are social, economic and environmental.

### 11.2.4 The Sustainable Development Goals are interconnected

One goal is no more important than any other — they complement and interconnect with each other. They are designed as a set of goals and targets that are integrated, interdependent and indivisible. Their achievement requires collaboration across all sectors and at national, international, regional and local levels.

Good health and wellbeing contributes to the achievement of many of the SDGs. In turn, the achievement of other SDGs helps achieve good health and wellbeing. It is for this reason that SDG 3: Good health and wellbeing is the focus of this topic, along with its relationship with other selected SDGs, which are:

- SDG 1: No poverty
- SDG 2: Zero hunger
- SDG 4: Quality education
- SDG 5: Gender equality
- SDG 6: Clean water and sanitation
- SDG 13: Climate action.

FIGURE 11.3 The UN's 17 Sustainable Development Goals



FIGURE 11.4 This topic explores the interrelationships between SDG 3 and other health-related SDGs.





**GOOD HEALTH AND WELLBEING: ENSURE HEALTHY LIVES AND PROMOTE WELLBEING FOR ALL AT ALL AGES**

Goal 3 aims to promote physical and mental health and wellbeing, and extend life expectancy by addressing the major causes of morbidity and mortality in high, middle- and low-income countries. The aim of this goal by 2030 is to:

- reduce global maternal mortality to less than 70 per 100 000 live births
- end preventable deaths of newborns and children under five, reducing neonatal mortality to 12 per 1000 live births and under-5 mortality to 25 per 1000 live births
- end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases, and combat hepatitis, water-borne diseases and other communicable diseases
- reduce by one third premature mortality from non-communicable diseases through prevention and treatment, and promote mental health and wellbeing
- strengthen the prevention and treatment of substance abuse, including drugs and alcohol
- halve global deaths and injuries from road traffic accidents
- ensure universal access to sexual and reproductive healthcare services
- achieve universal health coverage, including access to affordable essential medicines and vaccines
- reduce deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
- strengthen the implementation of the WHO Framework Convention on Tobacco Control in all countries, as appropriate
- support the research and development of vaccines and medicines for communicable and non-communicable diseases and provide access to affordable essential medicines and vaccines
- increase investment in healthcare services and qualified healthcare staff, especially in low-income countries and small island developing states
- strengthen the capacity of all countries to manage national and global health and wellbeing risks.

**FIGURE 11.5** The key features of SDG 3

SDG 3: Ensure healthy lives and promote wellbeing for all at ages		
Target 3.8: Achieve universal health coverage, including financial risk protection, access to quality essential healthcare services, medicines and vaccines for all		
MDG unfinished and expanded agenda	New SDG 3 targets	SDG 3 means of implementation targets
3.1: Reduce maternal mortality	3.4: Reduce mortality from NCD and promote mental health and wellbeing	3.a: Strengthen the implementation of the Framework Convention on Tobacco Control
3.2: End preventable newborn and child deaths	3.5: Strengthen prevention and treatment of substance abuse	3.b: Provide access to medicines and vaccines for all, support research and development of vaccines and medicines for all
3.3: End the epidemics of HIV, TB, malaria and NTD and combat hepatitis, waterborne and other communicable diseases	3.6: Halve global deaths and injuries from road traffic accidents	3.c: Increase health financing and health workforce in research and development
3.7: Ensure universal access to sexual and reproductive healthcare services	3.9: Reduce deaths from hazardous chemicals and air, water and soil pollution and contamination	3.d: Strengthen capacity for early warning, risk reduction and management of health and wellbeing risks

This SDG recognises there is still work to be done in many areas, including *maternal and child health and wellbeing*, **communicable diseases** such as *AIDS, malaria and Tuberculosis (TB)* and ensuring *universal access to sexual and reproductive healthcare services*

SDG 3 also sets out ‘means of implementation’ targets or the actions that need to be taken for the goal to be achieved. One target is to provide universal health coverage. This is considered a prerequisite for achieving SDG 3 and is therefore represented in figure 11.5 as a target that extends across all other targets.

Universal health coverage includes two major elements:

- expanding health and wellbeing services so all people have access to the health and wellbeing services they need
- reducing the cost of healthcare so people can access the healthcare they need without suffering financial hardship.

Other implementation targets include having an adequate and well trained health workforce and access to essential medicines. The key features of SDG 3 are represented in this table (figure 11.5) — features that build on the previous MDGs are shown, along with new targets and the implementation targets that provide the strategies or means of achieving the goals.

Universal healthcare:

- also called universal health coverage, universal coverage, or universal care, is a health care system that provides health care and financial protection to all residents of a particular country or region.

**QUESTIONS ASSOCIATED with SDG 3 Maternal & Child health and wellbeing:**

1. What new health priorities are addressed in SDG 3?
  - Reduce mortality from NCD and promote mental health and wellbeing
  - Strengthen prevention and treatment of substance abuse
  - Halve global deaths and injuries from road traffic accidents
  - Reduce deaths from hazardous chemicals and air, water and soil pollution and contamination
2. What are the five main causes of maternal mortality?
  - *haemorrhage* (excessive bleeding)
  - *sepsis* (an infection that affects the whole body)
  - *obstructed labour* (i.e. when the baby cannot pass through the birth canal, either due to the mother's small pelvis or the position of the baby in the uterus)
  - *unsafe abortion*
  - *hypertensive disease* (heart conditions caused by high blood pressure).
3. Outline three ways that maternal mortality rates can be reduced.
  - Maternal mortality rates can be reduced if all women have access to quality antenatal care
  - more women having access to sexual and reproductive health and wellbeing services,
  - more births being assisted by skilled health personnel
4. When do most infant deaths occur?
  - Many infant deaths occur in the neonatal period — the first 28 days of life. Up to half of all these deaths occur within the first 24 hours of birth, and 75 per cent occur in the first week
5. What factors have contributed to reductions in under-five mortality rates?
  - Vaccinations
  - Improved access to antenatal care
  - more births being assisted by skilled health personnel
  - fewer young mothers giving birth
  - greater access to family planning services
  -

	Reason for Improvement	Achieving the targets
<b>Reduce Maternal Mortality</b>	<ul style="list-style-type: none"> <li>- Quality antenatal care</li> <li>- more women having access to sexual and reproductive health and wellbeing services,</li> <li>- more births being assisted by skilled health personnel</li> </ul>	<ul style="list-style-type: none"> <li>- There needs to be an increased investment by governments in healthcare services, particularly in low and middle-income countries, to ensure all women have access to sexual and reproductive health and wellbeing services.</li> </ul>
<b>End preventable newborn &amp; child deaths</b>	<ul style="list-style-type: none"> <li>- Vaccinations</li> <li>- Improved access to antenatal care</li> <li>- more births being assisted by skilled health personnel</li> <li>- fewer young mothers giving birth</li> <li>- greater access to family planning services</li> </ul>	<ul style="list-style-type: none"> <li>- Preventable deaths of newborns and those under five (U5MR) can be reduced by ensuring that mothers have access to safe childbirth practices and effective neonatal care.</li> <li>- Many deaths of children under five are due to preventable causes such as malnutrition, malaria, diarrhoea, measles and pneumonia</li> </ul>

#### 11.4 Sustainable Development Goal 3: Good health and wellbeing: key feature — communicable diseases

**Communicable Disease:** A communicable disease is one that is spread from one person to another through a variety of ways that include: contact with blood and bodily fluids; breathing in an airborne virus; or by being bitten by an insect.

