



Australian Indigenous  
HealthInfoNet

# Summary of Aboriginal and Torres Strait Islander health status 2018



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UNIVERSITY

# Australian Indigenous HealthInfoNet

The Australian Indigenous HealthInfoNet's mission is to contribute to improvements in 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 researchers. The HealthInfoNet also provides easy-to-read and summarised material for students and the general community.

The HealthInfoNet achieves its mission by undertaking research into various aspects of Aboriginal and Torres

Strait Islander health and disseminating the results (and other relevant knowledge and information) mainly via its website ([healthinfonet.ecu.edu.au](http://healthinfonet.ecu.edu.au)). The research involves analysis and synthesis of data and other information obtained from academic, professional, government and other sources. 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.

## Recognition statement

The Australian Indigenous HealthInfoNet recognises and acknowledges the sovereignty of Aboriginal and Torres Strait Islander people 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 spiritualities. 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.


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

## Contact details

Professor Neil Drew (Director)  
Australian Indigenous HealthInfoNet  
Edith Cowan University  
2 Bradford Street  
Mount Lawley, Western Australia 6050  
Phone: (08) 9370 6336  
Fax: (08) 9370 6022  
Email: [healthinfonet@ecu.edu.au](mailto:healthinfonet@ecu.edu.au)  
Website: [healthinfonet.ecu.edu.au](http://healthinfonet.ecu.edu.au)

### Tell us what you think

We value your feedback as part of our post-publication peer review process, so please let us know if you have any suggestions for improving this or future editions of the *Summary of Aboriginal and Torres Strait Islander health status*.

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# Summary of Aboriginal and Torres Strait Islander health status 2018

## Publication team

### Production team

Millie Harford-Mills  
Andrea MacRae

### Executive editor

Professor Neil Drew

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This *Summary*, or an updated version, can be viewed at: [healthinfonet.ecu.edu.au/summaries](http://healthinfonet.ecu.edu.au/summaries).

For more detailed picture of Aboriginal and Torres Strait Islander health, please see the *Overview of Aboriginal and Torres Strait Islander health status* ([healthinfonet.ecu.edu.au/overviews](http://healthinfonet.ecu.edu.au/overviews)).

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## Bibdjool

Donna Lei Rioli, a Western Australian Aboriginal and Torres Strait Islander artist, was commissioned by the HealthInfoNet to create a logo incorporating a gecko, chosen as it is one of the few animals found across the great diversity of Australia.

Donna is a Tiwi/Nyoongar woman who is dedicated to the heritage and culture of the Tiwi people on her father's side, Maurice Rioli, and the Nyoongar people on her mother's side, Robyn Collard. Donna enjoys painting because it enables her to express her Tiwi and Nyoongar heritage and she combines the two in a unique way.

Donna interpreted the brief with great awareness and conveyed an integrated work that focuses symbolically on the pathway through life. This is very relevant to the work and focus of the Australian Indigenous HealthInfoNet in contributing to improving the health and wellbeing of Aboriginal and Torres Strait Islander Australians.

# Introduction

The *Summary of Aboriginal and Torres Strait Islander health status 2018* aims to provide an summary of the health of Australia's Aboriginal and Torres Strait Islander people using the most up-to-date information available. The Australian Indigenous HealthInfoNet has prepared the *Summary* as part of our contribution to supporting those who work in the Aboriginal and Torres Strait Islander health sector.

Many reports about Aboriginal and Torres Strait Islander people focus on the negative differences between Aboriginal and Torres Strait Islander people and non-Indigenous people. In addition to acknowledging the health challenges faced by the Aboriginal and Torres Strait Islander population, we also report positive differences and improvements in health whenever the information is available. In this *Summary*, we highlight improvements in the 'good news' sections.

Most of the information in this *Summary* comes from 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 come from:

- health surveys (for example, the Australian Aboriginal and Torres Strait Islander Health Surveys)
- hospitals and other government agencies (such as the birth and death registration systems and the hospital in-patient collections)
- other health services.

The accuracy of identification of Aboriginal and Torres Strait Islander people in health data collections varies across the country. In this *Summary*, statistics are usually from the following jurisdictions: New South Wales (NSW), Queensland (Qld), Western Australia (WA), South Australia (SA) and the Northern Territory (NT). Aboriginal and Torres Strait Islander statistics from these jurisdictions are considered to be reliable.

If you want more information about the health and wellbeing of Aboriginal and Torres Strait Islander people, you can:

- visit our website ([healthinfonet.ecu.edu.au](http://healthinfonet.ecu.edu.au))
- read the latest *Overview of Aboriginal and Torres Strait Islander health status* for a more comprehensive picture of the current health of Aboriginal and Torres Strait Islander people ([healthinfonet.ecu.edu.au/overviews](http://healthinfonet.ecu.edu.au/overviews))
- read one of our health topic reviews ([healthinfonet.ecu.edu.au/reviews](http://healthinfonet.ecu.edu.au/reviews)).

As part of the HealthInfoNet's commitment to making knowledge about Aboriginal and Torres Strait Islander health more accessible, this year we are pleased to present our new-look *Summary*. This *Summary* uses a range of visual aids to assist readers to quickly and easily understand the data presented throughout.

# Historical, social and political factors influencing health

Aboriginal and Torres Strait Islander people have lived on their traditional lands across Australia, including the islands of the Torres Strait, for many thousands of years [1]. Before colonisation, Aboriginal and Torres Strait Islander people lived in family and community groups and moved across the land in seasonal migration.

Colonisation of Australia occurred around 1788 and led to many negative impacts on the health and wellbeing of Aboriginal and Torres Strait Islander people [1, 2]. Some of these impacts are still present today, including:

- racism
- discrimination
- forced removal of children
- loss of identity, language, culture and land [3].

The Aboriginal and Torres Strait Islander concept of health is not just about the individual person, but a whole-of-life view that includes community and wellbeing [4].

Factors known as the 'social and cultural determinants of health' impact the health and wellbeing of Aboriginal and Torres Strait Islander people [4, 5].

Social and cultural determinants of health include:

- early life
- employment
- education
- connection to family and friends.

## Some social determinants among Aboriginal and Torres Strait Islander people

### Education in 2016 [6]



**47%**  
of 20-24 year-olds  
had completed  
year 12



**37%**  
of adults had  
completed  
vocational or  
tertiary studies



**15,395**  
were attending  
university

### Employment in 2016 [6]



**47%**  
of 15-64 year-olds were employed



**70%**  
of 15-24 year-olds were in full or  
part-time employment, education or  
training

### Income in 2016 [6]



**20%**  
of people had a household weekly  
income of \$1,000 or more



## Good news

Year 12 completions have increased substantially. In 2016, nearly half (47%) of Aboriginal and Torres Strait Islander 20-24 year-olds had completed year 12, compared to just 32% in 2006 [6].

University attendance has also increased, with the number of Aboriginal and Torres Strait Islander students more than doubling between 2016 and 2006 (from 7,000 in 2006 to 15,395 students in 2016) [6].



The proportion of Aboriginal and Torres Strait Islander people with weekly household incomes over \$1,000 has increased [6]. In 2016, it was 20% of Aboriginal and Torres Strait Islander people, compared with just 13% in 2006.



Another area of positive change is Aboriginal and Torres Strait Islander self-governance. There has been an increase in the number of Aboriginal and Torres Strait Islander people in all levels of government [7]. Additionally, there has been a move towards better ways of talking and thinking about Aboriginal and Torres Strait Islander health and wellness, and away from focusing only on a 'deficit' approach [3].

## Statistical terms

**Burden of disease** measures the impact of a disease or injury on a population, using the disability-adjusted life years (DALY) measure.

**Hospitalisation** (or hospital admission) refers to a period of care for someone admitted to hospital. Hospitalisation rates are calculated as the total number of periods of care for admitted patients divided by the total number of members of the population. The rate is usually written per 1,000 or per 10,000 members of the population.

