



Australian Indigenous  
HealthInfoNet

# *Summary of Aboriginal and Torres Strait Islander health status 2015*



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# The Australian Indigenous HealthInfoNet

The Australian Indigenous HealthInfoNet's mission is to help improve Aboriginal and Torres Strait Islander health by making relevant, high quality knowledge and information easily accessible to policy makers, health service providers, program managers, clinicians and other health professionals (including Aboriginal and Torres Strait Islander health workers and practitioners) and researchers. Information is provided mainly via the web site ([www.healthinfonet.ecu.edu.au](http://www.healthinfonet.ecu.edu.au)).

The HealthInfoNet analyses and compiles information from academic, professional, government and other sources for a range of health topics. The HealthInfoNet's work in knowledge exchange aims to facilitate the transfer of pure and applied research into policy and practice to address the needs of a wide range of users. The HealthInfoNet provides a range of products including easy-to-read material such as this summary.

## Recognition statement

The Australian Indigenous HealthInfoNet recognises and acknowledges the sovereignty of Aboriginal and Torres Strait Islander peoples as the original custodians of the country. Aboriginal and Torres Strait cultures are persistent and enduring, continuing unbroken from the past to the present, characterised by resilience and a strong sense of purpose and identity despite the undeniably negative impacts of colonisation and dispossession. Aboriginal and Torres Strait Islander people throughout the country represent a diverse range of people, communities and groups each with unique identity, cultural practices and spirituality. We recognise that the current health status of Aboriginal and Torres Strait Islander people has been significantly impacted by past and present practices and policies. It is not our intention to homogenise in summary health data and where possible we endeavour to disaggregate analyses to recognise geographical, social and cultural diversity.

We acknowledge and pay our deepest respects to Elders past and present throughout the country. In particular we pay our respects to the Whadjuk Noongar people of Western Australia on whose country our offices are located.

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This summary or an updated version can be viewed at: [www.healthinfonet.ecu.edu.au/health-facts/summary](http://www.healthinfonet.ecu.edu.au/health-facts/summary)

To get a more detailed picture of Aboriginal and Torres Strait Islander health (which includes details of the coverage of each health topic by state/territory), please refer to the *Overview of Aboriginal and Torres Strait Islander health status* ([www.healthinfonet.ecu.edu.au/overviews](http://www.healthinfonet.ecu.edu.au/overviews)).

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# Introduction

This summary includes the following information about Aboriginal and Torres Strait Islander people:

- population
- births
- deaths
- common health problems
- health risk and protective factors.

Information has been drawn from up-to-date sources to create a picture of the health of Aboriginal and Torres Strait Islander people in Australia (including information for the states and territories: New South Wales (NSW), Victoria (Vic), Queensland (Qld), Western Australia (WA), South Australia (SA), Tasmania (Tas), the Australian Capital Territory (ACT) and the Northern Territory (NT).

Sources include government reports, particularly those produced by the Australian Bureau of Statistics (ABS) and the Australian Institute of Health and Welfare (AIHW). Data for these reports are collected through health surveys, by hospitals and by doctors across Australia.

An important issue when collecting health information is to make sure that it is accurate and reliable. For Aboriginal and Torres Strait Islander people, states and territories need to collect details about their patients, including whether a person is Aboriginal and/or Torres Strait Islander [1]. The information about Aboriginal and Torres Strait Islander populations is getting better, but there are still limitations.

To create a complete picture, all the information in this *Summary* should be looked at in the context of the social determinants of health, the term used to talk about factors that affect people's lives, including their health [2-5].

The social determinants of health include if a person:

- is working
- feels safe in their community (no discrimination)
- has a good education
- has enough money
- feels connected to friends and family.

Social determinants that are particularly important to many Aboriginal and Torres Strait Islander people include cultural determinants such as:

- their connection to land
- the history of being forced from their traditional lands and away from their families.

Aboriginal and Torres Strait Islander people are generally worse off than non-Indigenous people when it comes to the social determinants of health [2-5].

Many health services are not as accessible and user-friendly for Aboriginal and Torres Strait Islander people as they are for non-Indigenous people, adding to higher levels of disadvantage. Sometimes this is because more Aboriginal and Torres Strait Islander people than non-Indigenous live in remote locations and not all health services are offered outside of cities. Sometimes health services are not culturally appropriate (which means they do not consider Aboriginal and Torres Strait Islander cultures and the specific needs of Aboriginal and Torres Strait Islander people). Also, some Aboriginal and Torres Strait Islander people may not be able to use some services because they are too expensive.

Factors that make health services more accessible for Aboriginal and Torres Strait Islander people are:

- having Aboriginal and Torres Strait Islander Health Workers on staff
- increasing the number of Aboriginal and Torres Strait Islander people working in the health sector (doctors, dentists, nurses, etc.)
- designing health promotion campaigns especially for Aboriginal and Torres Strait Islander people
- having culturally competent non-Indigenous staff
- making important health services available in rural and remote locations (so Aboriginal and Torres Strait Islander people living in rural and remote areas do not have to travel to cities, away from the support of their friends and families)
- funding health services so they are affordable for Aboriginal and Torres Strait Islander people who might otherwise not be able to afford them.

# What is known about the Aboriginal and Torres Strait Islander population?

Based on information from the 2011 Census, the ABS estimates that there were 729,048 Aboriginal and Torres Strait Islander people living in Australia in 2015 (Table 1) [6]. NSW had the largest number of Aboriginal and Torres Strait Islander people. The NT had the highest percentage of Aboriginal and Torres Strait Islander people in its population. Indigenous people made up 3% of the total Australian population.

Table 1. Estimated Indigenous population, by state/territory and Australia, 30 June 2015

State/territory	Number of Indigenous people	Proportion (%) of Indigenous population living in that state/territory	Proportion (%) of state/territory population that are Indigenous
NSW	225,349	31	3.0
Vic	52,299	7.2	0.9
Qld	208,026	29	4.3
WA	95,707	13	3.5
SA	40,646	5.6	2.4
Tas	26,440	3.6	5.1
ACT	6,902	0.9	1.7
NT	73,396	10	30
Australia	729,048	100	3.0

Source: Derived from ABS, 2014 [6], ABS, 2013 [7]

In 2015, around one-third of Aboriginal and Torres Strait Islander people lived in major cities, and almost one half lived in inner and outer regional areas [6]. One-fifth of the Aboriginal and Torres Strait Islander population lived in remote and very remote areas.

The number of Indigenous people counted in the 2011 Census was much higher than the number counted in the 2006 Census [8, 9]. This could be because:

- the number of Indigenous people has increased
- more Indigenous people were counted because of improvements in how the Census was conducted
- more Indigenous people identified as 'Indigenous' in their response.