	Summary	Improvements/ Prevention	Ending the epidemic
<b>AIDS</b>	AIDS (Acquired Immunodeficiency Syndrome) is caused by the Human Immunodeficiency Virus (HIV), which damages and weakens the body's immune system. The body loses the ability to fight infections, and the infected person eventually develops AIDS.	AIDS-related illnesses were reduced by 43 per cent since 2005. Between 2000 and 2015 new HIV infections were reduced by 40 per cent or 1.4 million. Progress has also been made in preventing mother-to-child transmission of HIV and reducing deaths of mothers who are infected with HIV	The spread of HIV can be prevented by using condoms; with voluntary male circumcision; pre-exposure medication that works to keep the HIV virus from taking hold in the body; promoting gender equality; and providing access to secondary education.
<b>Malaria</b>	a life-threatening disease caused by parasites that are transmitted to people when bitten by infected female mosquitoes. Young children and pregnant women are at greater risk of contracting the disease. Malaria destroys the body's red blood cells and causes fever, headache, diarrhoea and vomiting.	Between 2000 and 2015, the number of deaths from malaria declined by 62 per cent globally, and in the same period mortality rates fell by 31 per cent in the African region. Mortality rates among children under five from malaria also fell by around 35 per cent between 2010 and 2015.	Mass-distribution of insecticide-treated bed nets has reached 53 per cent of the population. And millions of people globally miss out on protection from the indoor spraying of their homes. Health systems in low-income countries are often not accessible

<b>Tuberculosis</b>	a disease that affects the lungs. It is highly contagious and is caused by bacteria that can spread from person to person via the air through coughing and sneezing. Its symptoms include night sweats, persistent cough, tiredness, weight loss and coughing up blood	Between 2000 and 2015, mortality rates from TB fell by 45 per cent or 37 million lives. Worldwide, the incidence of TB reduced from 172 to 142 per 100 000	Ending the TB epidemic depends on the provision of universal health coverage so all people have access to vaccination, early detection and effective treatment, especially the poor. Increased funding for health and wellbeing services and trained health workers would ensure that all cases of TB are reported and accurate data can inform health decisions.
<b>Neglected Tropical Diseases</b>	Neglected tropical diseases (NTDs) are a diverse group of 18 diseases that mainly occur in tropical and subtropical environments. Their diversity includes the different ways in which they are transmitted as well as their different biological make-up.	There are safe and effective drugs that can prevent and treat infection. Vector control to remove carriers of these diseases such as mosquitoes, ticks, flies, fleas, bugs and worms. Veterinary public health measures for diseases and infections that are transmitted between animals and humans. Improved water and sanitation	new drugs, insecticides, and diagnostic tests that are cost-effective, along with ongoing vector control is needed. Increasing levels of resistance to current insecticides threaten the progress that has been made in controlling some of these diseases.
<b>Hepatitis</b>	Hepatitis is inflammation of the liver caused by a viral infection. There are five types of hepatitis that contribute to the global burden of disease, and have the greatest potential for outbreaks. These are referred to as types A, B, C, D and E.	Hepatitis A and B can be prevented through immunisation and by ensuring blood supplies are screened and safe from the virus before being used for transfusions. Hepatitis A, B and C transmission can also be prevented with safe injection and safe sex practices	To end the epidemic of hepatitis, large-scale vaccination programs are needed, particularly for those at high risk of hepatitis A, B and E and to prevent mother-to-child transmission. Access to clean water and sanitation is also important.

### QUESTIONS:

#### Test Your Knowledge:

1. What is the relationship between HIV and AIDS?
  - You can only get AIDS if you have the HIV virus already. Therefore, AIDS is not possible to get unless HIV is present
2. What factors have contributed to the reduction in malaria deaths?
  - Bed nets/mosquito nets, spraying of homes and healthcare
3. Which neglected tropical diseases cause considerable morbidity and mortality?
  - schistosomiasis, trachoma, trypanosomiasis,
4. Which forms of hepatitis cause the greatest number of deaths?
  - Type C and B

Non-Communicable Disease:

- A non-communicable disease (NCD) is a disease that is not transmissible directly from one person to another.

	<b>Reducing the burden of disease associated with &amp;/or from</b>	<b>Link to Health and Wellbeing</b>
<b>Road traffic accidents</b>	To achieve this, a coordinated approach is needed, involving the transport sector, police, health and education sectors. Good road infrastructure is important along with ensuring that vehicles on the road are safe and in good working condition. Education, healthy public policy and law enforcement are needed to modify driver behaviour and, in the event of a road accident, emergency services are needed to ensure those who are injured can receive health care as soon as possible.	By decreasing the burden of disease from road traffic accidents, this promotes physical health and wellbeing as the risk of injury and/or death is decreased
<b>Alcohol</b>	Each year, alcohol accounts for approximately 7.6 per cent of deaths for males and 4 per cent for females. Of concern is the increasing rate of consumption of alcohol by females. Alcohol is a drug of dependence and many people need specialised medical assistance to help them change their behaviour. However, only one in six people worldwide have access to healthcare services capable of supporting them with alcohol issues.	By reducing the burden of disease from alcohol, this promotes mental health and wellbeing as the risk of mental disorder. And promotes physical health and wellbeing as the risk of cancer is decreased.
<b>Illicit drugs</b>	It has been estimated that the cost of treating all drug-dependent people worldwide would be \$US200–250 billion. Therefore, greater funding is required to strengthen prevention and treatment services and reduce the burden of disease associated with drug and alcohol misuse. Drug and alcohol dependent people require treatment, which is only accessible to around one in six (4.5 million) people worldwide.	By decreasing the burden of disease of illicit drugs, this promotes social health and wellbeing as people are more inclined to participate in social events as they don't feel embarrassed about using illicit drugs



	Reducing the number of deaths & illness	Link to Health and Wellbeing
<b>Hazardous Chemicals</b>	By decreasing the world’s reliance on fossil fuels and increasing access to clean fuels and efficient technologies. Reducing vehicle emissions by investing in rapid transit systems that can move large numbers of people in cities will reduce reliance on cars and decrease air pollution. Tobacco smoke-free legislation is also effective in reducing exposure to second-hand tobacco smoke	As more and more people move to cities, pollution from heavy traffic, poor housing and limited access to water and sanitation services bring about significant health and wellbeing risks. Environmental risk factors contribute to more than 100 diseases and injuries
<b>Air pollution &amp; contamination</b>	In 2016, indoor and external air pollution resulted in around 6.5 million deaths, mainly from heart and lung diseases such as stroke, heart disease and respiratory infections and cancer	Reducing vehicle emissions by investing in rapid transit systems that can move large numbers of people in cities will reduce reliance on cars and decrease air pollution. Tobacco smoke-free legislation is also effective in reducing exposure to second-hand tobacco smoke.
<b>Water pollution &amp; contamination</b>	Contamination of drinking water and soil, mainly through poor sanitation, is responsible for an estimated 871 000 deaths, half of which occur in Africa.	As global access to clean water and sanitation increases, deaths resulting from these diseases are declining.
<b>Soil pollution &amp; contamination</b>	Governments need to implement rigorous monitoring of soil pollution levels. Increasing access to safe water and adequate sanitation and promoting hand washing would further reduce deaths from diarrhoeal diseases.	Increasing access to adequate sanitation and promoting hand washing would further reduce deaths from diarrhoeal diseases.