**Prevalence** is the number or proportion (%) of cases of a disease or condition in a population at a particular time.

**Rates** are one way of looking at how common a condition or disease is in a population. A rate is calculated by taking the number of cases and dividing it by the population, for a specific amount of time. Rates are usually written per 1,000 or per 10,000 members of the population.

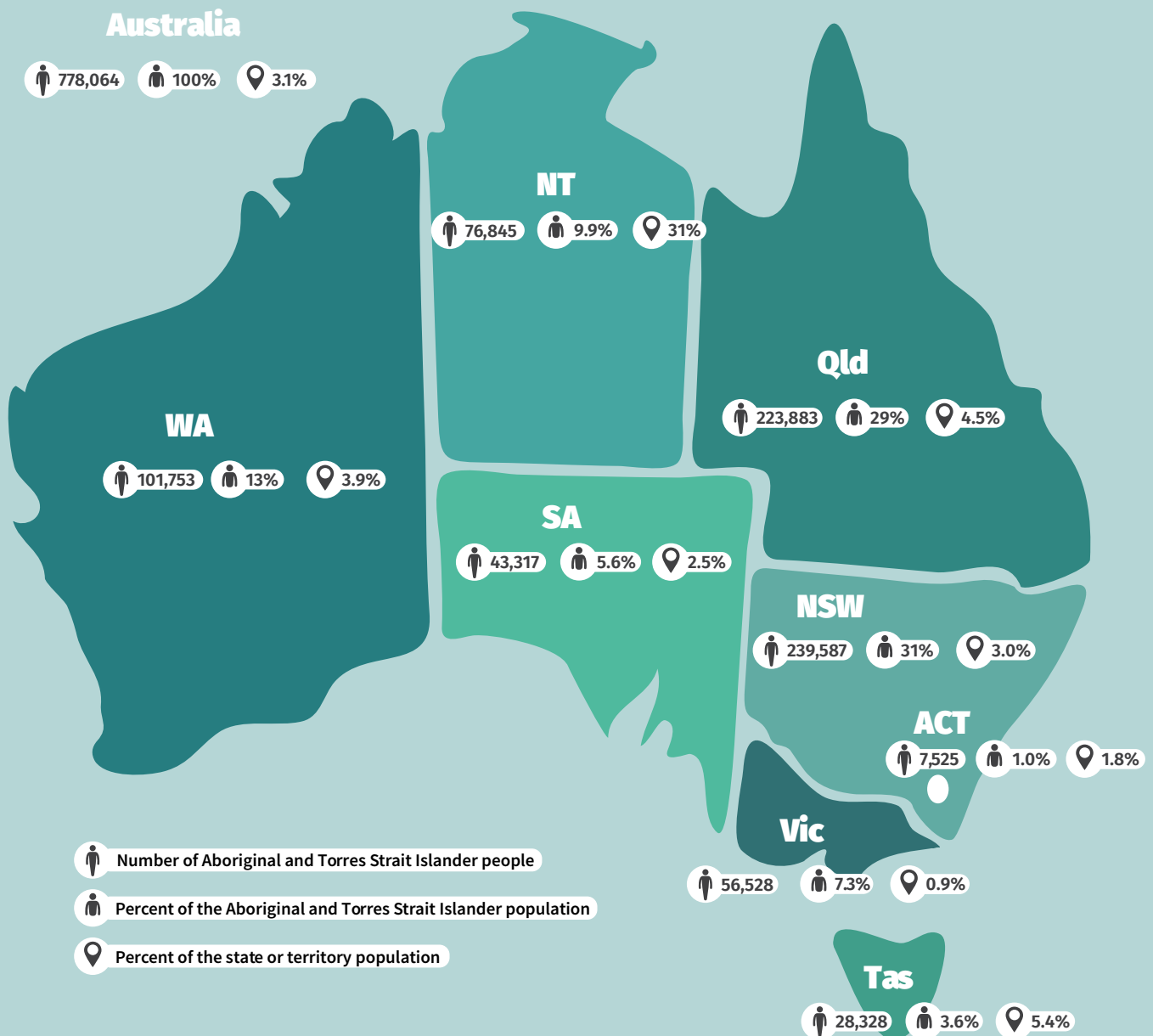
A specific type of rate, called an *age-standardised rate* (or an age-adjusted rate), allows for comparisons between populations that have different age structures. Age-standardising is often used when comparing a condition or disease among Aboriginal and Torres Strait Islander and non-Indigenous populations because the age-structures of these two populations are quite different (the Aboriginal and Torres Strait Islander population is younger). Comparisons of rates between Aboriginal and Torres Strait Islander and non-Indigenous populations in this *Summary* are age-standardised unless otherwise stated.

A *rate ratio* is a way of expressing the comparison of rates between two populations. A rate ratio is calculated by dividing the rate for one population with the rate of the other population. An example of a rate ratio is that cardiovascular disease is 1.2 times more common for Aboriginal and Torres Strait Islander people than non-Indigenous people (1.2 is the rate ratio).

# Aboriginal and Torres Strait Islander population

In 2018 there were an estimated 778,064 Aboriginal and Torres Strait Islander people living in Australia [8]. The Aboriginal and Torres Strait Islander population makes up about 3% of the total Australian population [8, 9].

NSW is the state with the largest number of Aboriginal and Torres Strait Islander people. Qld has the second largest Aboriginal and Torres Strait Islander population [8, 9].



## Where Aboriginal and Torres Strait Islander people live

In 2016, more than one-third of Aboriginal and Torres Strait Islander people lived in a major city [10].

Around one-fifth of Aboriginal and Torres Strait Islander people lived in remote or very remote areas.



**37%**  
major cities



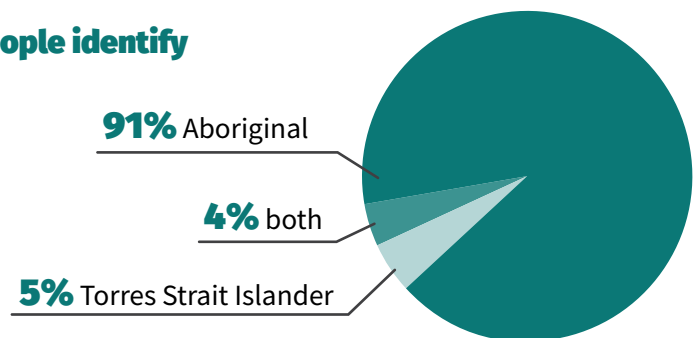
**44%**  
regional areas



**19%**  
remote and very remote areas

## How Aboriginal and Torres Strait Islander people identify

In 2016, 91% of the total Aboriginal and Torres Strait Islander population identified as Aboriginal, 5% as Torres Strait Islander, and 4% as being both Aboriginal and Torres Strait Islander [10].