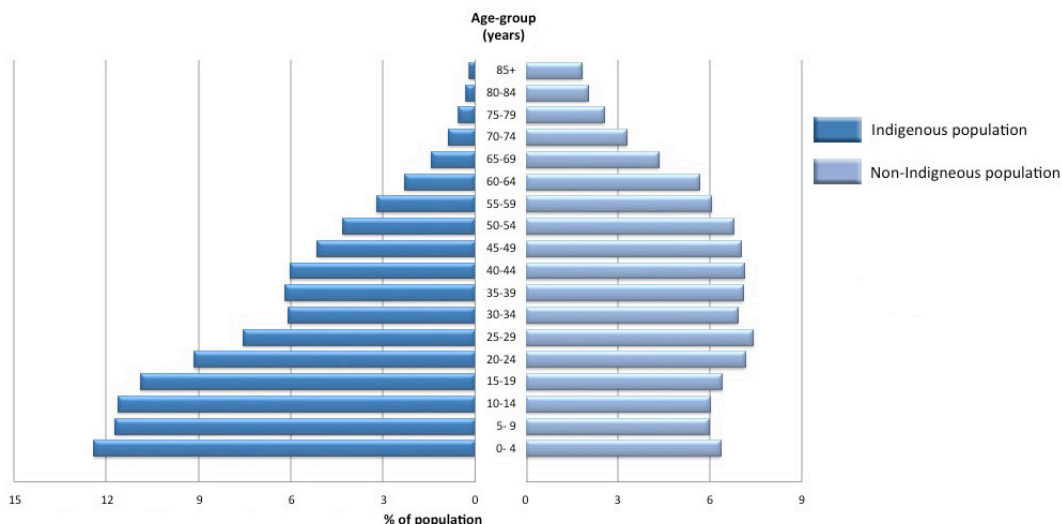
In 2011, 90% of Indigenous people identified as Aboriginal, 6% identified as Torres Strait Islanders and 4% identified as both Aboriginal and Torres Strait Islander [10].

The Indigenous population is much younger overall than the non-Indigenous population. In 2011, more than one-third of Indigenous people were younger than 15 year of age (compared with one-fifth of non-Indigenous people) [11]. Almost 3.5% of Indigenous people were 65 years or older, compared with 14% of non-Indigenous people.

## Population pyramid

Figure 1 is a population pyramid; it shows a comparison of the age profiles of the Indigenous and non-Indigenous populations [11]. The bars show the percentage of the total population that falls within each age group. The general shapes of the Indigenous and the non-Indigenous pyramids are different. The Indigenous pyramid is wide at the bottom (younger age-groups) and narrow at the top (older age-groups); this shape shows that the Indigenous population is a young population. The non-Indigenous pyramid has a more even spread of ages through the population.

Figure 1. Population pyramid of Aboriginal and Torres Strait Islander and non-Indigenous populations, 2011



Source: ABS, 2012 [11]

## What is known about Aboriginal and Torres Strait Islander births?

In 2014, there were 17,779 births registered in Australia where one or both parents were Aboriginal and Torres Strait Islander (six in every 100 births) [12]. Overall, Aboriginal and Torres Strait Islander women had more children and had them when they were younger than non-Indigenous women.

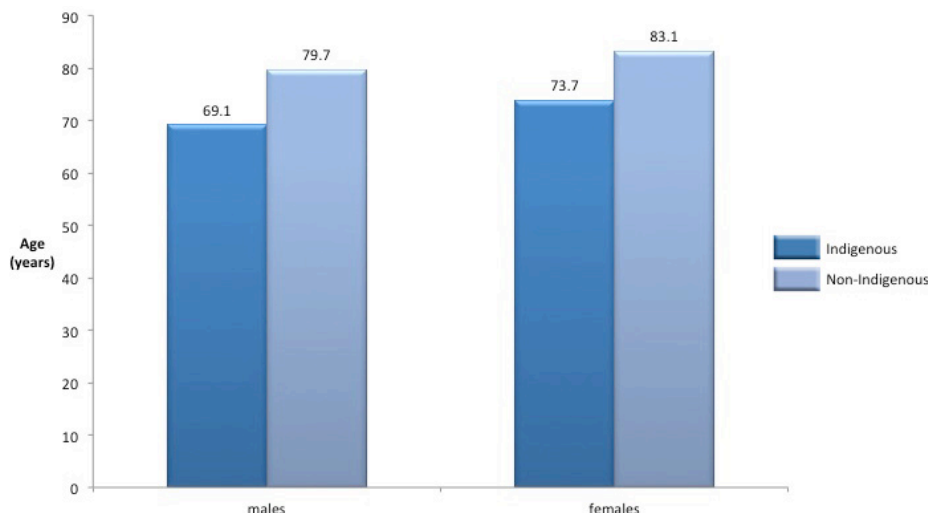
Aboriginal and Torres Strait Islander women had, on average, 2.2 births in their lifetime (compared with 1.8 births for all Australian women) [12]. About three-quarters of Aboriginal and Torres Strait Islander mothers were 30 years or younger when they had their babies, compared with less than one-half of non-Indigenous mothers [Derived from 12]. About 17% of Indigenous mothers were teenagers, compared with 2.5% of non-Indigenous mothers.

In 2013, babies born to Aboriginal and Torres Strait Islander mothers weighed an average of 3,200 grams, 161 grams less than those born to non-Indigenous mothers [13]. Babies born to Indigenous mothers were almost twice as likely to be of low birthweight (less than 2,500 grams) than babies born to non-Indigenous mothers. Low birthweight can increase the risk of a child developing health problems.

## What is known about Aboriginal and Torres Strait Islander deaths?

Aboriginal and Torres Strait Islander people are much more likely than non-Indigenous people to die before they are old [14, 15]. The most recent estimates from the ABS show that an Indigenous boy born in 2010-2012 was likely to live to 69 years, about 10 years less than a non-Indigenous boy (who could expect to live to 80 years) (Figure 2) [15]. An Indigenous girl born in 2010-2012 is likely to live to 74 years, which is almost 10 years less than a non-Indigenous girl (who is likely to live to 83 years).

Figure 2. Expectations of life at birth for Indigenous and non-Indigenous males and females, 2010-2012



Source: ABS, 2013 [15]

In 2014, there were 2,914 deaths registered for Aboriginal and Torres Strait Islander people [14]. Many Indigenous deaths are incorrectly counted as non-Indigenous because the person or family are not identified as Indigenous – the actual number of Indigenous deaths is not known, but would be higher than the number registered as such.

The leading causes of death for Indigenous people in 2013 were:

- cardiovascular disease (including heart attacks and strokes)
- cancer
- injury (including transport accidents and self-harm) [16].

Babies born to Indigenous women are almost twice as likely to die in their first year as those born to non-Indigenous women [14]. In 2012-2014, of the Indigenous infant mortality rates for NSW, Qld, WA, SA and the NT, the highest were in the NT and lowest in NSW.

## What is known about heart health in the Aboriginal and Torres Strait Islander population?

Cardiovascular disease (CVD) is a group of diseases affecting the heart and the rest of the circulatory system (blood, blood vessels and lymphatics) [17]. The most common types of CVD are coronary heart disease (including heart attack), stroke, heart failure and high blood pressure [18]. Risk factors (behaviours or characteristics that makes it more likely for a person to get a disease) for CVD include: smoking, high blood cholesterol, being overweight, not eating well, being physically inactive and having diabetes [19, 20].

Many Aboriginal and Torres Strait Islander people are affected by CVD. One-in-eight (13%) Aboriginal and Torres Strait Islander people reported in the 2012-2013 *Australian Aboriginal and Torres Strait Islander health survey* (AATSIHS) that they had some form of CVD [21]. One-in-twenty-five (4%) Aboriginal and Torres Strait Islander people reported having some form of heart, stroke and/or vascular disease. Around one-in-twenty (6%) Aboriginal and Torres Strait Islander people reported having high blood pressure (hypertensive heart disease) [22].

More Aboriginal and Torres Strait Islander women (14%) reported having CVD than Aboriginal and Torres Strait Islander men (11%) in 2012-2013 [22]. Aboriginal and Torres Strait Islander people living in remote areas were more likely to report having heart disease than those living in non-remote areas [23]. CVD was 1.2 times more common for Aboriginal and Torres Strait Islander people than for non-Indigenous people [22].