### 11.6 The relationships between Sustainable Development Goal 3 and SDG 1

- SDG 3: Good health and wellbeing can be explored as a single goal but, as you saw previously in this topic, the SDGs are interconnected and indivisible. It is therefore important to consider how the achievement of SDG 3 is both dependent upon and underpins other SDGs. Without good health and wellbeing, achieving many of the SDGs will be difficult. In a similar way, the achievement of SDG 3 is dependent upon the achievement of other SDGs.

All SDG's and how they relate to SDG 3

Sustainable Development Goal (SDG) Name ↓	Description ↓	How it relates to SDG 3 ↓
<u>SDG 1: No poverty</u>	eradicating extreme poverty currently measured as people living on less than US\$1.90 a day. Reducing by half the proportion of men, women and children living in poverty. Implementing social protection systems. Ensuring equal rights and access to essential resources, services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services	<p>The governments of poor countries often do not invest resources to provide public health and wellbeing services, such as safe water and sanitation, health promotion programs, healthcare, education and social security benefits, all of which affect people's ability to enjoy good health and wellbeing.</p> <p>SDG 3 helps to end poverty by ensuring all people have access to essential medicines, vaccines and healthcare services at an affordable price. Natural disasters and outbreaks of disease can result in people, communities and countries being plunged into poverty.</p>
<u>SDG 2: Zero hunger</u>	end hunger and ensure access for all people, in particular the poor and people in vulnerable situations, such as infants, to safe, nutritious and sufficient food. End all forms of malnutrition. Double agricultural productivity and incomes of small-scale food producers, and ensure equal access to land and resources	Maternal and child health and wellbeing will be improved with access to nutritious food, contributing to reductions in under-five and maternal mortality rates. With improved nutrition, children will be at reduced risk of contracting and dying from communicable diseases such as malaria and hepatitis, and vaccine-preventable diseases such as measles and tuberculosis.
<u>SDG 4: Quality education</u>	ensure all children complete free, equitable and quality primary and secondary education. Ensure all children have access to quality early childhood development, care and pre-primary education. Ensure all adults have equal access to affordable and quality technical, vocational and tertiary education. Increase the number of youth and adults who have relevant skills for employment	An educated and skilled workforce brings about greater economic growth. Economic growth provides more resources for governments to invest in universal healthcare, essential medicines and social protection measures. People will be able to access preventative and curative health services, which will help reduce morbidity and mortality

<p><u>SDG 5: Gender equality</u></p>	<p>end all forms of discrimination against all women and girls everywhere. End all forms of violence against women and girls, including human trafficking and sexual exploitation. Eliminate harmful practices, such as child, early and forced marriage and female genital mutilation. Recognise and value unpaid domestic work. Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision making in political, economic and public life</p>	<p>Actions taken to achieve gender equality empowers women and girls. This is important for economic growth and ending poverty. Small loans to women in Bangladesh have been shown to increase family income twice as much as similar loans to men. Water and sanitation systems controlled by women have been shown to be more sustainable and effective than those controlled by men. This contributes to good health and wellbeing for all members of the community and for all ages</p>
<p><u>SDG 6: Clean water and sanitation</u></p>	<p>achieve universal and equitable access to safe and affordable drinking water. Enable access to adequate and equitable sanitation and hygiene for all. Improve water quality by reducing pollution, eliminating dumping and minimising release of hazardous chemicals and materials. Increase the efficient use of water and ensure sustainable access to clean water. Implement integrated water resources management at all levels, including across borders. Protect and restore water-related ecosystems. Expand international cooperation and capacity to support low- and middle-income countries to achieve their targets. Support the participation of local communities in water and sanitation management.</p>	<p>Actions taken by the water and sanitation sector to achieve SDG 6 underpin the ability to achieve SDG 3. Without clean water and sanitation, reductions in maternal and child mortality, communicable diseases and diseases caused by soil and water pollution and contamination will not be achieved.</p>
<p><u>SDG 13: Climate action</u></p>	<p>strengthen the resilience and capacity of all countries to adapt to climate-related hazards and natural disasters. Integrate climate change measures into national policies, strategies and planning. Improve education, awareness-raising and the capacity of people and organisations to take actions that reduce or prevent environmental degradation. Implement the commitment by high-income countries to frameworks developed by the United Nations to take action to reduce climate change and to provide funds to support low-and middle-income countries to implement strategies to reduce climate change. Promote ways of raising capacity for effective climate change-related planning and management in lowincome countries and small island developing states, including focusing on women, youth and local and marginalised communities.</p>	<p>Many policies and individual actions have the potential to reduce greenhouse gas emissions and improve health and wellbeing. Cleaner energy systems, promoting energy efficient public transport and alternatives, such as cycling or walking, rather than private vehicles, could reduce carbon emissions and air pollution, all of which would help reduce current morbidity and mortality rates due to communicable diseases and a range of non-communicable diseases.</p>

11.12 The UN's Sustainable Development Goals and the World Health Organization (WHO)

Function	Explanation	Example
<u>Provide leadership and create partnerships to promote health and wellbeing</u>	WHO works with member states and other agencies to develop international policies and regulations to prevent and manage disease outbreaks and coordinate relief efforts in times of disaster	<ul style="list-style-type: none"> <li>- Partnerships have helped produce effective vaccines against meningitis, Ebola and the first malaria vaccine.</li> </ul>
<u>Conduct research and provide health and wellbeing information</u>	WHO works with others to ensure the most up-to-date research is available to help inform decisions that promote health and wellbeing; prevent and control diseases, improve health systems; and help achieve universal access to healthcare. WHO provides expertise in research and development to improve the way in which diseases can be prevented, diagnosed, managed and treated	<ul style="list-style-type: none"> <li>- Their work has led to guidelines and advice on preventing and treating conditions such as asthma, hepatitis and Zika.</li> </ul>
<u>Set norms and standards, and promote and monitor their implementation</u>	WHO works with other agencies and governments to standardise the way research is carried out, the use of common indicators for the collection of data and the health and wellbeing terminology that is used. This makes it more effective and efficient to share information, monitor the impact of disease and evaluate the effectiveness of programs and initiatives.	<ul style="list-style-type: none"> <li>- International Classification of Diseases, which enables all countries to use a common standard for reporting diseases</li> <li>- WHO Essential Medicine List that provides a guide for countries on the main medicines that a health system needs.</li> <li>- WHO's work has led to global standards for air and water quality and safe and effective medicines. An emerging challenge is the protection of the effectiveness of antibiotics as a result of drug resistance.</li> </ul>
<u>Develop policies to help countries take action to promote health and wellbeing</u>	Policies help governments and the global community implement action that is known to be effective in bringing about improvements in health and wellbeing. WHO helps countries adapt these policies to meet their local context and helps governments implement them.	<ul style="list-style-type: none"> <li>- Global Framework Convention on Tobacco Control               <ul style="list-style-type: none"> <li>- The Stop TB Strategy</li> </ul> </li> <li>- Healthy Eating and Physical Activity Guidelines</li> <li>- Guidelines on the intake of sugars to reduce the risk of non-communicable diseases in adults and children.</li> </ul>