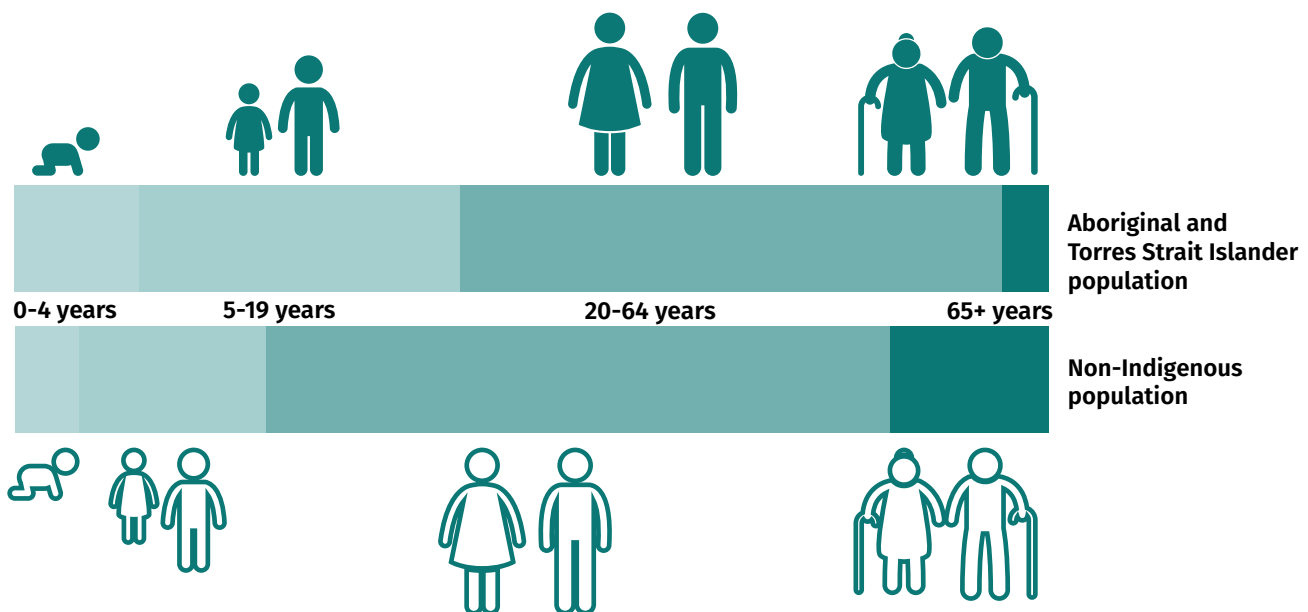
## The age structure of the Aboriginal and Torres Strait Islander population

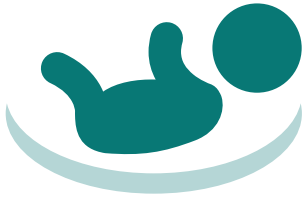
The Aboriginal and Torres Strait Islander population is much younger than the non-Indigenous population [8, 9].

For older populations, only 5% of Aboriginal and Torres Strait Islander people were aged 65+ years, compared to 15% of non-Indigenous people.

In 2018, one-third (33%) of Aboriginal and Torres Strait Islander people were less than 15 years old. For non-Indigenous people, only 18% of the population were less than 15 years old.

The reason why the Aboriginal and Torres Strait Islander population is significantly younger than the non-Indigenous population is largely because of their higher levels of births and deaths [11].





# Births and pregnancy

There were 20,400 births registered in Australia where one or both parents were Aboriginal and/or Torres Strait Islander in 2017 [12]. This accounts for 7% of all births in Australia for that year.

Compared with non-Indigenous women, Aboriginal and Torres Strait Islander women had more babies and had them when they were younger [12].

## Aboriginal and Torres Strait Islander mothers in 2017 [12]



**25.6 years** was the median age (the media age of non-Indigenous mothers was 31.3 years)



**20-24 years** was the age-group with the highest levels of fertility



**13%** of mothers were teenagers

## Birthweight of Aboriginal and Torres Strait Islander babies

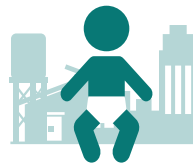
In 2016, babies born to Aboriginal and Torres Strait Islander mothers weighed an average of 3,216 grams, 125 grams less than babies born to non-Indigenous mothers [13].

Low birthweight is a birthweight of less than 2,500

grams. Babies with low birthweight are a concern because they are at greater risk of health problems and death during infancy [14]. Around 12% of babies born to Aboriginal and Torres Strait Islander mothers were of low birthweight [13].



There was a small decrease in the proportion of low birthweight babies between 2006 (12.4%) and 2016 (11.6%) [13].



The levels of low birthweight of babies varied by remoteness, from 11% of babies in major cities to 15% in very remote areas [13].



There are many factors that can have a negative impact on a baby's birthweight, one of which is smoking tobacco [14]. In 2016, 43% of Aboriginal and Torres Strait Islander mothers smoked during pregnancy (compared to 12% of non-Indigenous mothers) [13].

A positive trend is the decrease in the proportion of Aboriginal and Torres Strait Islander mothers who smoked during pregnancy, which has decreased from 50% in 2009 to 43% in 2016 [13].



## Good news

Antenatal care is care from health professionals that women receive during pregnancy. Antenatal care helps pregnant women by monitoring their health, doing blood tests and screening, and providing information and support [15]. It is recommended that women make at least seven to ten visits. Between 2010 and 2016 there was an increase in the proportion of Aboriginal and Torres Strait Islander women attending antenatal care in their first trimester (from 41% in 2010 to 60% in 2016) [13].



# Deaths

In 2017 there were 3,250 deaths registered for Aboriginal and Torres Strait Islander people [16]. This accounts for 2% of all deaths in Australia for that year.

(The ABS notes that the actual number of deaths may be slightly higher because of inaccurate data or delays in registration.)

## Life expectancy of Aboriginal and Torres Strait Islander people [16]

Aboriginal and Torres Strait Islander people are much more likely than non-Indigenous people to die before they are old, especially in remote and very remote areas [17].

The most recent estimates show that an Aboriginal and Torres Strait Islander male born in 2015-2017 is likely to live to 71.6 years, about 9 years less than a non-Indigenous male (who is likely to live to 80.2 years) [17]. An Aboriginal and Torres Strait Islander female born in 2015-2017 is likely to live to 75.6 years, which is almost 8 years less than a non-Indigenous female (who is likely to live to 83.4 years).



## Leading causes of deaths for Aboriginal and Torres Strait Islander people in 2017 [18]



**12%**

from coronary heart disease



**8%**

from diabetes



**7%**

from chronic lower respiratory disease



**6%**

from lung and related cancers

## Deaths of Aboriginal and Torres Strait Islander babies

In 2015-2017, babies born to Aboriginal and Torres Strait Islander mothers were twice as likely to die in their first year as those born to non-Indigenous

mothers [16]. The mortality rate of babies born to Aboriginal and Torres Strait Islander mothers was highest in the NT and lowest in NSW.



### Good news

Since 2010-2012, the life expectancy of Aboriginal and Torres Strait Islander people has increased (2.5 years for males and 1.9 years for females) [17]. The gap in life expectancy between Aboriginal and Torres Strait Islander people and non-Indigenous people has also narrowed slightly (2.0 years for males and 1.7 years for females).

There have been some reductions in deaths rates related to heart, lung and kidney diseases between 1998 and 2015 [19].



# Hospital admissions

Statistics about hospital admissions provide information about the health of a population and give governments information on how well the health system is managing [20]. These statistics, however, provide only a part of the overall picture of health because:

- they only provide a record of illnesses or cases that are serious enough to require hospitalisation
- not everyone has access to hospitals

- different hospitals may have different admission policies
- the statistics relate to events of hospitalisation rather than to patients.

In 2016-17 there were 521,936 hospital admissions for Aboriginal and Torres Strait Islander people [21]. These accounted for 5% of all hospital admissions in Australia during this time. A key factor in the higher rates of hospitalisation for Aboriginal and Torres Strait Islander people was dialysis.

## Aboriginal and Torres Strait Islander hospital admissions

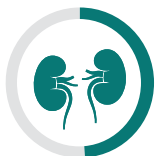


Aboriginal and Torres Strait Islander people were admitted to hospital 2.6 times more than non-Indigenous people in 2016-17 [21].



Aboriginal and Torres Strait Islander people were hospitalised at higher rates than non-Indigenous people across all age-groups (except for 65+ years) in 2013-15 [19].

## Leading causes of Aboriginal and Torres Strait Islander hospital admissions in 2016-17<sup>1</sup> [21]



**49%**  
for dialysis



**7%**  
for injuries



**5%**  
for respiratory conditions



**5%**  
for pregnancy and births

## Potentially preventable hospitalisations among Aboriginal and Torres Strait Islander people in 2016-17 [21]

Potentially preventable hospitalisations are hospital admissions that could have been avoided with access to good primary care and preventive care [22]. They can be used as a way to measure how easily people

can access care and how effective it is [21]. They are calculated for chronic conditions (like diabetes) and conditions that can be prevented with vaccinations.