Aboriginal and Torres Strait Islander people were almost twice as likely to be admitted to hospital for CVD than other Australians in 2013-14 [24]. Aboriginal and Torres Strait Islander men were hospitalised at 1.6 times the rate of non-Indigenous men and Aboriginal and Torres Strait Islander women were hospitalised at 2.1 times the rate of non-Indigenous women. In every age group except for males aged 75 and over, Aboriginal and Torres Strait Islander people were more likely to be hospitalised than non-Indigenous people.

CVD was the leading cause of death of Aboriginal and Torres Strait Islander people in 2013, being responsible for 24% of the deaths in this population in NSW, Qld, WA, SA and the NT [16]. There were more deaths from ischaemic heart disease (affecting the blood supply to the heart) among Aboriginal and Torres Strait Islander men than among Aboriginal and Torres Strait Islander women. In contrast, cerebrovascular disease (affecting blood vessels supplying the brain) caused more deaths among Aboriginal and Torres Strait Islander women than among Aboriginal and Torres Strait Islander men [25]. Aboriginal and Torres Strait Islander people were 1.6 times more likely to die from ischaemic heart diseases and cerebrovascular diseases than non-Indigenous people.

Aboriginal and Torres Strait Islander people are more likely to die from CVD at younger ages than non-Indigenous people. In 2010-12 in NSW, Qld, WA, SA and the NT, Aboriginal and Torres Strait Islander people aged 35-44 years were 10 times more likely to die from coronary heart disease (the leading cause of CVD-related deaths) than non-Indigenous people of the same age [24].

## What is known about cancer in the Aboriginal and Torres Strait Islander population?

Cancer is a term used for a variety of diseases that cause damage to the body's cells (the basic building blocks of the body) [26, 27]. Normally cells grow and multiply in a controlled way but cancer causes cells to grow and multiply in an uncontrolled way. If these damaged cells spread into surrounding areas or to different parts of the body, they are known as malignant. Cancer can occur almost anywhere in the body.

In 2005-2009, the overall rate of new cases (incidence rate) of cancer was slightly lower for Aboriginal and Torres Strait Islander people than for non-Indigenous people [28]. Incidence rates varied depending on the type of cancer. Aboriginal and Torres Strait Islander people had higher incidence rates than non-Indigenous people for:

- lung cancer (1.7 times higher)
- cancers of 'unknown primary site' (where the part of the body where the cancer started is not known) (1.8 times higher)
- cancer of the uterus (for women) (1.6 times higher)
- liver cancer (2.8 times higher)
- cervical cancer (for women) (2.3 times higher)
- cancer of the pancreas (1.3 times higher).

Aboriginal and Torres Strait Islander people had lower incidence rates than non-Indigenous people in 2005-2009 for:

- bowel cancer (0.8 times lower)
- breast cancer (for women) (0.7 times lower)
- non-Hodgkin lymphoma (lymphomas affect the lymphatic system - a part of the body's immune system that helps the body ward off diseases) (0.7 times lower)
- prostate cancer (for men) (0.6 times lower).

In 2012-2013, the hospitalisation rate for cancer for Aboriginal and Torres Strait Islander people was lower than for non-Indigenous people (10 and 15 per 1,000 respectively) [29].

The cancer death rate for Aboriginal and Torres Strait Islander people was 1.3 times higher than for non-Indigenous people in NSW, Qld, WA, SA and the NT in 2013 [16]. The types of cancer that caused the most deaths among Aboriginal and Torres Strait Islander people in 2008-2012 were lung cancer, liver cancer, breast cancer (for women) and cancer of 'unknown primary site' [28].

The fact that Aboriginal and Torres Strait Islander people are more likely than non-Indigenous people to die from cancer could be because:

- the types of cancers they develop (such as cancers of the lung and liver) are more likely to be fatal
- their cancer may be more advanced by the time it is found (which is partly because Aboriginal and Torres Strait Islander people may visit their doctor later and/or may not participate in screening programs)
- they are less likely to receive adequate treatment [30-32].

## What is known about diabetes in the Aboriginal and Torres Strait Islander population?

Diabetes is a group of disorders in which the body does not convert glucose (a type of sugar found in many foods) into energy [33]. This leads to high sugar levels in the blood which can cause serious health problems including: heart disease, stroke, kidney failure, limb amputations, eye disease and blindness [34, 35].

There are several types of diabetes, but the most common are type 1, type 2 and gestational diabetes mellitus (GDM) (a form of diabetes that occurs in pregnancy) [33, 36]. Type 1 diabetes is not common among Aboriginal and Torres Strait Islander people [37]. However, type 2 diabetes is a serious health problem for many Aboriginal and Torres Strait Islander people, who tend to develop it earlier and often die from it at a younger age than non-Indigenous people. GDM develops in some women during pregnancy [38] and is more common among Aboriginal and Torres Strait Islander women than among non-Indigenous women [39]. For many Indigenous people, diabetes is not diagnosed until after complications have developed [40].

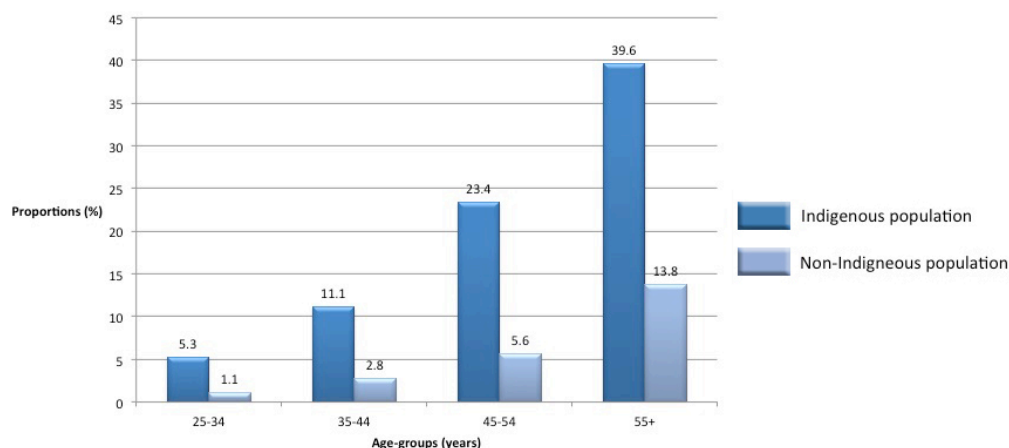
Diabetes was reported by 9% of Aboriginal and Torres Strait Islander people<sup>1</sup> in the 2012-2013 AATSIHS [21, 41]. The level of diabetes for Aboriginal and Torres Strait Islander people was more than three times higher than for non-Indigenous people [42]. More Aboriginal and Torres Strait Islander women (10%) reported having diabetes than Aboriginal and Torres Strait Islander men (8%) [22].

According to the 2012-2013 AATSIHS, diabetes was more common for Aboriginal and Torres Strait Islander people living in remote areas (13%) than for those living in non-remote areas (8%) [23]. Diabetes affected Aboriginal and Torres Strait Islander people at a younger age than non-Indigenous people and increased with age – from 5% of Aboriginal and Torres Strait Islander people aged 25-34 years, up to 40% of those aged 55 years and over (Figure 3) [42].

<sup>1</sup> The number of people with diabetes included those who reported type 1 diabetes, type 2 diabetes and/or high sugar levels



Figure 3. Proportion (%) of people reporting diabetes/high sugar levels as a long-term health condition, by Indigenous status, and age-group, Australia, 2012-2013



Source: ABS 2014 [42]

General practitioners (GPs) are usually the first point of contact for people with diabetes and they often coordinate other health professionals who are needed to manage the condition [43]. In the period 2008 to 2013, diabetes was managed in 5% of sessions between Aboriginal and Torres Strait Islander patients and GPs [44]. Diabetes was managed about 3 times more often among Aboriginal and Torres Strait Islander patients than among other patients.