<p><u>Provide technical support and help build sustainable health systems</u></p>	<p>WHO provides advice and support to countries to implement changes in areas such as the provision of universal healthcare, health financing and a trained workforce. They help countries strengthen their capacity for early warning, risk reduction and the management of health and wellbeing risks.</p>	<ul style="list-style-type: none"> <li>- Assisting countries with health finance through developing a national health finance strategy</li> <li>- Providing policy briefs on the importance of free healthcare</li> </ul>
<p><u>Monitor health and wellbeing and assess health and wellbeing trends</u></p>	<p>WHO has developed a Global Health Observatory which stores and shares health related data. It helps countries identify who is getting ill, from which diseases and how and where they are getting ill so resources can be targeted to where they are needed most.</p>	<ul style="list-style-type: none"> <li>- Each year, WHO studies influenza trends to determine what should be included in the following season's influenza vaccine.</li> </ul>

FIGURE 11.58 The World Health Organization's leadership priorities



World Health Organisation (WHO):

Is a Branch of the UN and Its goal is to build a better and healthier future for everyone in the world. Who works to:

- Fight infectious diseases
- Tackle non-communicable diseases
- Help mothers and children
- Address environmental risks and social factors
- Ensure access to medications
- Coordinate humanitarian assistance during emergencies

Vision:

A world in which all people attain the highest possible standard of health and well-being

Mission:

Promote health, keep the world safe and serve the vulnerable

Priorities of the WHO

Achieving Universal Health Coverage

- 1 billion more people benefitting from universal health coverage

Addressing Health Emergencies

- 1 billion more people better protected from health emergencies

Promoting Healthier Populations

- 1 billion more people enjoying better health and well-being

### ACHIEVING UNIVERSAL HEALTH COVERAGE:

- Provides funding models for public health systems, including maternal and ageing health services
- Help identify barriers to accessing health services and provide solutions to increase access
- Assist with the development of health promotion services
- Assists in the training of health care workers
- Ensure the development of policies and financing which ensure the provision of quality, affordable, essential medicines and vaccines

### ADDRESSING HEALTH EMERGENCIES:

- Assists with developing policies and regulations to prevent and manage disease outbreaks
- Helps countries to strengthen early warning systems in preparation for times of disaster
- Helps countries to coordinate relief efforts in times of disaster
- Ensure populations affected by health emergencies have access to life saving health services

### PROMOTING HEALTHIER POPULATIONS:

- Conducts research to improve the ways in which diseases can be prevented, diagnosed, managed and treated
- Collects data to monitor the impacts of disease and evaluate the effectiveness of programs and initiatives
- Monitor progress made towards achieving the SDGs
- Ensure countries are taking action against preventable non-communicable diseases and communicable diseases
- Support countries in addressing the health effects of climate change

### IMPORTANT!:

- When explaining how the WHO works to achieve its key priorities, you should also be able to explain how this helps to achieve SDG 3

Eg. In order to work towards it's priority of Addressing Health Emergencies, the WHO assists countries to develop policies and regulations to prevent and manage disease outbreaks. This also helps to work towards achieving SDG 3, as it will aid in reducing epidemics and mortality rates associated with communicable diseases such as tuberculosis and malaria



# Chapter 12

<b>Term</b>	<b>Definition</b>
<b><i>Aid</i></b>	assistance given to countries or communities in the event of a crisis or for the development of long-term sustainable improvements
<b><i>Bilateral Aid</i></b>	the provision of aid from the government of one country to the government of another country
<b><i>Emergency Aid</i></b>	Rapid assistance given to people or countries in immediate distress to relieve suffering during and after emergencies such as wars and natural disasters, for example floods, tsunamis or earthquakes. Emergency aid is also called 'humanitarian aid'
<b><i>Multilateral Aid</i></b>	aid provided through an international organisation, such as the World Bank, United Nations or World Health Organization. Multilateral aid combines donations from several countries and then distributes them to the recipients.
<b><i>Non-government organisation (NGO) aid</i></b>	NGOs take different approaches to aid, which can include specific projects or programs, emergency aid, volunteering, education and development. The aid provided by NGOs often focuses on communities.



12.2.1 Different types of aid

<b>Type of AID</b>	<b>Explanation</b>	<b>Purpose/ Characteristics</b>	<b>Advantages</b>	<b>Disadvantage</b>	<b>Examples</b>
<u><i>Emergency or Humanitarian Aid</i></u>	the rapid assistance given to people or countries in immediate distress to relieve suffering during and after emergencies such as conflict and natural disasters, for example floods, tsunamis or earthquakes.	The purpose of this type of aid is to respond quickly and effectively to address the immediate needs of the affected communities  Emergency aid includes food, water, medicines and shelter, health workers, doctors or emergency workers	It provides countries with resources to help people recover from natural disasters	Emergency aid does not address the underlying causes of poverty.	Australia provides aid to countries in times of natural disasters by providing food supplies, medical teams and equipment, transport, law and order personnel, and communication resources.
<u><i>Bilateral Aid</i></u>	one government provides to the government of another country.	to help reduce poverty and bring about long term sustainable development.	bilateral aid helps governments of recipient countries strengthen their economic, political, health and education systems and eventually become self-sufficient.	There can also be risks with providing bilateral aid if the government of the recipient country is corrupt and the funds are not spent on their intended purpose.	the Australian government providing funding for the government of Papua New Guinea to implement prevention, treatment, counselling and education programs in relation to HIV/AIDS;
<u><i>Multilateral Aid</i></u>	aid provided through an international organisation, such as the World Bank, United Nations or World Health Organization.	The purpose of of multilateral aid is to contribute to the achievement of equity in health and wellbeing and to promote human development	being less tied to the political interests of individual donor countries and allows for the efficient pooling of resources to address global issues that require a global approach	some of the funds provided to multilateral agencies must be spent by the agency itself for administrative purposes.	Australia supports multilateral agencies engaged in poverty reduction and sustainable development to complement and reinforce its bilateral aid program
<u><i>Non-Government Organisations - (NGO's)</i></u>	non-profit organisations that work to promote health and wellbeing and human development; they operate separately from governments.	many of these agencies rely on funding from the Australian government, through its aid program, as well as through funds generated from public donations	It tends to focus on smaller community-based projects that are targeted to meet basic health and wellbeing needs and promote community development and participation		The International Red Cross, which provides healthcare and disaster relief worldwide, is one of the world's largest humanitarian organisations.