**3 times**  
more common  
overall than for non-Indigenous people

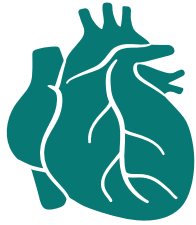


**highest rates**  
of potentially preventable hospitalisations were for chronic conditions



**5 times**  
higher rates for vaccine-preventable conditions compared with non-Indigenous people

<sup>1</sup> This excludes the third leading cause of hospital admission that is for 'symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified,' which includes the examination of abnormal blood, urine and diagnostic imaging without a diagnosis.



# Cardiovascular health

Cardiovascular health involves the heart, arteries, veins and other components of the circulatory system [23]. Cardiovascular disease (CVD) is the term used for all of the serious diseases and conditions affecting the heart and blood vessels [24]. These include:

- coronary (ischaemic) heart disease (CHD)
- heart failure
- cerebrovascular disease (including stroke)
- peripheral vascular disease
- rheumatic heart disease [25].

This term also includes key factors like:

- hypertension (high blood pressure)
- high blood cholesterol [25].

There are a number of risk factors for CVD. Information shows that these risk factors are more common among Aboriginal and Torres Strait Islander people than among non-Indigenous people [26, 27]. These

risk factors include:

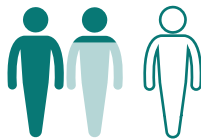
- smoking
- obesity
- not eating enough fruit and vegetables
- high blood pressure
- high cholesterol.

CVD is a serious problem for the Aboriginal and Torres Strait Islander community [28]. Many Aboriginal and Torres Strait Islander people have CVD, which is a leading cause of both hospitalisation and death. Information from 2011 shows that CVD was the third biggest contributor to the total burden of disease for Aboriginal and Torres Strait Islander people (responsible for 12%) [28]. CVD was the biggest contributor to the gap in the total burden of disease between Aboriginal and Torres Strait Islander and non-Indigenous people (19% of the gap).

## The status among Aboriginal and Torres Strait Islander people in 2012-2013 [26, 29-32]



**13%**  
had CVD



**1.2 times**  
more common  
than among non-  
Indigenous people



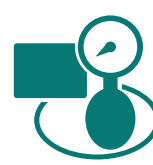
**prevalence**  
increased with age



**11%**  
of men had CVD



**14%**  
of women had CVD



**hypertensive  
disease**  
was the most  
common type of  
CVD



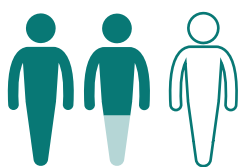
**18%**  
of people in remote  
areas had CVD



**11%**  
of people in non-  
remote areas had  
CVD

## Hospital admissions of Aboriginal and Torres Strait Islander people

In 2016-17 there were 14,789 hospitalisations of Aboriginal and Torres Strait Islander people for CVD [21]. This represents 6% of all Aboriginal and Torres Strait Islander hospitalisations.



Aboriginal and Torres Strait Islander people were 1.7 times more likely to be hospitalised for CVD than non-Indigenous people [21].



Aboriginal and Torres Strait Islander hospitalisation rates for CVD were highest in remote and very remote areas in 2014-15 [3].

## Deaths of Aboriginal and Torres Strait Islander people in 2011-2015 [33]



**24%**  
of all deaths were from CVD



**1.6 times**  
higher than the death rate from CVD for non-Indigenous people



**coronary heart disease**  
was the leading cause of CVD deaths

## Acute rheumatic fever and rheumatic heart disease among Aboriginal and Torres Strait Islander people

Acute rheumatic fever (ARF) and rheumatic heart disease (RHD) are preventable health problems that affect many Aboriginal and Torres Strait Islander people and communities [34]. RHD occurs when ARF, a sickness caused by the germ *Streptococcus*, leads to permanent damage to the heart valves [35, 36]. ARF

and RHD are health conditions that affect Aboriginal and Torres Strait Islander people much more than non-Indigenous people [37].

Information on the number of ARF/RHD cases in Australia is provided by RHD registers from Qld, WA, SA, and the NT [38].



**397 cases**  
of ARF in 2016 [39]



**94%**  
of ARF cases were for Aboriginal and Torres Strait Islander people [39]



**3,392 people**  
had RHD in 2015 [33]



**92%**  
of RHD cases were for Aboriginal and Torres Strait Islander people [33]



### Good news

Between 1998 and 2015 there was a 43% decrease in the death rate for CVD for Aboriginal and Torres Strait Islander people [19]. The gap between Aboriginal and Torres Strait Islander and non-Indigenous deaths due to CVD also narrowed.

Between 2003 and 2011 there was an important reduction in the level of total burden of disease from CVD for Aboriginal and Torres Strait Islander people [28]. This is due to a reduction in the fatal burden (years of life lost because of premature death) from CHD and stroke.



# Cancer

Cancer is a term used for a variety of diseases that cause damage to the body's cells [40, 41]. Cancer is caused by changes to the genes, allowing the cells to grow and multiply in an uncontrolled way. If these cells spread to other parts of the surrounding tissue, or other parts of the body, they are known as malignant.

Cancer is a problem in the Aboriginal and Torres Strait Islander community. Some cancers cause many Aboriginal and Torres Strait Islander deaths, especially lung and other smoking-related cancers [42]. These deaths can be linked to higher proportions of Aboriginal and Torres Strait Islander people engaging in risky behaviours like smoking tobacco, risky drinking and eating unhealthy foods compared with non-Indigenous people [43, 44].

Factors that contribute to the high death rate from cancers for Aboriginal and Torres Strait Islander people include:

- the types of cancers (which are more likely to be fatal)
- access to doctors and screening programs
- comorbidities with other conditions (which can affect the cancer or its treatment)
- substandard treatment [44-47].

Cancer and other neoplasms (an abnormal growth of tissue in a part of the body) were responsible for 9% of the total burden of disease among Aboriginal and Torres Strait Islander people in 2011 [28]. Cancer was the fourth leading disease contributing to the burden of disease for Aboriginal and Torres Strait Islander people.

## The status among Aboriginal and Torres Strait Islander people in 2009-2013

There were 6,397 new cases of cancer diagnosed among Aboriginal and Torres Strait Islander people [42]. This is an average of 1,279 cases per year.

Overall, Aboriginal and Torres Strait Islander people were only slightly (1.1 times) more likely to be

diagnosed with cancer than non-Indigenous people, however, certain types of cancer were more common among Aboriginal and Torres Strait Islander than non-Indigenous people [42]:



**2.4 times**  
more common for  
liver cancer



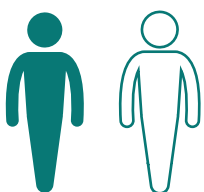
**2.1 times**  
more common for  
lung cancer



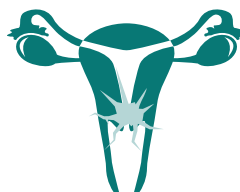
**1.9 times**  
more common for head  
and neck cancers



**1.8 times**  
more common for  
cancer of the uterus



The rates of cancers like colorectal, breast and prostate cancer were either the same or lower for Aboriginal and Torres Strait Islander than for non-Indigenous people [42].



The rate for cervical cancer for Aboriginal and Torres Strait Islander 20-69 year-old women was 2.2 times higher than for non-Indigenous women of the same age [48].

## Hospital admissions of Aboriginal and Torres Strait Islander people

In 2016-17 there were 7,931 hospital admissions for cancer among Aboriginal and Torres Strait Islander people in Australia [21]. This accounts for 3% of all Aboriginal and Torres Strait Islander hospitalisations (excluding admissions for dialysis).