In 2012-13, there were 2,749 hospital separations for diabetes for Aboriginal and Torres Strait Islander people in Australia [45]. Aboriginal and Torres Strait Islander people were four times more likely to be hospitalised for diabetes than non-Indigenous people.

Diabetes was responsible for 202 deaths among Aboriginal and Torres Strait Islander people living in NSW, Qld, SA, WA and the NT in 2013 [16, 25]. Diabetes<sup>2</sup> was the second leading cause of death for Aboriginal and Torres Strait Islander people. The overall death rate was six times higher for Aboriginal and Torres Strait Islander people than for non-Indigenous people.

## What is known about the social and emotional wellbeing of Aboriginal and Torres Strait Islander people?

The term 'social and emotional wellbeing' relates to a person's overall social, emotional, psychological (mental), spiritual and cultural wellbeing. Factors that are important to social and emotional wellbeing include a person's:

- connection to country
- spirituality and ancestry (family history)
- relationships with family members and friends (kinship)
- connection to community [2].

Social and emotional wellbeing is considered to be much broader than mental health. Mental health describes how a person thinks and feels, and how they cope with and take part in everyday life. It is often seen, incorrectly, as simply the absence of a mental illness.

Many things can influence a person's social and emotional wellbeing, including:

- discrimination and racism
- physical health problems
- child removals and unresolved trauma
- violence and family violence
- death of family members or friends
- substance and/or alcohol use
- social and economic factors (education, employment, income, housing) [5].

Measuring social and emotional wellbeing is difficult, but it usually relies on self-reported feelings (like happiness or calmness) or 'stressors' (stressful events in a person's life).

<sup>2</sup> All types of diabetes combined except GDM.

The 2012-13 AATSIHS collected information on positive wellbeing and asked people to report on feelings of happiness, calmness and peacefulness, fullness of life, and energy levels [46]. The survey found that most (nine-in-ten) Aboriginal and Torres Strait Islander people felt happy some, most, or all of the time [45]. Around eight-in-ten Aboriginal and Torres Strait Islander people reported feeling calm and peaceful, full of life, and that they had a lot of energy some, most, or all of the time.

However, the survey found that Aboriginal and Torres Strait Islander adults were almost three times more likely to feel high or very high levels of psychological distress than non-Indigenous adults [47]. Aboriginal and Torres Strait Islander people may have higher levels of psychological distress because they experience more stressful events than non-Indigenous people. There were differences between men and women with more women reporting high levels of psychological distress than males. People living in non-remote areas reported higher levels of psychological distress than those in remote areas [45]. People who were educated to year 12 experienced less distress than people educated to year 9, and employed people were half as likely to experience distress as unemployed people [48].

The higher levels of distress are reflected in the number of stressful events experienced. Almost seven-in-ten Aboriginal and Torres Strait Islander people experienced one or more significant stressors in the year before the survey, which was almost one-and-a-half-times higher than experienced by the total Australian population [49]. Aboriginal and Torres Strait Islander people most often reported the following stressors:

- the death of a family member or friend
- serious illness
- unable to get a job
- alcohol or drug related problems
- mental illness.

Stressors like 'trouble with the police' and 'gambling problems' were five and six times more likely to be reported by Indigenous people than by the general population.

*The Western Australian Aboriginal child health survey (WAACHS)* found that 24% of Aboriginal children and young people were rated by their carer (parent or guardian) as being at high risk of 'clinically significant emotional or behavioural difficulties' (emotional or behavioural problems that affect a person's day-to-day life); this compares with 15% of children for the general WA population [50]. Aboriginal children whose carers had been forcibly separated (taken away) from their families were at high risk of having 'clinically significant emotional or behavioural difficulties', more than twice the risk of children whose carer had not been forcibly separated. These children also had twice the rates of alcohol and other drug use.

The WAACHS also found that seven-in-ten Aboriginal children were living in families that had experienced three or more major life stress events (like a death in the family, serious illness, family breakdown, financial problems, or arrest) in the year before the survey, and two-in-ten had experienced seven or more major stress events [50].

The *Footprints in time: longitudinal study of Indigenous children* found that Indigenous boys had more behavioural and emotional difficulty than Indigenous girls [51].

In 2013-14, there were 16,070 hospitalisations with a main diagnosis of 'mental and behavioural disorders that were Identified as Indigenous ('mental and behavioural disorders' occur when a person becomes unwell in the mind and experiences changes in their thinking, feelings and/or behaviour that affects their day-to-day life) [52].

For 2006-2010, there were 312 Aboriginal and Torres Strait Islander deaths from 'mental and behavioural disorders' [53]. Compared with the non-Indigenous population, Aboriginal and Torres Strait Islander people were one-and-a-half times more likely to die from these disorders.

Deaths from 'mental and behavioural disorders' do not include deaths from 'intentional self-harm' (suicide). For 2009-2013, Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT were twice as likely to die from 'intentional self-harm' than were non-Indigenous people [25]. Deaths from intentional self-harm were especially high for Aboriginal and Torres Strait Islander people younger than 35 years of age, particularly for men.

## What is known about kidney health in the Aboriginal and Torres Strait Islander population?

Healthy kidneys help the body by removing waste and extra water, and keeping the blood clean and chemically balanced [54]. When the kidneys stop working properly – as is the case when someone has kidney disease – 'waste' can build up in the blood and damage the body. Chronic kidney disease (CKD) is when the kidneys gradually stop working [55]. End-stage renal disease (ESRD) is when the

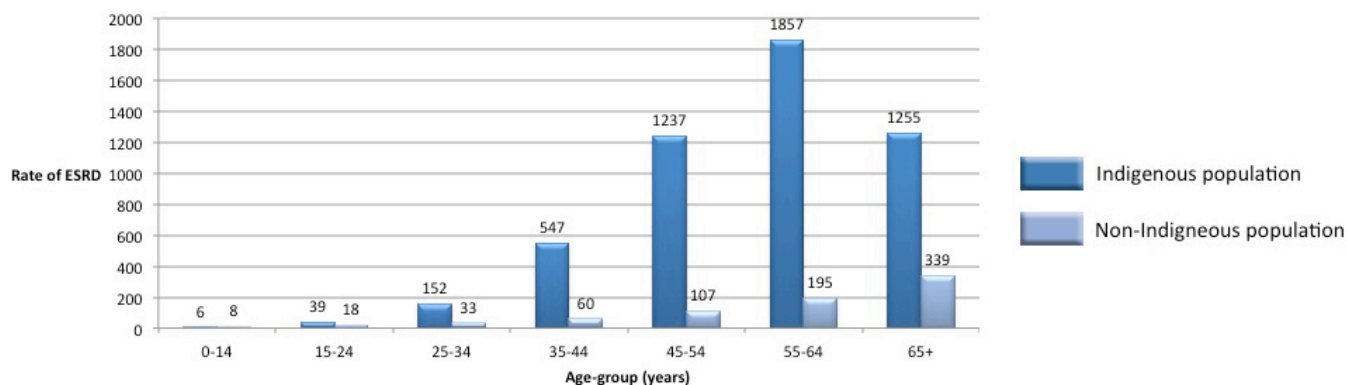
kidneys have totally or almost totally stopped working. People with ESRD must either have regular dialysis (use a machine that filters the blood) or have a kidney transplant to stay alive [56].

Kidney disease is a serious health problem for many Aboriginal and Torres Strait Islander people. In 2010-2014, ESRD was nearly seven times more common for Aboriginal and Torres Strait Islander people than for non-Indigenous people [Derived from 6, 57-59].