### 12.3 The features of Australia's aid program

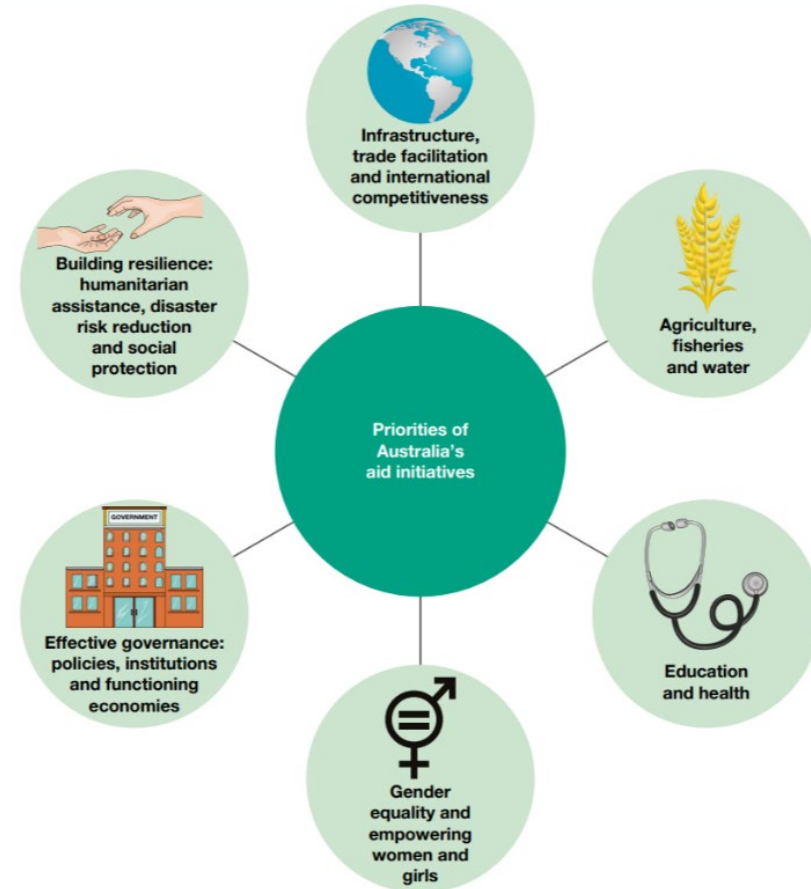
Type of Aid	Explanation of Aid Australian Government provides	Examples
<u>Bilateral Aid</u>	<p>Through DFAT, the government provides bilateral aid directly to 75 countries, including our nearest neighbours: Indonesia, Papua New Guinea, East Timor and the nations of the South Pacific region. This aid comes in the form of funding, donations of material resources, training and advice.</p> <p>This assistance helps partner governments to strengthen their economic, political, health and education systems with the aim of eventually becoming self-sufficient and no longer needing Australia's support.</p>	<p>how this has been successful can be seen in Fiji. Australia's aid supports 85 schools operating in remote and/or socially disadvantaged communities. In 2015, the proportion of year 4 students in target schools performing above the national average in literacy increased to 50 per cent from 37 per cent in 2012 and in numeracy to 54 per cent from 39 per cent</p>
<u>Multilateral Aid</u>	<p>Approximately one-third of Australia's aid budget is dedicated to multilateral aid.</p> <p>The Australian government provides multilateral funds to international aid organisations such as the World Bank, Asian Development Bank, United Nations Development program, UNICEF and the World Health Organization to run programs in low- and middle-income countries.</p>	<p>Australia ensures that carefully targeted programs are put in place to achieve health and wellbeing and promote human development globally.</p> <p>By funding multilateral organisations, Australia hopes to accelerate achievement of the Sustainable Development Goals by improving access to health services — particularly maternal and child health and wellbeing</p>
<u>Emergency/ Humanitarian Aid</u>	<p>In times of crisis, such as natural disasters and conflict, populations often rely on an emergency supply of resources such as food, water, shelter and healthcare to survive.</p> <p>The Australian government responds quickly in these situations, and provides personnel and material resources to assist in saving lives.</p>	<p>when the Department of Foreign Affairs and Trade contributed \$2.5 million to the international effort to assist Haitians in the aftermath of Hurricane Matthew in 2016 when at least 546 Haitians were killed and thousands of homes destroyed.</p>
<u>NGO Aid</u>	<p>The Australian government funds Australian NGOs through the Australian NGO Cooperation Program to provide grants to over 50 registered NGOs. Under this program, DFAT has a partnership with ten of Australia's largest NGOs (World Vision Australia, Oxfam Australia) with whom they work closely.</p> <p>NGOs strengthen the aid program as they work in areas that are difficult to access, such as conflict-affected regions, and often focus their efforts on small, community-based development work.</p>	<p>In 2016–17, around \$178 million of Australia's aid funding went to Australian NGOs to deliver aid programs directly to people in need as well as other volunteer programs, such as the Australian Volunteers for International Development program.</p> <p>This program supports skilled Australians to undertake volunteer work in low- and middle-income countries.</p>

## 12.4 The Australian government's aid priorities

The Australian government's aid program is guided by the six priorities shown in figure 12.11.

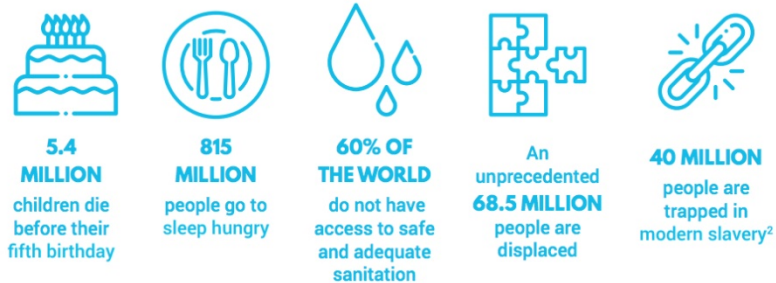
These priorities all contribute to breaking the cycle of poverty in low- and middle-income countries, improving health and wellbeing and promoting human development.

FIGURE 12.11 Priorities of the Australian government's aid program



### A WORLD FREE FROM POVERTY.

In the world today:

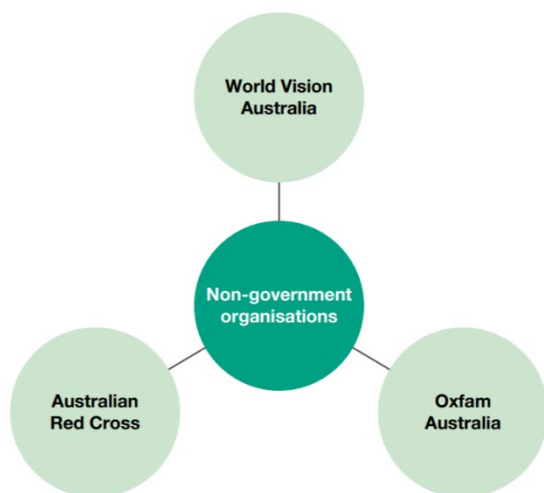


The Priority	Why is it a priority?	Improvement in Health & Wellbeing & Human Development	Examples
<u>Infrastructure, trade facilitation &amp; International competitiveness</u>	Improving infrastructure in low- and middle-income countries promotes economic development, improves trade opportunities and reduces poverty	Infrastructure also helps families to access healthcare when needed and for children to attend school, all of which improves health and wellbeing and promotes human development.	<ul style="list-style-type: none"> <li>- 4637 kilometers of road were constructed and maintained</li> <li>- In Cambodia, \$6.3 million were put into water and power companies</li> </ul>
<u>Education &amp; Health</u>	Education and health are critical to improving the lives of all people, especially the poor, and for providing opportunities for people to participate in the economy to improve living standards.	being educated, people can gain the skills to enable them to contribute to the country's economy. When girls are educated, they are likely to marry later in life and have fewer children. This contributes to better maternal health and wellbeing, improved child health and wellbeing and increased economic opportunities.	<ul style="list-style-type: none"> <li>- Australia supported 178,174 kids in Bangladesh to get an education</li> <li>- Australia contributed to 20.9 million people to gain access to sexual reproductive services</li> </ul>
<u>Gender equality &amp; empowering Women &amp; girls</u>	Women and girls in low- and middleincome countries often lack the same opportunities available to men and boys in terms of education, employment and making decisions that affect their lives	Better educated women have fewer and healthier children and are more likely to send their children to school, leading to a more educated community. Providing female farmers with equal access to resources could reduce hunger for an extra 150 million people.	<ul style="list-style-type: none"> <li>- DFAT provided &amp;1.5 million to support women candidates in local and national elections in Papua New Guinea</li> </ul>
<u>Building Resilience</u>	Humanitarian assistance is provided in crisis situations, such as natural disasters and conflict, where life is at immediate risk. Causes of these situations include earthquakes, bushfires, tsunamis, conflict and chemical spills	Australia's goal for humanitarian assistance is to save lives, alleviate suffering and maintain human dignity during and following the humanitarian crises, particularly the protection of the most vulnerable, including women, children and people with a disability.  Social protection improves an individual's ability to cope and not resort to survival measures that can entrench poverty.	<ul style="list-style-type: none"> <li>- AUSMAT has provided emergency medical care to over 1,700 people in Fiji</li> </ul>
<u>Effective Governance</u>	Governance affects virtually all aspects of a country's society and economy. Stable, productive governments can work to	Good governance, therefore, contributes to global efforts to achieve equality, create the conditions for improved human development and assists in reducing global health issues.	<ul style="list-style-type: none"> <li>- Increasing transparency in government by supporting the implementation of freedom of</li> </ul>