Overall, Aboriginal and Torres Strait Islander people were less likely to be hospitalised for cancer than non-Indigenous people [21].

In 2014–15, hospitalisation rates were higher for lung and cervical cancers for Aboriginal and Torres Strait Islander people than for non-Indigenous people [3]:



**2 times**

higher hospitalisation rates for lung cancer



**3 times**

higher hospitalisation rates for cervical cancer



**males**

had slightly higher hospitalisation rates than women for lung cancer

## Cancer survival and deaths of Aboriginal and Torres Strait Islander people

Some information is available on survival from cancer among Aboriginal and Torres Strait Islander people [42]. This information shows that, of the Aboriginal and Torres Strait Islander people who were diagnosed with cancer between 2007 and 2014, 50% had a chance of surviving for five years after their diagnosis. For non-Indigenous people this figure was 65%.

In 2011-2015, cancer was responsible for the deaths of 2,754 Aboriginal and Torres Strait Islander people, an average of 551 deaths per year [42]. Cancer related death rates were higher for Aboriginal and Torres Strait Islander people than for non-Indigenous people.



In 2017, cancers of the trachea (windpipe), bronchus (major air passages to the lungs) and lung were the fourth leading cause of death for Aboriginal and Torres Strait Islander people [18].



Deaths rates from cancers of the trachea, bronchus and lung were 2.2 times higher for Aboriginal and Torres Strait Islander people than for non-Indigenous people in 2017 [18].



Lung cancer was the leading cause of cancer death for both Aboriginal and Torres Strait Islander people and non-Indigenous people in 2011-2015 [42].



# Diabetes

Diabetes (diabetes mellitus) is a chronic condition where the body cannot properly process glucose (sugar) from food [49]. Diabetes occurs when the body is not producing enough insulin (a hormone which controls blood glucose), or when the body cannot effectively use the insulin.

The three most common types of diabetes are type 1 diabetes, type 2 diabetes and gestational diabetes mellitus (a type of diabetes that occurs in pregnancy).

Diabetes is a serious problem for the Aboriginal and Torres Strait Islander population [50]. The most common form is type 2 diabetes, which occurs at earlier ages for Aboriginal and Torres Strait Islander people and is often undetected and untreated.

Diabetes was responsible for 4% of the total burden of disease among Aboriginal and Torres Strait Islander people in 2011 [28].

## The status among Aboriginal and Torres Strait Islander people in 2012-2013 [50]



**13%**  
of adults had diabetes



**3.5 times**  
more likely to have diabetes than non-Indigenous adults



**prevalence**  
increased with age



Of Aboriginal and Torres Strait Islander people with diabetes, a larger proportion were women (56%) than men (44%).



Aboriginal and Torres Strait Islander adults in remote areas were twice as likely to have diabetes as those living in non-remote areas.

## Hospital admissions of Aboriginal and Torres Strait Islander people in 2015-16

Hospital services are usually required to treat the advanced stages of diabetes complications. In 2015-16, there were around 2,300 hospitalisations of Aboriginal and Torres Strait Islander people for type 2

diabetes [51]. There were around 860 hospitalisations of Aboriginal and Torres Strait Islander people for type 1 diabetes.

## Deaths of Aboriginal and Torres Strait Islander people in 2017 [18]



Diabetes was the second leading cause of death among Aboriginal and Torres Strait Islander people.

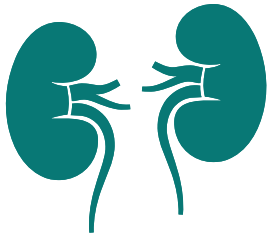


The death rate from diabetes was 5.2 times higher for Aboriginal and Torres Strait Islander people than for non-Indigenous people.



### Good news

There are eight chronic disease management indicators relating to diabetes that form part of the National Key Performance Indicators. There have been improvements in six of these eight indicators in 2017 [52].



# Kidney health

Keeping the kidneys healthy is important because they help the body by removing waste and extra water, and keep the blood clean and chemically balanced [53]. If the kidneys stop working properly waste can build up in the blood and damage the body [54]. When someone has damage to their kidneys, it might be referred to as:

- kidney disease
- renal disease
- renal disorder.

Risk factors for kidney disease include:

- obesity
- diabetes
- smoking
- cardiovascular disease [55].

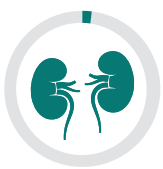
Managing kidney disease may include dialysis, which involves filtering the blood through a machine [56].

If kidney disease is left untreated a kidney transplant may be required.

Kidney disease is a serious health problem for many Aboriginal and Torres Strait Islander people who tend to be diagnosed at younger ages than non-Indigenous people [19]. Severe kidney disease is also more common among Aboriginal and Torres Strait Islander people than non-Indigenous people. In particular, chronic kidney disease (CKD) and end-stage kidney disease (ESKD) are reported much more commonly among Aboriginal and Torres Strait Islander people than among non-Indigenous people.

Kidney and urinary diseases were responsible for 2.5% of the total burden of disease among Aboriginal and Torres Strait Islander people in 2011 [28].

## The status among Aboriginal and Torres Strait Islander people in 2012-2013 [26]



**2%** reported kidney disease as a long-term health condition



**3.7 times** more common than among non-Indigenous people



**proportions** were similar for men and women

## Hospital admissions of Aboriginal and Torres Strait Islander people



Dialysis was the leading cause of hospitalisation for Aboriginal and Torres Strait Islander people in 2016-17 [21].



In 2015-16, hospitalisation rates for chronic kidney disease were 5.0 times higher for Aboriginal and Torres Strait Islander people than for non-Indigenous people [57].



In 2016-17, hospitalisation rates were 2.6 times higher for Aboriginal and Torres Strait Islander people than for non-Indigenous people [21]. About 80% of this difference was due to the higher level of dialysis treatments for Aboriginal and Torres Strait Islander people.

## End stage kidney disease among Aboriginal and Torres Strait Islander people

End-stage kidney disease (ESKD), also known as end-stage renal disease (ESRD), is when the kidneys have totally or almost totally stopped working [53]. People with ESKD must either have regular dialysis or have a kidney transplant to stay alive [56].

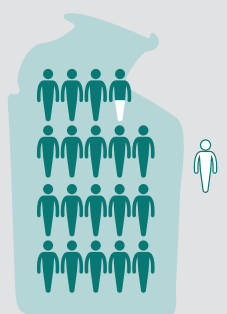
ESKD is much more common among Aboriginal and Torres Strait Islander people than non-Indigenous people [19].



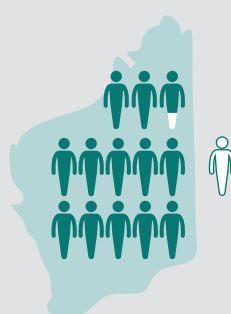
In 2011-2015, ESKD was 6.8 times more common for Aboriginal and Torres Strait Islander people than for non-Indigenous people [8, 58-60].



Rates of ESKD were higher for Aboriginal and Torres Strait Islander adults than for non-Indigenous adults in all age-groups in 2011-2015 [8, 58-60].



The NT had the highest rates of ESKD for Aboriginal and Torres Strait Islander people (18.6 times higher than for non-Indigenous people) in 2011-2015 [8, 58-60].



WA had the second highest rates of ESKD for Aboriginal and Torres Strait Islander people (12.7 times higher than for non-Indigenous people) in 2011-2015 [8, 58-60].

In 2014-15 there were 207,605 hospitalisations for ESKD disease among Aboriginal and Torres Strait Islander people [3]. This was 11.2 times higher than the hospitalisation rate for non-Indigenous people [3].



Hospitalisation rates for ESKD increased with remoteness [3]. In remote and very remote areas, the rate for Aboriginal and Torres Strait Islander people was almost 70 times higher than that for non-Indigenous people.