ESRD affects Aboriginal and Torres Strait Islander people when they are much younger compared with non-Indigenous people. In 2010-2014, almost 60% of Aboriginal and Torres Strait Islander people who were diagnosed with kidney disease were younger than 55 years (about 30% of non-Indigenous people were younger than 55 years) (Figure 4) [Derived from 6, 57-59].

The rates of ESRD were highest for Aboriginal and Torres Strait Islander people living in the NT (20 times higher for Aboriginal and Torres Strait Islander people than non-Indigenous people) and WA (11 times higher) [Derived from 6, 57-59].

Figure 4. Rates (per million) of end-stage renal disease for Indigenous and non-Indigenous people, by age-group (years) 2010-2014



Note: Rates show how many Aboriginal and Torres Strait Islander and non-Indigenous people had ESRD per million.

Source: Derived from ANZDATA, 2015 [59], ABS, 2013 [57], ABS, 2003 [58], ABS, 2014 [6]

Dialysis was the most common reason for Aboriginal and Torres Strait Islander people to be admitted to hospital in 2013-14 [44]. Of all Aboriginal and Torres Strait Islander hospital admissions, 45% were for dialysis. Aboriginal and Torres Strait Islander people were admitted to hospital for dialysis around 10 times more often than other Australians [24].

Some people need to have dialysis every day. Dialysis can be undertaken at hospitals, special out-of-hospital satellite units, or in the home (which requires special equipment and training for the patient and their carers, and is very costly) [56]. Accessing dialysis can sometimes be very difficult for Aboriginal and Torres Strait Islander people who live in rural or remote locations and they may have to travel to receive treatment.

In 2008-2012, Aboriginal and Torres Strait Islander people were almost three times more likely to die from kidney disease than non-Indigenous people [45].

## What is known about injury in the Aboriginal and Torres Strait Islander population?

Injury can include both physical harm and non-physical harm (for example, mental or emotional), [60] but in public health terms, injury generally refers to physical harm to a person's body [61] including:

- assault
- self-harm
- environmental injuries (e.g. being bitten by a dog or being poisoned by inhaling poisonous fumes)
- falls
- transport accidents [60].

Everyday life situations for Aboriginal and Torres Strait Islander people can affect the types of injuries and the frequency of injuries experienced. Some factors that can increase the risk of injury include:

- disruption to culture
- socioeconomic disadvantage [60]
- living in rural and remote locations (including increased use of roads)

- risky behaviour
- limited access to health services and support services [62].

Aboriginal and Torres Strait Islander people were more likely than other Australians to be admitted to hospital for injuries in 2013-14 [52]. Injury was the second most common reason for Aboriginal and Torres Strait Islander hospital admissions. The main causes of Indigenous injury-related hospital admissions were medical complications, falls and assault.

In 2013, injury was the third most common cause of death for Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT [16]. The most common causes of injury-related death for Aboriginal and Torres Strait Islander people were suicide and transport accidents. Aboriginal and Torres Strait Islander people were more than twice as likely as non-Indigenous people to die from suicide and more than twice as likely to die from traffic accidents.

## What is known about respiratory health in the Aboriginal and Torres Strait Islander population?

The respiratory system includes all the parts of the body involved with breathing, including the nose, throat, larynx (voice box), trachea (windpipe) and lungs [63]. Respiratory disease occurs if any of these parts of the body are damaged or diseased and breathing is affected. Common types of respiratory disease include colds and similar viral infections, asthma and pneumonia.

Risk factors for respiratory disease include: infections, smoking (including passive smoking, which is particularly bad for children), poor environmental conditions (especially areas that are dusty or have lots of pollen or pollution), poor living conditions and other diseases (like diabetes, heart and kidney disease) [63, 64].

Respiratory disease was reported by around one-third of Aboriginal and Torres Strait Islander people in the 2012-2013 AATSIHS [65]. Respiratory problems were reported more often by Aboriginal and Torres Strait Islander women than men. Asthma (the respiratory condition most often reported by Aboriginal and Torres Strait Islander people) was nearly twice as common for Aboriginal and Torres Strait Islander people than for non-Indigenous people.

In 2012-13, Aboriginal and Torres Strait Islander people were four times more likely than non-Indigenous people to be admitted into hospital for chronic obstructive pulmonary disease, three times more likely to be admitted for influenza and pneumonia and nearly twice as likely to be admitted for asthma [45].

In 2013, respiratory disease was the cause of 8% of Aboriginal and Torres Strait Islander deaths in NSW, Qld, SA, WA and the NT [16]. Aboriginal and Torres Strait Islander people were twice as likely as non-Indigenous people to die from a respiratory disease.

## What is known about eye health in the Aboriginal and Torres Strait Islander population?

Healthy eyes are important for everyday life; they are needed to read and study, play sports, drive vehicles and work [66]. Most eye problems are preventable and treatable [67].

A number of problems can affect the health of the eye [68]. The most common conditions are [69]:

- refractive error (problems focussing the eyes)
- cataract (clouding of the eye's lens)
- diabetic retinopathy (damage to the small blood vessels in the back of the eye caused by diabetes, which can lead to blindness)
- infectious diseases like trachoma (caused by bacteria).

Eye health is affected by getting older, smoking, injuries, exposure to ultra-violet (UV) light from the sun, and not eating enough healthy food [68]. Eye problems can result in vision loss (not being able to see properly) which can be improved with glasses, contact lenses or eye surgery [70]. Eye problems can also result in blindness.

In the 2012-2013 AATSIHS, eye and sight problems were the most common long-term health condition, reported by [71-73]:

- 33% of Aboriginal and Torres Strait Islander people
- 38% of Aboriginal and Torres Strait Islander women and 29% of Aboriginal and Torres Strait Islander men
- 9% Aboriginal and Torres Strait Islander children.

In 2012-2013, Aboriginal and Torres Strait Islander people were slightly less likely to report eye and sight problems than non-Indigenous



adults [65], but they were more than seven times as likely to report blindness [65] and almost three times as likely to report sight problems caused by diabetes [44].

Eye examinations conducted in the 2008 *National Indigenous eye health survey* (NIEHS) showed that [74]:

- Aboriginal and Torres Strait Islander children had better vision than other children in Australia, especially in remote areas
- refractive error caused one-half of vision loss in both Aboriginal and Torres Strait Islander adults and children
- low vision was nearly three times more common for Aboriginal and Torres Strait Islander adults than for other Australian adults
- blindness was six times more common for Aboriginal and Torres Strait Islander adults than for other Australian adults
- cataract was the leading cause of blindness for Aboriginal and Torres Strait Islander adults
- blindness due to diabetic retinopathy was 30 times more common for Aboriginal and Torres Strait Islander adults.

Trachoma still occurs among Aboriginal and Torres Strait Islander children in some remote communities in the NT, WA and SA [75]. The overall level of trachoma in these communities has reduced from 14% in 2009 to 4.7% in 2014. It has been suggested that targeted screening, treatment and health promotion programs have contributed to the decrease in the level of trachoma [76].

## What is known about ear health in the Aboriginal and Torres Strait Islander population?

Ear health is very important for hearing, learning and balance [77]. If ears get damaged, people might:

- not be able to hear properly, either for a short time, a long time, or for the rest of their lives
- have problems learning (because they cannot hear)
- have problems learning to speak properly.

There are a number of ear diseases, but the most common is otitis media (OM). OM occurs when the middle ear is affected by infection from bacteria or viruses. OM can be very painful and sometimes damages the ear drum; fluid can also leak from the ear (known as 'runny ear'). In another type of OM, fluid builds up in the middle ear without damaging the ear drum ('glue ear'). Both types of OM can cause hearing loss. Risk factors for ear disease include overcrowded homes, exposure to smoking, living in poor conditions and poor hygiene. Children who go to day-care centres are more likely than others to get ear infections.