	promote the health and wellbeing and human development of the population. An effective government provides the foundations for economic growth, private sector investment and trade.	When governance is poor, human development outcomes are also poor	information laws, including through the UN-Pacific Regional Anti-Corruption programs work in Vanuatu
<u>Agriculture, fisheries &amp; water</u>	Agriculture and fishing provide employment and an income for millions of workers in middle- and low-income countries, particularly those living in rural areas. These industries also provide opportunities for improving economic development by exporting products to other countries.	By having adequate agriculture, fisheries and water, this provide food and good nutrition, promoting physical health and wellbeing.  These provide many sources of income for people in low and middle income countries, meaning they are better able to gain access to knowledge and participate in their community	- Over 443,000 poor women and men adopted innovative agricultural and fisheries practices such as new growing techniques and improved crop varieties

### 12.5 The role of non-government organisations (NGOs) in promoting health and wellbeing and human development globally: World Vision

**FIGURE 12.18** Some of the NGOs that provide aid



Globally, there are thousands of NGOs involved in providing aid. Within Australia, there are NGOs that focus on assisting people within this country and others that provide aid to overseas countries.

Some NGOs work both inside and outside Australia. Although being an NGO implies no government involvement, many of the agencies rely on funding from the Australian government through its aid program, as well as funds generated from public donations.

Generally, the aid provided by NGOs focuses on smaller projects that are often more focused and involve the community. They often work in collaboration with governments or other aid agencies.

Such as:

- World Vision Australia
- Australian Red Cross
- Oxfam Australia

NGO & description	How NGO promotes health & wellbeing	How NGO promotes human development
<b>World Vision</b>		
<p><a href="https://www.worldvision.com.au/about-us">https://www.worldvision.com.au/about-us</a></p> <p><u>Description (include aims):</u></p> <ul style="list-style-type: none"> <li>- an NGO that works with children, families and communities around the world to overcome poverty and injustice.</li> <li>- World Vision Australia works in more than 67 countries, with local staff who understand and appreciate the needs of the culture. World Vision’s work is funded through a variety of activities, such as child sponsorship, the 40 Hour Famine, general donations, emergency relief appeals and corporate support of projects through cash donations or the provision of materials.</li> <li>- World Vision is a Christian development organisation that works with all people to create change regardless of their religion, ethnicity or gender through:</li> </ul> <p><u>Examples of NGO work and why it targets pregnant women, mother and children:</u></p> <ul style="list-style-type: none"> <li>- Many of the health and wellbeing issues faced by mothers and children living in poor communities are preventable. World Vision seeks to address these issues and to promote health and wellbeing and human development by working at the household, community and national levels</li> </ul>	<ul style="list-style-type: none"> <li>- Children are particularly vulnerable to causes of ill health, such as malnutrition and disease, and the impact of these can affect children their whole lives. Malnutrition in the first 1000 days of a child’s life, for example, can affect the development of the brain, making it difficult to learn; can cause stunted growth; and can increase the risk of disease.</li> </ul>	<ul style="list-style-type: none"> <li>- Malnutrition in the first 1000 days of a child’s life, for example, can affect the development of the brain, making it difficult to learn; can cause stunted growth; and can increase the risk of disease. When malnourished children become adults they can have ongoing health and wellbeing problems and find it difficult to work and to earn a higher income, which impacts human development.</li> </ul>

NGO & description	How NGO promotes health & wellbeing globally	How NGO promotes human development
<b>Red Cross</b>		
<p><a href="http://www.redcross.org.au/about-us.aspx">http://www.redcross.org.au/about-us.aspx</a>  <u>Description (include aims):</u></p> <ul style="list-style-type: none"> <li>- The main task undertaken by Red Cross volunteers was to put together parcels of soap, toiletries, games and food to be given to sick and wounded soldiers. Many volunteers also worked in hospitals across Australia during the war.</li> <li>- The Australian Red Cross aims to ‘improve the lives of vulnerable people in Australia and internationally by mobilising the power of humanity’</li> </ul> <p>Examples of NGO work and the SDG it relates to:</p> <ul style="list-style-type: none"> <li>- The Australian Red Cross works to save lives, alleviate human suffering and protect dignity, especially in times of disasters, armed conflicts and other humanitarian crises. In this way, it is helping promote health and wellbeing and human development.</li> <li>- It relates to SDG 3 (good health and wellbeing) and SDG 6 (climate action)</li> </ul>	<ul style="list-style-type: none"> <li>- it works towards longer-term recovery and resilience. After Cyclone Pam in Vanuatu, for example, Red Cross restored safe water facilities and provided tools and advice to help people rebuild their homes. Reducing the impact of disasters promotes health and wellbeing. Preventing or reducing the impact of a disaster can save many lives and reduces the human suffering that can result, increasing health and wellbeing</li> </ul>	<ul style="list-style-type: none"> <li>- The damage to towns and villages is reduced, which protects family’s livelihood and reduces the risk of poverty.</li> <li>- People are more empowered, which promotes human development.</li> <li>- Schools and infrastructure suffer less damage which means children can continue to attend school. Providing tools to people to help them rebuild their homes promotes human development, as it empowers people and provides them with the knowledge and skills to be independent</li> </ul>

NGO & description	How NGO promotes health & wellbeing	How NGO promotes human development
<b>Oxfam Australia</b>		
<p><b>Oxfam Australia</b>  <a href="https://www.oxfam.org.au/what-we-do/">https://www.oxfam.org.au/what-we-do/</a>  <u>Description (include aims):</u></p> <ul style="list-style-type: none"> <li>- one of Australia’s largest international development organisations, operating as a secular, notfor-profit, non-government organisation, with programs in more than 30 countries.</li> <li>- Oxfam’s vision is a just world without poverty, where people can influence decisions that affect their lives, enjoy their rights and assume their responsibilities — a world in which everyone is valued and treated equally.</li> </ul> <p>Examples of NGO work and the SDG it relates to:</p> <ul style="list-style-type: none"> <li>- During emergency situations, Oxfam Australia provides life-saving assistance to people in need. Its work includes the provision of clean water, sanitation facilities, food and health services, and nutrition advice either directly or through other national or international organisations</li> </ul>	<p>During emergency situations, Oxfam Australia provides life-saving assistance to people in need. Its work includes the provision of clean water, sanitation facilities, food and health services, and nutrition advice either directly or through other national or international organisations. Following natural disasters or conflicts, Oxfam Australia is also involved in long-term projects to rebuild lives and reduce the risk of future disasters or conflict.</p>	<p>When people have the power to claim their basic economic rights, they can escape poverty permanently. This core belief underpins Oxfam’s development programs. With their partners and with local communities, Oxfam helps people claim rights for themselves. This contributes to improved human development, as people are provided with the skills, knowledge and opportunity to participate in decisions that affect the life of their community</p>