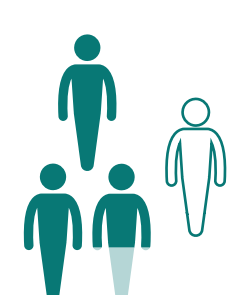


Aboriginal and Torres Strait Islander people living in remote and very remote areas were 2.9 times more likely to be hospitalised for ESKD than Aboriginal and Torres Strait Islander people living in major cities [3].

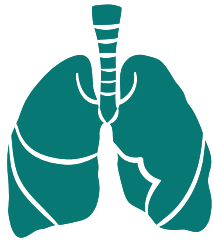
## Deaths of Aboriginal and Torres Strait Islander people



In 2017 there were 52 Aboriginal and Torres Strait Islander deaths from diseases of the urinary system (like disorders of the bladder and urethra, and kidney diseases) [18]. Death rates from these conditions were 1.6 times higher than those for non-Indigenous people.



In 2012-2016, the death rate for kidney disease for Aboriginal and Torres Strait Islander people was 2.6 times higher than the rate for non-Indigenous people [61].



# Respiratory health

The respiratory system includes all parts of the body involved with breathing, including the nose, throat, larynx (voice box), trachea (windpipe) and lungs [62]. Respiratory disease occurs if any of these parts of the body are damaged or diseased and breathing is affected [63, 64]. These diseases include respiratory conditions that come on quickly or don't last long (acute), or those that last a long time (chronic) [28].

Respiratory disease is linked to a number of risk factors, such as:

- smoking (including passive smoking)
- poor environmental conditions
- exposures to gases, fumes or chemicals
- infections and other diseases [28, 62].

Children are especially vulnerable to developing respiratory diseases if they have:

- exposure to tobacco smoke
- poor living conditions
- poor nutrition
- limited access to medical care [65, 66].

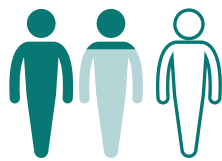
Respiratory diseases were responsible for 8% of the burden of disease among Aboriginal and Torres Strait Islander people in 2011 [28]. Asthma (a chronic disease where the airways narrow due to inflammation) and chronic obstructive pulmonary disease (COPD; a group of lung diseases that block airflow) were responsible for most of this burden.

## The status among Aboriginal and Torres Strait Islander people in 2012-2013 [67]



**31%**

had a long-term respiratory condition<sup>2</sup>



**1.2 times**

more common than among non-Indigenous people



**34%**

of women had a respiratory condition



**28%**

of men had a respiratory condition

## Asthma among Aboriginal and Torres Strait Islander people in 2012-2013 [67]



**18%**

had asthma



**asthma**

was the most common long-term respiratory disease



**1.9 times**

more common than among non-Indigenous people

Other long-term respiratory diseases reported by Aboriginal and Torres Strait Islander people were chronic sinusitis (reported by 8% of Aboriginal and

Torres Strait Islander people) and COPD (reported by 4% of Aboriginal and Torres Strait Islander people) [67].

<sup>2</sup> A long-term respiratory condition is one that lasted, or was expected to last, for six months or longer.

## Hospital admissions of Aboriginal and Torres Strait Islander people

In 2016-17 there were 27,567 hospitalisations of Aboriginal and Torres Strait Islander people for respiratory diseases [21]. The Aboriginal and Torres Strait Islander hospitalisation rate was 2.5 times higher than the non-Indigenous rate.

In 2014-15, Aboriginal and Torres Strait Islander people were admitted into hospital more often for some respiratory conditions than non-Indigenous people [3], including:



**5 times**  
higher hospitalisation  
rate for COPD

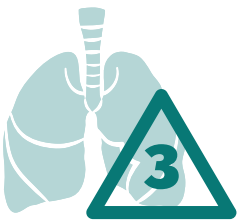


**3.1 times**  
higher hospitalisation  
rate for influenza and  
pneumonia



**1.8 times**  
higher  
hospitalisation rate  
for asthma

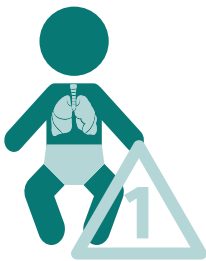
## Deaths of Aboriginal and Torres Strait Islander people



Chronic lower respiratory disease (a group of diseases that includes asthma, bronchitis, emphysema<sup>3</sup>) was the third highest cause of death for Aboriginal and Torres Strait Islander people in 2017 [18].



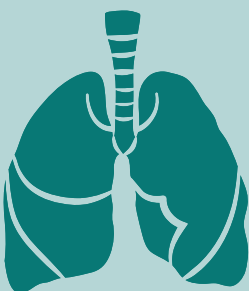
The death rate from chronic lower respiratory disease was 2.9 times higher for Aboriginal and Torres Strait Islander people than for non-Indigenous people in 2017 [18].



Influenza and pneumonia was a leading cause of respiratory related deaths for Aboriginal and Torres Strait Islander infants (babies under one year of age) in 2013-2017 [18].



Aboriginal and Torres Strait Islander infants were 4.5 times more likely to die from influenza and pneumonia than non-Indigenous infants in 2013-2017 [18].



### Good news

While deaths rates from respiratory diseases tend to be higher for Aboriginal and Torres Strait Islander people than for non-Indigenous people, there has been some progress towards closing this gap [19]. The death rates for respiratory disease for Aboriginal and Torres Strait Islander people dropped significantly between 1998 and 2015.

<sup>3</sup> Bronchitis is a disease where the lining of bronchial tubes, which carry air to and from the lungs, become inflamed. Symptoms of bronchitis include coughing up mucus and shortness of breath. Emphysema is a progressive lung disease where the air sacs, or alveoli, of the lungs are damaged. This results in irreversible damage to the lungs' tissues.



# Social and emotional wellbeing

For many Aboriginal and Torres Strait Islander people, social and emotional wellbeing (SEWB) is the foundation of mental and physical health [68]. Aboriginal and Torres Strait Islander people view health as holistic, including mental, physical, cultural and spiritual health. Factors that are important to Aboriginal and Torres Strait Islander people's SEWB include:

- connection to country, spirituality and ancestry
- kinship (connection to family)
- self-determination [69].

There are also some factors that can have a negative impact on Aboriginal and Torres Strait Islander people's SEWB, such as:

- discrimination and racism
- grief and loss
- trauma
- alcohol and other drug use
- violence [69].

## The status among Aboriginal and Torres Strait Islander people

### Psychological distress

It can be difficult to measure SEWB, however, there is information available on levels of 'psychological distress'. Psychological distress is a term used to describe unpleasant emotions like feeling hopeless, very sad, nervous, jumpy or restless [70].

The level of psychological distress experienced by Aboriginal and Torres Strait Islander people is directly linked to specific stressful life events that they have experienced [71].



**30%**

of adults felt high or very high levels of psychological distress in the previous four weeks in 2012-2013 [26, 72]



**2.7 times**

higher levels of high or very high psychological distress compared with non-Indigenous people in 2012-2013 [26, 72]



**68%**

of adults experienced one or more personal stressors (stressful life events) in the previous year in 2014-2015 [71]

### Positive feelings

Another way to measure SEWB is through people's experiences of positive feelings.



The vast majority of adults (91%) felt happy either some, most, or all of the time in 2012-2013 [73].



More than half (54%) of adults rated their overall life satisfaction as at least 8 out of 10 (0 was completely dissatisfied and 10 was completely satisfied) in 2014-2015 [74].

## Mental health conditions

Another way of measuring SEWB is by looking at mental health conditions. The most recent information is from 2014-2015 [75].