Aboriginal and Torres Strait Islander people, especially children and young adults, have more ear disease and hearing loss than other Australians [77, 78].

Diseases of the ear and mastoid (portion of the temporal bone of the skull behind the ear) and/or hearing problems were reported as a long-term health condition by 12% of Aboriginal and Torres Strait Islander people in the 2012-2013 AATSIHS [46]. Ear/hearing problems were reported by 13% of males and by 12% of females. Ear/hearing problems were reported by the same proportion of people in non-remote areas and remote areas (both 12%). Hearing loss was more common in older people.

Hearing health services in the NT in 2014-15 found that for Aboriginal and Torres Strait Islander children who received audiology services, the most common condition was OM with effusion (OME) and around half of the children had some form of hearing loss [79].

In 2012-13, the hospitalisation rate for diseases of the ear and mastoid process for Aboriginal and Torres Strait Islander children aged 0-3 years was slightly lower than for non-Indigenous children and the rate for those aged 4-14 years was 1.6 times higher than for non-Indigenous children [45].

## What is known about oral health in the Aboriginal and Torres Strait Islander population?

Oral health is a term used for the health of a person's teeth and gums [80]. If people have unhealthy teeth and gums they will probably have some pain [81]. Also, they may not be able to eat a variety of healthy foods or talk to other people comfortably.

Two common oral health problems are caries and gum disease [80, 81]. Caries is caused by bacteria that decay (break down) the enamel (hard outer part of the tooth); if caries is not treated the tooth will continue to decay and will eventually have to be removed [81]. Caries is caused by eating a lot of sticky and sweet foods that allow bacteria to grow and multiply. Gum disease (also known as periodontal disease) is caused by bacteria that attack the gums causing them to swell and bleed. If gum disease is not treated, the gums start to break down and the teeth will become loose because the gums won't be strong enough to hold them in place. Gum disease is caused by poor oral hygiene (poor care of the teeth and gums).

The oral health of Aboriginal and Torres Strait Islander Australians is not as good as that of non-Indigenous people [82]. In 2004-2006, Indigenous adults had more than twice as much caries as non-Indigenous adults, and three times the number of decayed tooth surfaces [83]. Aboriginal and Torres Strait Islander adults also suffered from more periodontal disease than non-Indigenous adults. More Aboriginal and Torres Strait Islander adults than non-Indigenous adults suffered from edentulism (losing all of their teeth), especially at younger ages.

The oral health of young non-Indigenous children has improved in recent years, but the oral health of young Indigenous children has generally become worse. Aboriginal and Torres Strait Islander children have more caries in their deciduous (baby) and permanent (adult) teeth than non-Indigenous children and their caries are often more severe [82, 84]. Aboriginal and Torres Strait Islander children have more decayed, missing and filled teeth than non-Indigenous children.

Around one-in-three Aboriginal and Torres Strait Islander children under 14 years reported having oral health problems in the 2008 *National Aboriginal and Torres Strait Islander Social Survey* (NATSISS) [53]. Almost half of the 10-14 year-old children had oral health problems. Children in non-remote areas were more likely to have oral health problems than those in remote areas.

## What is known about disability in the Aboriginal and Torres Strait Islander population?

Disability may affect how a person moves around and looks after themselves, how they learn, or how they communicate [85, 86]. There are a lot of different kinds of disability, for example:

- some affect the body, others affect how the brain works
- some are temporary, others last for a person's whole life
- some people are born with a disability, others become disabled as the result of an event (such as a car crash).

A disability that is severe and affects how a person is able to live their life and their need for assistance is classified as a 'profound/severe core activity restriction' [85].

In 2012, about a quarter of Aboriginal and Torres Strait Islander people had a disability [87]. Indigenous people had higher rates of disabilities than non-Indigenous people across all age groups and for both males and females. Indigenous children aged 0-14 years were more than twice as likely as non-Indigenous children to have a disability. Aboriginal and Torres Strait Islander people had a higher overall need for assistance compared with non-Indigenous people (63% compared with 60%) and were almost twice as likely to require assistance with communication compared with non-Indigenous people (11% compared with 6.6%).

## What is known about communicable diseases in the Aboriginal and Torres Strait Islander population?

Communicable diseases (infectious diseases) are passed from person to person either by direct contact with an infected person or indirectly, such as through contaminated (dirty/unclean) food or water. They can be spread through the air, such as when an infected person coughs or sneezes and another person breathes in the air that contains the germs. Communicable diseases can be caused by:

- bacteria (e.g. tuberculosis)
- viruses (e.g. HIV)
- fungi (e.g. tinea)
- parasites (e.g. malaria) [88].

Improvements to personal and environmental cleanliness, and the introduction of new immunisations (vaccines), have greatly reduced the number of people who catch some communicable diseases [38].

If a person develops certain communicable diseases (like tuberculosis), the disease must be 'notified'; this means that the information is collected by health authorities. Data from state and territory collections are collected and published by the National Notifiable Disease Surveillance System (NNDSS), but Indigenous status is often not reported for large proportions of notifications.

Recent information about communicable diseases includes:

**Tuberculosis:** a lung infection caused by a bacterium that can trigger a range of symptoms, such as coughing, weight loss and fever [89].

Tuberculosis notifications were 11 times higher for Indigenous people than for non-Indigenous people in 2009-2013 [Derived from 90, 91-95].

**Hepatitis:** an inflammation of the liver caused by viral infections, alcohol or other drugs, toxins, or an attack by the body's immune system on itself [96]. The most common types of hepatitis are hepatitis A, B, and C.

The hepatitis A virus (HAV) is an infection of the liver mainly caused by eating contaminated food or water or by direct contact with an infected person [97, 98] (including sexual contact, particularly between men) [97]. Hepatitis A notifications have decreased a lot among Aboriginal and Torres Strait Islander people since 2000. In 2011-2013, five Aboriginal and Torres Strait Islander people were identified with Hepatitis A [Derived from 99, 100, 101].

Hepatitis B virus (HBV) is caused by contact with blood and other body fluids (semen, vaginal fluids and a low risk from saliva) from an infected individual, commonly through sexual contact or use of contaminated injecting equipment [102]. A mother may also infect her foetus with HBV during pregnancy or her baby during birth [102]. Hepatitis B notifications declined for Aboriginal and Torres Strait Islander people between 2010 and 2014 [103]. In 2010-2015, newly acquired hepatitis B notifications were almost four times higher for Aboriginal and Torres Strait Islander people than for non-Indigenous people [Derived from 90, 101, 103, 104].

Hepatitis C virus (HCV) infection mainly occurs through blood-to-blood contact [105]. Injecting drug use is the most common method of infection [99, 103, 106]. Hepatitis C notifications were almost eight times higher for Aboriginal and Torres Strait Islander people than for non-Indigenous people in 2010-2014 [Derived from 90, 104, 107].

**Haemophilus influenzae type b (Hib):** bacteria that can cause a range of illnesses, such as meningitis, septicaemia (blood poisoning) and pneumonia [102, 108-110].

Notification rates for Hib were 13 times higher for Indigenous people than for non-Indigenous people in 2007-2010 [108].

**Invasive pneumococcal disease (IPD):** caused by a bacteria and can lead to several major health conditions, such as pneumonia and meningitis [108].

Rates for IPD among Aboriginal and Torres Strait Islander people in 2007-2010, were highest in the 50 years and older age-group followed by the 0-4 years age-group [108]. Rates for those aged 25-49 were nearly 12 times higher than for their non-Indigenous people in the same age group.