### 13.3 - Aid programs addressing SDG 1: no poverty

**Program:** DFAT's *Aid for Trade Program*

**SDGs Addressed:** SDG 1: No poverty

**Type of aid involved:** Bilateral and NGO aid (through DFAT and world vision)

**Implementation:**

- DFAT has a set target that aims to commit 20% of their foreign aid to *Aid for Trade Program* initiatives by 2020 as an investment into helping grow the economy for developing countries
- *Aid for Trade* also works with businesses in the private sector of many countries to shape the market so that it is more inclusive of poorer, smaller businesses (e.g local farmers)

### 13.4 - Aid programs addressing SDG 2: zero hunger

**Program:** World Food Programme's *School Feeding Program*

**SDGs Addressed:** SDG 2: zero hunger

**Type of aid involved:** Multilateral aid through UN, DFAT and World Vision

**Implementation:**

- WFP sets up canteens whci provide children with hot food and nutritious snacks
- This also means more children will come to school
- Children who attend school regulary get an extra kilogram of rice and soybeans as well as cooking oil

### 13.5 Aid programs addressing SDG 3: good health and wellbeing

**Program:** *Stop TB Partnership Program*

**SDGs addressed:** SDG 3: good health and wellbeing

**Type of aid involved:** Multilateral aid through WHO, World bank and UN

**Implementation:**

- *Stop TB* makes use of the DOTS treatment which involves giving TB pateints a 6-month course of antimicrobial drugs
- Other treatments such as the BCG vaccine for children and babies may be used
- *Stop TB* also encourages hospitals to adopt preventative measures for TB

### 13.6 - Aid programs addressing SDG 4: Quality education

**Program:** Girls Education Movement - Technogirls

**SDGs addressed:** SDG 4: quality education

**Type of aid involved:** Non-government organisation aid (UNICEF)

**Implementation:**

- Girls in grades 9-12 from disadvantaged backgrounds in south africa are given access to education, where they develop their skills and knowledge in mathematics, science and technology
- The girls who show commitment and enthusiasm during the work experience are given the opportunity to be granted scholarships for further education.

### 13.7 – Aid programs addressing SDG 5: Gender equality

**Program:** CARE Australia's *We Bloom* program

**SDGs addressed:** SDG 5: Gender equality, SDG 1: No poverty, SDG 4: Quality education

**Type of aid involved:** Non-government organisation (CARE Australia)

**Implementation:**

- Provides young women in south west Cambodia with literacy, numeracy and life skills
- Teaches individuals to set goals and overcome conflict to improve confidence
- Enables them to be a part of community decision making

### 13.8 – Aid programs addressing SDG 6: Clean water and sanitation

**Program:** World Vision's *Developing Wells and Pumps in Niger* program

**SDGs addressed:** SDG 6: Clean water and sanitation

**Type of Aid involved:** Multilateral aid through the Nature Conservancy, DFAT and US governments

**Implementation:**

- Build wells in Niger to make water collection easier in exchange for a small fee for the maintenance of the pump so women can earn an income
- Local people are taught how to use the well and operate the water pump, so as to ensure long term maintenance of the wells' condition
- People can source clean water and know the link between hygiene and disease through education

## 13.9 – Aid programs addressing SDG 13: Climate action

**Program:** responsible Asia forestry and trade (RAFT) partnership

**SDGs addressed:** SDG 13: Climate action

**Type of aid involved:** multilateral aid (through The Nature conservamcy, DFAT and US governments)

**Implementation:**

- They educate peoppe inm the aisia pacidic refuin on the ecinomicsnof the market, how to meet the increasing targets for wood products and promote trade.
- They educate people on hwo to promote skills of sustainability when logging forests for income

## 13.10 – taking social action

Social action is about doing something to help create positive change. Individuals can take social action at a personal level, or can join an organised group to advocate for change.

Large-scale social action in the past has been successful in bringing about significant social change, such as the suffragette movement of the late nineteenth and early twentieth centuries, which was successful in giving women the right to vote; or the civil rights campaign in Australia from the late 1950s during which Aboriginal and non-Aboriginal activists came together to fight for equal civil rights for Indigenous Australians.

This is often the image people have about taking social action: being part of demonstrations, rallies and marches and carrying signs and placards. By working together, groups can exercise greater power because of their numbers.

Some of the reasons why people take social action:

- to help those who are less fortunate than themselves.
- to ensure that the needs of all people are represented
- to eliminate discrimination
- to prevent harm and damage to the community or the environment.
- to preserve something of historical or social value.

Ways of taking social action:

- volunteering
- donating money
- conduct fundraising events
- show support
- organise a boycott

## Health and Human Development – Chapter 11

### Sustainable Development Goals (SDGs)

#### Key facts:

- Created in 2015 when the MDGs ended.
- The target for achieving the SDGs is 2030.
- Created by the United Nations (UN)

#### Objectives of the SDGs:

- End extreme poverty
- Fight inequality and injustice
- Tackle climate change

#### The 5 Areas of Importance That the SDGs Address:

- **People** → end poverty and hunger
- **Planet** → protect the planet from degradation and climate change
- **Prosperity** → ensure all people can expand in economic, social and technological ways
- **Peace** → create a peaceful and just environment, free from fear and violence
- **Partnership** → implement the SDGs through global partnership, focusing on the poorest countries

#### SDG 3 – Good health and wellbeing

Refers to '*ensuring healthy lives and promoting wellbeing for all at all ages*'.

- The aim is to promote physical and mental health and wellbeing at all ages, with a large focus on under 5 and maternal mortality
- FYI the term 'health sector' means healthcare or healthcare system

Communicable diseases → 'contagious', people can 'communicate' these to one another. Such as:

- Malaria
- HIV/AIDS
- Tuberculosis
- Hepatitis (in all its forms)
- Neglected tropical diseases

Non-communicable diseases → result from within the body or from something that cannot be 'caught'

- Cancer
- Cardiovascular disease
- Diseases from pollution
- Drug misuse

Why is achieving SDG 3 Important?

- Maternal mortality rates are significantly higher in developing countries. This has direct consequences not only on mothers, but the whole family.
- Most deaths of children in developing countries are caused by preventable diseases. → achieving universal health coverage would help eradicate this.
- Many communicable diseases such as malaria, HIV/AIDS, tuberculosis and hepatitis can be easily prevented through education (educating people on safe sex)

How SDG 3 improves global health and human development:

- By addressing the most significant causes of mortality and morbidity (HIV/AIDS, malaria, tuberculosis, hepatitis) we can **extend life expectancy**
- Having qualified health workers, health clinics, and access to contraceptives reduces the risk of birthing complications and infections, **reducing maternal mortality**
- Reducing the mortality rate from HIV/AIDS through education and immunization means that more children will have parents to provide for them, so they can develop to their full potential, **will be able to attend school and access knowledge**, and receive an education where they can enhance their capabilities and expand their choices

### SDG 1 – No poverty

Aims to 'end extreme poverty in all its forms everywhere'

Extreme poverty is characterized by living on less than USD \$1.90 a day.