**29%** had a clinically diagnosed mental health condition



**25%** of men had a clinically diagnosed mental health condition



**34%** of women had a clinically diagnosed mental health condition



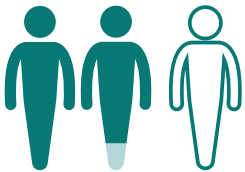
**33%** of people in non-remote areas had a mental health condition



**16%** of people in remote areas had a mental health condition

## Hospital admissions of Aboriginal and Torres Strait Islander people in 2016-17 [21]

There were 21,176 hospitalisations of Aboriginal and Torres Strait Islander people for mental health conditions in 2016-17 [21].<sup>4</sup>



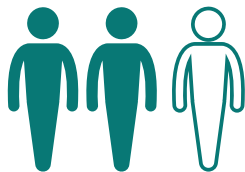
Hospitalisation rates for mental health conditions were 1.9 times higher for Aboriginal and Torres Strait Islander people than non-Indigenous people [21].



Intentional self-harm was the cause of 3,008 hospitalisations of Aboriginal and Torres Strait Islander people. [21].

## Deaths of Aboriginal and Torres Strait Islander people

Mental health conditions were responsible for 385 deaths of Aboriginal and Torres Strait Islander people during 2011-2015 [33].



The death rate from suicides was 2 times higher for Aboriginal and Torres Strait Islander people than for non-Indigenous people in 2017 [18].



Suicide was the 5th leading cause of death for Aboriginal and Torres Strait Islander people in 2017 [18].



Aboriginal and Torres Strait Islander people die from suicide at much younger ages than non-Indigenous people [18]. In 2013-2017, suicide was the leading cause of death for Aboriginal and Torres Strait Islander people aged 15-44 years.

<sup>4</sup> Hospital admissions from mental health conditions use information from the broad International Classification of Diseases (ICD) classification 'mental and behavioural disorders'. It includes mental illness and mental health problems, as well as mental retardation and disorders relating to the use of substance like alcohol, tobacco, other drugs and volatile substances; it does not include the results of suicide.



# Eye health

Healthy eyes are important for everyday life [76]. Poor eye health can limit an individual's education, employment and social opportunities [33]. It can also increase the risk of injury and increase an individual's dependence on services and other people.

There are a number of factors that can have an impact on the health of the eyes, including:

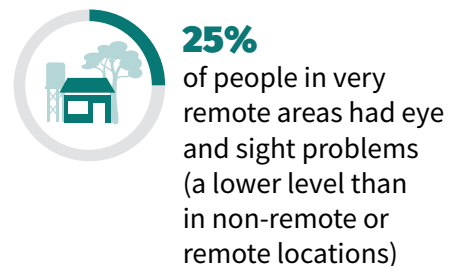
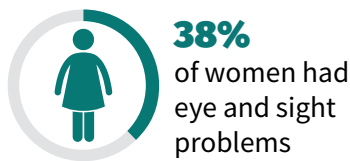
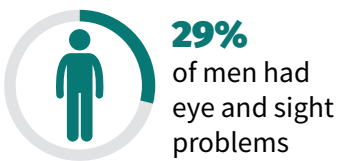
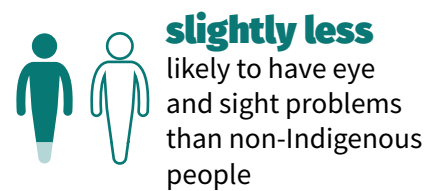
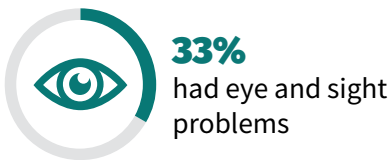
- genetics (family history)
- old age
- diseases (such as diabetes)
- injuries
- poor diet
- smoking.

While Aboriginal and Torres Strait Islander children generally have very good eyesight [3, 77], Aboriginal and Torres Strait Islander adults are more likely than non-Indigenous adults to experience vision loss or blindness [78]. Uncorrected refractive error, cataracts, diabetic retinopathy and trachoma are the main causes of vision loss and blindness among Aboriginal and Torres Strait Islander people [78, 79].

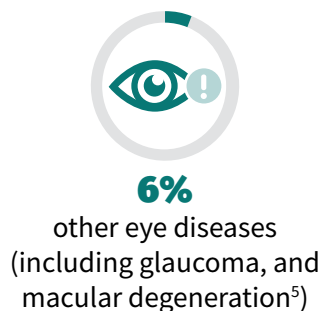
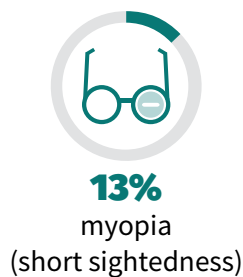
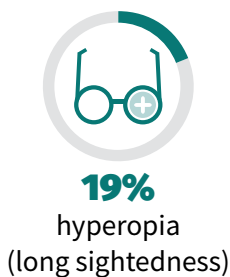
In 2011, hearing and vision disorders together contributed 1.2% to the total burden of disease experienced by Aboriginal and Torres Strait Islander people [28]. The burden of vision loss was estimated to be 3 times more for Aboriginal and Torres Strait Islander people than for non-Indigenous people.

## The status among Aboriginal and Torres Strait Islander people

Self-reported information from 2012-2013 [67, 80, 81]



In 2012-2103, the most common eye conditions for Aboriginal and Torres Strait Islander people [81]:



<sup>5</sup> Glaucoma is a condition that leads to poor drainage of the clear liquid that normally flows in and out of the front section of the eye. This causes increased pressure that can damage the nerve cells and lead to loss of eyesight. Macular degeneration is eye damage due to ageing.

<sup>6</sup> Eye examinations were done as part of the National Eye Health Survey, which examined the eyes of Aboriginal and Torres Strait Islander adults (aged 40-92 years) and non-Indigenous adults (aged 50-98 years) living in 30 cities, rural and remote areas across Australia in 2015-2016 [78].

## Information from eye examinations in 2015-2016<sup>6</sup> [78]



11% of Aboriginal and Torres Strait Islander adults had bilateral vision impairment (impaired vision in both eyes), a level 3 times higher than for non-Indigenous adults.



0.3% of Aboriginal and Torres Strait Islander adults had bilateral blindness (being blind in both eyes), a level 3 times higher than for non-Indigenous adults.



Levels of bilateral vision impairment among Aboriginal and Torres Strait Islander adults increased with age.



Levels of bilateral vision impairment among Aboriginal and Torres Strait Islander adults was highest in very remote areas.

## Hospital admissions of Aboriginal and Torres Strait Islander people

In 2016-17 there were 4,280 hospital admissions for eye diseases among Aboriginal and Torres Strait Islander people [21]. More detailed information

is available for 2014-16 when there were 7,367 hospitalisations for eye diseases among Aboriginal and Torres Strait Islander people, of which [82]:



**61%** of eye hospital admissions were for 'disorders of the lens' (primarily cataracts)



**45%** of eye hospital admissions were for men



**55%** of eye hospital admissions were for women

## Trachoma among Aboriginal and Torres Strait Islander people

Trachoma is an eye infection caused by a type of bacteria called *Chlamydia trachomatis* [83]. Untreated and repeated trachoma infections can damage the eyes and eyelids, making the eyelashes turn inwards and causing damage to the front of the eye (trichiasis).

Trachoma is usually found in young children who are 2-3 years-old, but can also occur in older children and teenagers. Trachoma is related to poor living

conditions and overcrowded houses where there may be issues with personal hygiene [79].

Australia is the only developed country where trachoma is still a significant problem in certain locations, almost all of which are Aboriginal and Torres Strait Islander communities in remote and very remote parts of the NT, SA and WA [79]. There have, however, been substantial improvements in controlling trachoma in these communities.



In 2017, an estimated 4% of Aboriginal and Torres Strait Islander 5-9 year old children in selected communities had trachoma [79]. This is a decrease of 14% since 2009 [83].



In 2016, screening in at-risk communities in WA, SA and the NT found trichiasis in 0.3% of Aboriginal and Torres Strait Islander adults [79].