**Meningococcal disease:** caused by bacteria and can lead to meningitis, meningococcaemia without meningitis, and septic arthritis [108].

Notification rates for Aboriginal and Torres Strait Islander children aged 0-4 years were nearly four times higher than for non-Indigenous children in 2007-2010 [108].

**Sexually transmitted infections:** caused by bacteria and viruses and can lead, if left untreated, to a range of health conditions [111].

In 2014, notification rates for gonorrhoea were 18 times higher for Indigenous people than for non-Indigenous people, and for syphilis and chlamydia were both over 3 times higher for Indigenous people than for non-Indigenous people [103].

**Human immunodeficiency virus (HIV):** an infection that destroys cells in the body's immune system [112].

In 2014, the rate of HIV diagnosis was 1.6 times higher for Indigenous than non-Indigenous people [103].

## What is known about factors contributing to health in the Aboriginal and Torres Strait Islander population?

### Nutrition

If a person eats healthy food they are more likely to be healthy [113]. A healthy diet includes:

- fresh vegetables and fruits
- whole grains
- low-fat dairy products
- lean meats
- foods low in fat and salt.

Having access to healthy foods can be a challenge for some Aboriginal and Torres Strait Islander people who live in remote locations. Food may have to be sent over long distances and is not always available and fresh foods may be expensive [113].

Poor nutrition is an important factor contributing to overweight and obesity, malnutrition, CVD, type 2 diabetes, and tooth decay [113, 114]. The National Health and Medical Research Council (NHMRC) guidelines recommend that adults eat fruit and plenty of vegetables

every day, selected from a wide variety of types and colours [115]. The guidelines also recommend including reduced fat varieties of milk, yoghurts and cheeses, and to limit the intake of foods and drinks containing added salt.

The 2012-13 *National Aboriginal and Torres Strait Islander nutrition and physical activity survey* NATSINPAS [116] collected data on the consumption of many different foods, both healthy and unhealthy including:

### • Fruit and vegetables

More than one-half of Aboriginal and Torres Strait Islander people reported eating the recommended amount of fruit every day (54%) but only 8% ate the recommended amount of vegetables every day [117]. Women were more likely than men to have eaten an adequate amount of fruit (57% and 51% respectively) and vegetables (7% and 3% respectively) each day.

### • Dairy foods

Milk products and dishes (dairy foods) were consumed by 83% of Aboriginal and Torres Strait Islander people, which was similar to the proportion of non-Indigenous people who consumed dairy foods (85%) [116]. Similar proportions of males and females consumed dairy foods (84% and 82% respectively).

### • Discretionary foods

In the day prior to the survey, Aboriginal and Torres Strait Islander people consumed 41% of their total daily energy in the form of discretionary foods (foods and drinks that are not necessary to provide the nutrients the body needs, such as sweets, cakes, soft drinks and alcoholic drinks) [117]. Similar proportions of females and males consumed all discretionary foods except for alcoholic beverages for which twice as many males as females reported consuming (15% and 7.7% respectively) [116].

### • Sugar

Sugar products and dishes were consumed by more than half the Aboriginal and Torres Strait Islander population (54%) in the day prior to the survey [116]. Similar proportions of males and females consumed sugar (54% and 53% respectively).

### • Sodium (salt)

The average daily amount of sodium consumed from food by Aboriginal and Torres Strait Islander people was 2,379 mg (approximately one teaspoon of salt) [117]. Males in all age-groups, except for those 51 years and older, had average intakes that exceeded the upper level of sodium intake recommended by the NHMRC.

### • Bush foods

Aboriginal and Torres Strait Islander people in remote areas were more likely than their non-remote counterparts to eat non-commercially caught fin fish (7.8% and 1.8% respectively), crustacea (for example, crabs, prawns and lobsters) and molluscs (for example, scallops, squid and oysters) (1.2% and 0.3% respectively), wild harvested meat (7.7% and 0% respectively) and reptiles (3.9% and 0.1% respectively) [116].

The *National Aboriginal and Torres Strait Islander health measures survey* (NATSIHMS) 2012-2013 collected information on biomarkers (measurable indicators for biological state) of nutrition – including vitamin D, anaemia (where there are not enough red blood cells or the level of haemoglobin is low) and iodine (needed for growth and development) [118]. It was found that:

- More than a quarter of Aboriginal and Torres Strait Islander adults (27%) had a vitamin D deficiency. Vitamin D deficiency was more common among Aboriginal and Torres Strait Islander people living in remote areas (39%) than those in non-remote areas (23%).
- 7.6% of Aboriginal and Torres Strait Islander adults were at risk of anaemia. The risk of anaemia was higher for those living in remote areas compared with those living in non-remote areas (10% compared with 6.9%).
- Aboriginal and Torres Strait Islander adults had adequate iodine levels.

According to the 2012-2013 NATSINPAS, 22% of respondents had run out of food in the last 12 months and couldn't afford to buy more (7% of respondents had run out and gone without food, while 15% had run out but not gone without food) [119]. People in remote areas were more likely to run out of food than people in non-remote areas (31% and 20% respectively) and slightly more likely to go without food if they ran out (9.2% and 6.4% respectively).

## Physical activity

Physical activity is important for good overall health. Low levels of activity including high levels of sedentary (being inactive) behaviour are risk factors for a range of health conditions [120]. *Australia's physical activity and sedentary behaviour guidelines* for adults recommend moderate physical activity on most, preferably all, days of the week to improve health and reduce the risk of chronic



disease and other conditions [121]. Doing any physical activity is better than doing none and the health benefits of physical activity are continuous, starting with any activity above zero [122]. Low levels of activity, including sedentary behaviour, are a risk factor for a variety of health conditions including cardiovascular disease (CVD), type 2 diabetes, certain cancers, depression and other social and emotional wellbeing conditions, overweight and obesity, a weakened musculoskeletal system and osteoporosis [120, 121].

According to the 2012-2013 AATSIHS, 47% of Aboriginal and Torres Strait Islander people aged 18 years and over living in non-remote areas had met the target of 30 minutes of moderate intensity physical activity on most days (or a total of 150 minutes per week); this level was 0.9 times that of non-Indigenous people [46]. Aboriginal and Torres Strait Islander adults in non-remote areas spent around one third the time on physical activity (39 minutes per day including 21 minutes on walking for transport) compared with children aged 5-17 years [120]. Those who participated in the survey's pedometer study recorded an average of 6,963 steps per day; 17% met the recommended threshold of 10,000 steps or more [120].

In remote areas, 55% of Aboriginal and Torres Strait Islander adults exceeded the recommended 30 minutes of physical activity and 21% did not participate in any physical activity on the day prior to the interview [120]. The most common type of physical activity for adults was 'walking to places' (71%). One-in-ten (11%) participated in cultural activities, including hunting and gathering bush foods or going fishing.

Among Aboriginal and Torres Strait Islander adults living in non-remote areas, 61% reported that they were physically inactive (sedentary or had exercised at a low level) in the week prior to the survey; this level of physical inactivity was 1.1 times that of that of non-Indigenous people [46]. Aboriginal and Torres Strait Islander adults spent an average of 5.3 hours per day on sedentary activities, including 2.3 hours of watching television, DVDs and videos [120].

Aboriginal and Torres Strait Islander children aged 2-4 years living in non-remote areas spent an average of 6.6 hours per day participating in physical activity and spent more time outdoors than their non-Indigenous children (3.5 hours compared with 2.8 hours) [120]. Aboriginal and Torres Strait Islander children aged 2-4 years spent an average of 1.5 hours per day on sedentary screen-based activities such as watching TV, DVDs or playing electronic games.