- Poverty comes in many forms; lack of income, lack of basic resources, lack of adequate nutrition, lack of access to education and healthcare, experiencing discrimination, and experiencing exclusion

How it relates to SDG 3:

- By eradicating poverty, people can afford to access health care so that they can be vaccinated against many communicable diseases. This promotes **good health and wellbeing** by reducing the incidence of HIV/AIDS for example.

## SDG 2 – Zero hunger

Aims to 'end hunger and malnutrition by ensuring all people have access to a reliable food supply.

This also involves assisting farmers to improve their agricultural practices in order to increase yield and sustainability.

### How it relates to SDG 3:

- Achieving food security in all countries means that everyone is consuming a nutritious diet, reducing burden of disease from nutrient deficiency (anaemia)
- If pregnant women are consuming a nutritious diet, maternal mortality is reduced from deficiency diseases, prevents birthing complications, and reduces low birth weight.
- Thus, the **agricultural and nutrition sectors** will work together with the health sector to work towards SDG 2 (zero hunger) and SDG 3 (good health and wellbeing)

## SDG 4 – Quality Education

Having a quality education increases literacy skills required for employment and enables people to make informed life choices to improve their living standards and their health.

Education breaks the poverty cycle, as knowledge can be passed down from generation to generation.

The aim of SDG 4 is to 'enable everyone to have access to quality, free primary and secondary education'.

### How it relates to SDG 3:

- Enhanced literacy skills enable people to better understand health promotion messages, and understand risk factors of poor health (poor diets, excessive alcohol consumption), thus reducing rates of diet related diseases (a sub division of lifestyle diseases)
- This also enables them to make better health related decisions and engage in basic health practices for themselves and their family (e.g importance of washing your hands), thereby reducing the incidence of both non-communicable and communicable diseases
- Having an education increases people's employment prospects. Earning a stable income means individuals will be able to afford health care, nutritious food, and shelter, reducing the burden of disease from easily preventable diseases, promoting good health and wellbeing

## SDG 5 – Gender Equality

Aims to 'ensure all women and girls have the same opportunity as men and boys in reference to education, employment, and making decisions that affect their lives'.

This involves ending discrimination and violence towards women and empowering women and girls to participate in political and public decisions affecting their lives.

### How it relates to SDG 3:

- Gender equality is the foundation for a sustainable world; gender inequality hinders the ability to achieve global health.
- If women are educated, they can not only access quality employment, but can also better take care of their family (e.g buying nutritious food to feed their family, practice healthy and hygienic behaviours) and impart their onto their own children, as a result this will promote healthy practices, therefore promote good health and wellbeing.

### SDG 6 – Clean water and sanitation

Seeks to ‘ensure everyone has access to safe and affordable drinking water and sanitation through infrastructure and encouraging hygienic practices.

Dirty water and inadequate sanitation is a major cause for many communicable diseases

How it relates to SDG 3:

- Unpolluted water means a reduced risk of contracting water-borne diseases from drinking water, which reduces the burden of disease from communicable diseases such as malaria and cholera
- Having access to sanitation, improves air quality, reducing mortality and morbidity from air-borne diseases
- Access to water that is safe to drink strengthens the immune system, reducing the mortality and morbidity of many communicable diseases

### SDG 13 – Climate action

Climate change is a transnational issue; it is a topical problem that affects every country in every continent today.

It is the developing countries that feel the effects of climate change the most; rising sea levels, extreme heat, extreme cold

Many countries do not have adequate infrastructure to deal with extreme climates, which has detrimental consequences for the health and wellbeing of their people.

SDG 13 aims to ‘encourage all countries to reduce emissions and transition to cleaner, more sustainable options in all aspects of life’

How it relates to SDG 3:

- Unpredictable rainfall patterns – causing floods as well as droughts – make it increasingly difficult for farmers to grow crops, hindering countries’ ability to achieve food security. This can also hinder farmers sources of income.
- Global warming is gradually destroying the ozone layer that protects Earth from harmful radiation of the sun. This increases the effects of UV radiation, increasing burden of disease from skin cancer from skin cancer.
- Thus, the **environmental sector** will work together with the health sector to work towards achieving SDG 13 and 3

### World Health Organisation (WHO)

They are a branch of the United Nations concerned with and primarily promote global health

## Priorities of the WHO

There are 3 priorities set by the WHO that give focus and direction to the issues that WHO consider global health issues.

These 3 are:

### *Achieving Universal Health Coverage*

- Provides funding models for public health systems, including maternal and ageing health services
- Help identify barriers to accessing health services and provide solutions to increase access
- Assist with the development of health promotion services
- Assists in the training of health care workers
- Ensure the development of policies and financing which ensure the provision of quality, affordable, essential medicines and vaccines

### *Addressing Health Emergencies*

- Assists with developing policies and regulations to prevent and manage disease outbreaks
- Helps countries to strengthen early warning systems in preparation for times of disaster
- Helps countries to coordinate relief efforts in times of disaster
- Ensure populations affected by health emergencies have access to life saving health services

### *Promoting Healthier Populations*

- Conducts research to improve the ways in which diseases can be prevented, diagnosed, managed and treated
- Collects data to monitor the impacts of disease and evaluate the effectiveness of programs and initiatives
- Monitor progress made towards achieving the SDGs
- Ensure countries are taking action against preventable non-communicable diseases and communicable diseases
- Support countries in addressing the health effects of climate change

## Health and Human Development – Chapter 12

### Aid

The 3 types of *aid* are:

- Emergency/humanitarian aid
- Bilateral aid
- Multilateral aid



### Emergency/humanitarian aid:

Emergency or humanitarian aid is a type of aid where *rapid* assistance is given to people or countries in immediate distress to relieve suffering during or after a man-made emergency (wars and conflicts) or natural disasters (floods, earthquakes)

- Emergency aid is SHORT TERM; its purpose is to keep people alive, not to boost the country's economy

#### Examples of emergency aid:

- Provision of food, water, shelter
- Provision of personnel (health workers, doctors)
- Assisting communities to rebuild houses and infrastructure

#### Limitations of emergency aid:

- It aims to respond quickly and effectively to address the needs of the communities affected by disasters or emergencies. HOWEVER, this type of aid does not address the underlying causes of poverty; thus, it is a 'quick fix' and is not sustainable in the long term.

### Bilateral aid:

Is the provision of aid (money/resources) from one government to another (e.g Australia directly to Indonesia)

Usually used for small scale things, community-based things, commonly education based

#### Examples of bilateral aid:

- Small community-based immunisation programs
- Provision of a water treatment plant in a village
- Australian government providing funding to Papua New Guinea to provide prevention, treatment, counselling and education programs for HIV/AIDS

#### Advantages of bilateral aid:

- The needs of the receiving country are met
- The capacity to assist of the donating country is met

#### Limitations of bilateral aid:

- Often goods donated to the receiving country are products of companies of the donating country, thereby favouring the economy of that country (donating country)

### Multilateral aid:

A type of aid where assistance is provided through an international third-party organisation such as the UN, WHO, World Bank, World Vision.

These companies receive funding and donations and distributes it to the developing world.

Usually associated with long term, large scale things

#### Examples of multilateral aid:

- Emergency relief and funding transnational issues such as global warming, control of disease outbreaks.
- Provides funding and assists in construction of major infrastructure projects such as building safe roads and footpaths

#### Advantages of multilateral aid:

- Because funds from multiple countries are being combined, a greater impact is able to be generated and larger scale projects are able to be achieved.

#### Limitations of multilateral aid:

- There is a very low level of communication; governments in individual countries do not have control over where their money goes towards