Aboriginal and Torres Strait Islander children aged 5-17 years living in non-remote areas spent an average of two hours per day participating in physical activity (exceeding the recommendation of one hour per day); this was 25 minutes more than their non-Indigenous children [120]. Around half (48%) of Aboriginal and Torres Strait Islander children met the recommended amount of physical activity, compared with 35% of non-Indigenous children. The most common physical activities among Aboriginal and Torres Strait Islander children were active play and children's games (57%) and swimming (18%). Those who participated in the survey's pedometer study recorded an average of 9,593 steps per day, with an average of one-in-four children (25%) meeting the recommended 12,000 steps per day.

In remote areas, 82% of Aboriginal and Torres Strait Islander children aged 5-17 years did more than 60 minutes of physical activity on the day prior to the interview [120]. The most common activities were walking (82%), running (53%) and playing football or soccer (33%).

Aboriginal and Torres Strait Islander children aged 5-17 years living in non-remote areas spent an average of 2.6 hours per day on sedentary screen-based activities (exceeding the recommended limit of two hours). Aboriginal and Torres Strait Islander children aged 12-14 years spent half the time that non-Indigenous children spent using the internet or computer for homework (4 minutes compared with 8 minutes per day) and those aged 15-17 years spent nearly one third of the time spent by their non-Indigenous counterparts (8 minutes compared with 20 minutes per day). Aboriginal and Torres Strait Islander children aged 15-17 years spent more time on screen-based activities than Aboriginal and Torres Strait Islander children aged 5-8 years (3.3 hours compared with 1.9 hours) [120].

## **Tobacco use**

Smoking tobacco is a major cause of:

- heart disease
- stroke
- many forms of cancer
- lung disease
- a variety of other health conditions [123].

Passive smoking (breathing in another person's tobacco smoke) also contributes to poor health, particularly for children.

The proportion of Aboriginal and Torres Strait Islander adults who smoke declined significantly according to surveys between 2002 and 2012-2013 (from 51% to 44%), but smoking was still more than twice as common among Aboriginal and Torres Strait Islander adults

than among non-Indigenous adults [124, 125]. In 2012-2013, Aboriginal and Torres Strait Islander adults living in remote areas reported a higher proportion of current smokers (53%) than those living in non-remote areas (41%) [126].

More than half of Aboriginal and Torres Strait Islander children lived with someone who usually smoked inside the house in 2012-2013 [126].

Tobacco use was responsible for one-in-five deaths among Indigenous people in 2003 [127].

## Alcohol use

Drinking too much alcohol is associated with:

- health conditions like liver disease, diabetes, cardiovascular disease and some cancers
- accidents and injury
- harms to family and community [128].

If a woman drinks alcohol when she is pregnant, the unborn child may be affected by fetal alcohol spectrum disorder (FASD), the term used to describe the physical, behavioural and learning problems caused by alcohol damage to the brain and other parts of the body of the unborn baby [129, 130].

Aboriginal and Torres Strait Islander people are more likely to not drink alcohol than non-Indigenous people, but for those who drink, many are more likely to drink at harmful levels [131, 132]. The 2012-2013 AATSIHS found that almost one-quarter of Aboriginal and Torres Strait Islander people either never drank alcohol or had not had any alcohol in the last year [132]. Not drinking was 1.6 times more common among Aboriginal and Torres Strait Islander people than non-Indigenous people, the difference was mostly due to Aboriginal and Torres Strait Islander people who used to drink and have stopped.

Levels of short term/single occasion drinking risk (more than four standard drinks on a single occasion) were similar for Aboriginal and Torres Strait Islander and non-Indigenous people [132]. Around half of drinkers in 2012-2013 drank at levels exceeding the guidelines (52% of Aboriginal and Torres Strait Islander people compared with 45% of non-Indigenous people). However, Aboriginal and Torres Strait Islander people who drank were 1.4 times more likely to drink at levels of 'high risk' of short-term harm as non-Indigenous people (37% compared with 27%).

Levels of long-term/lifetime drinking risk (more than two standard drinks per day) were similar for Aboriginal and Torres Strait Islander and non-Indigenous people. One-in-five drinkers aged 18 years and over in 2012-2013, drank at levels exceeding the 2009 guidelines for long-term/lifetime drinking risk [132]. However, Aboriginal and Torres Strait Islander people were 1.4 times more likely to drink at levels of 'high risk' of lifetime harm than non-Indigenous people.

The 2008 NATSISS found that 80% of mothers of Aboriginal and Torres Strait Islander children aged 0-3 years did not drink during pregnancy, 16% drank less alcohol and 3% drank the same amount or more alcohol during pregnancy [133].

From 2008-2012 in NSW, Qld, WA, SA and NT, Aboriginal and Torres Strait Islander people were 4.9 times more likely to die due to alcohol use than non-Indigenous people [45, 134].

## Concluding comments

Australia's Aboriginal and Torres Strait Islander people's health continues to improve slowly although they are still not as healthy as non-Indigenous people overall. The reasons why the health of Indigenous people is worse than for non-Indigenous people are complex, but represent a combination of general factors (like education, employment, income and socioeconomic status) and health sector factors (like not having access to culturally appropriate services or support).

Within the health sector, there is a need for:

- more health advancement programs
- better identification of health conditions before they become serious
- more primary health care services that are accessible to Aboriginal and Torres Strait Islander people
- greater cultural competence of service providers.

Making and combining these changes are important to the long term future for Aboriginal and Torres Strait Islander peoples and for strengthening strategies to improve health outcomes.

Health improvements for the Aboriginal and Torres Strait Islander population will require the ongoing commitment by all Australian governments. Key stakeholders and representative bodies have recognised the importance of the *Closing the gap strategy* in health and

other disadvantages between Aboriginal and Torres Strait Islander peoples and other Australians [135]. Working towards constitutional recognition for Aboriginal and Torres Strait Islander people also remains a key Australian government commitment [136].

A greater focus on the lessons learned from strengths based indicators and practices, collaboration and culturally respectful policy and program development will make a strong and long lasting contribution to positive health outcomes for Aboriginal and Torres Strait Islander people in the years to come.

## Abbreviations

**AATSIHS** - Australian Aboriginal and Torres Strait Islander Health Survey

**ABS** - Australian Bureau of Statistics

**ACT** - Australian Capital Territory

**AIHW** - Australian Institute of Health and Welfare

**ANZDATA** - Australia and New Zealand Dialysis and Transplant Registry

**CKD** - Chronic kidney disease

**CVD** - Cardiovascular disease

**ESRD** - End-stage renal disease

**FASD** - Fetal alcohol spectrum disorder

**GDM** - Gestational diabetes mellitus

**Hib** - *Haemophilus influenzae* type b

**HIV** - Human immunodeficiency virus

**IPD** - Invasive pneumococcal disease

**NATSIHMS** - National Aboriginal and Torres Strait Islander Health Measures Survey

**NATSINPAS** - National Aboriginal and Torres Strait Islander nutrition and physical activity survey

**NATSISS** - National Aboriginal and Torres Strait Islander Social Survey

**NHMRC** - National Health and Medical Research Council

**NIEHS** - National Indigenous Eye Health Survey

**NNDSS** - National Notifiable Diseases Surveillance System

**NSW** - New South Wales

**NT** - Northern Territory

**OM** - Otitis media

**OME** - Otitis media with effusion

**Qld** - Queensland

**SA** - South Australia

**Tas** - Tasmania

**TB** - Tuberculosis

**UV** - Ultraviolet

**Vic** - Victoria

**WA** - Western Australia

**WAACHS** - Western Australian Aboriginal child health survey

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