### Good news

There has been a reduction in the prevalence of blindness among Aboriginal and Torres Strait Islander adults [77, 78]. Blindness among Aboriginal and Torres Strait Islander adults has reduced from 6 times higher than that experienced by non-Indigenous adults in 2008 [77] to 3 times higher in 2016 [78].



# Environmental health

Environmental health refers to natural or built environments that may impact on an individual's health and wellbeing [85]. Unhealthy environments can lead to many health problems, including:

- intestinal infections
- skin infections
- chronic diseases (such as acute rheumatic fever)
- some cancers [86].

Aboriginal and Torres Strait Islander people are more likely to experience issues from poor environmental health than non-Indigenous people. This is because of:

- the remoteness of some communities
- overcrowding
- poor infrastructure
- lack of access to housing repairs and maintenance
- the cost of maintenance [86, 87].

## The status among Aboriginal and Torres Strait Islander people



**72%** lived in a house of 'acceptable' standard in 2016 [88]



**18%** lived in an overcrowded house in 2016 [89]



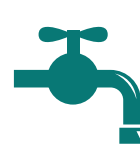
**NT** had the highest levels of overcrowding in 2016 [89]



**26%** of households reported major structural issues with their house in 2014-2015 [3]



**major structural issues** occurred most often in very remote areas in 2014-2015 [3]



**9 in 10** households reporting working facilities in 2014-2015<sup>7</sup> [3]



Hospital admissions for diseases related to environmental health were 2.3 times higher for Aboriginal and Torres Strait Islander people than for non-Indigenous people in 2014-15 [3].



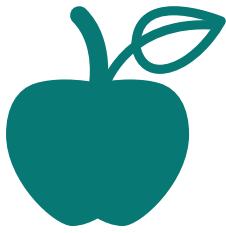
The death rate from diseases related to poor environmental health were 1.7 times higher for Aboriginal and Torres Strait Islander people than for non-Indigenous people in 2010-2014 [3].



### Good news

There have been small decreases in overcrowding in Aboriginal and Torres Strait Islander households [3]. Nationally in 2014-2015, 21% of Aboriginal and Torres Strait Islander people lived in an overcrowded house, a decrease from 28% in 2008. Declines in overcrowding have also occurred in very remote areas [3]. In 2014-2015, 49% of Aboriginal and Torres Strait Islander people lived in an overcrowded house, a decrease from 63% in 2004-2005.

<sup>7</sup> Household facilities are those used to wash people and clothes, prepare food, and working plumbing.



# Nutrition

Good nutrition is important for a healthy mind and body [90]. The Australian Dietary Guidelines recommend that adults eat fruit and plenty of vegetables each day, as well as reduced-fat milk, yoghurts and cheeses, and limit the amount of sugars, salt and junk foods (discretionary foods) [91].

Poor nutrition can contribute to:

- overweight and obesity
- malnutrition
- cardiovascular disease
- type 2 diabetes
- tooth decay [92, 93].

Poor nutrition is a problem for Aboriginal and Torres Strait Islander people [94]. Five of the seven biggest risk factors that contribute to the gap in health between Aboriginal and Torres Strait Islander people are directly related to poor diet [28]. These include:

- obesity
- high blood cholesterol

- alcohol
- high blood pressure
- low fruit and vegetable intake.

Before colonisation, Aboriginal and Torres Strait Islander people enjoyed a traditional diet full of healthy, nutrient rich food [92, 95]. Aboriginal and Torres Strait Islander people today tend to have diets that contain added sugars, saturated fats and low levels of fibre, however, traditional foods are still an important part of the diet in some communities [96].

A 2011 study about burden of disease examined 29 risk factors for disease burden, 13 of which were related to diet [28]. The combined effect of all dietary risks contributed 10% to the total burden of disease for Aboriginal and Torres Strait Islander people, impacting particularly on older Aboriginal and Torres Strait Islander people.

## The status among Aboriginal and Torres Strait Islander people

### Fruit consumption in 2012-2013 [94, 97]



**54%**

met the daily recommended serves of fruit



**average**

daily serves of fruit was 1 for adults and 1.6 for children



**51%**

of men ate the recommended amount of fruit



**57%**

of women ate the recommended amount of fruit

### Vegetable consumption in 2012-2013 [94, 97, 98]



**8%**

met the daily recommended serves of vegetables



**average**

daily serves of vegetables was 2.1 for adults and 1.4 for children



**3%**

of men ate the recommended amount of vegetables



**7%**

of women ate the recommended amount of vegetables

## Junk food (discretionary food) consumption in 2012-2013 [97, 99]

Junk foods (technically known as discretionary foods) are foods and drinks that are not necessary for nutrition, many of which have a lot of saturated fats, added sugar, added salt, and/or alcohol [94].

In 2012-2013, a large proportion of Aboriginal and Torres Strait Islander people consumed discretionary foods [99].



**41%**

of daily energy was from discretionary foods on average



**9%**

of daily energy was from cereal-based foods (like cakes and biscuits)



**7%**

of daily energy was from non-alcoholic drinks (like soft drinks)



**similar**

proportions of men and women consumed most discretionary foods



Twice as many Aboriginal and Torres Strait Islander men as women drank alcohol.



Higher proportions of Aboriginal and Torres Strait Islander people in non-remote areas consumed discretionary foods than those in remote areas (except non-alcoholic drinks, which were the same for both locations).

## Breastfeeding among Aboriginal and Torres Strait Islander people

Breastfeeding is an important part of providing a healthy start for both babies and mothers [101]. Breast milk provides all the energy and nutrients that a baby needs for the first six months of life [91, 102]. Breastfeeding provides many nutrients needed for the healthy development of the brain and body, as well as protection for the baby against SIDS, asthma and infectious diseases. It also reduces the likelihood of developing a chronic disease later in life. The Australian Dietary Guidelines recommendation is to 'encourage, support and promote breastfeeding' [91].

Providing a baby with breastmilk within the first hour of their birth (technically known as 'breastfeeding initiation') is important because the first milk (colostrum) has many protective factors that can protect against germs [101, 102]. In 2010, breastfeeding initiation levels were similar among Aboriginal and Torres Strait Islander and non-Indigenous mothers.

The most recent information on breastfeeding among Aboriginal and Torres Strait Islander babies is from 2014-2015 when [19, 75]:



**80%**

of babies had been breastfed



**1.2 times**

more likely than non-Indigenous babies to have never been breastfed



**NT**

had the highest levels of breastfeeding (98% of babies)



**Vic**

had the lowest levels of breastfeeding (75% of babies)



### Good news

Recent information shows that overall there are many similarities between the diets of Aboriginal and Torres Strait Islander and non-Indigenous people [100].



# Physical activity

Physical activity is important for maintaining good health and wellbeing [103]. Being physically active can help prevent heart disease, type 2 diabetes, some cancers, anxiety, depression, musculoskeletal problems, weight gain, and some injuries [104, 105]. Physical inactivity (or sedentary behaviour) is a risk factor associated with a number of potentially preventable chronic diseases that are common in the Aboriginal and Torres Strait Islander population [19]. Australia's Physical Activity and Sedentary Behaviour Guidelines recommend a combination of medium and

high intensity physical activity on most (or all) days of the week to improve health and reduce the risk of chronic disease and other conditions [103, 104].

The most recent information about physical activity among Aboriginal and Torres Strait Islander people is from the 2012-2013 Australian Aboriginal and Torres Strait Islander Health Survey [70]. This information was gathered by surveying Aboriginal and Torres Strait Islander people about how active they were in the day or the week prior to the interview.

## The status among Aboriginal and Torres Strait Islander people

### Non-remote areas in 2012-2013 [70, 103]



**47%**

of adults met the target of 30 minutes of moderate intensity physical activity on most days



**41%**

of adults exercised for at least 150 minutes over five sessions in the previous week



**61%**

of adults were physically inactive (sedentary or had exercised at a low level) in the previous week



**5.3 hours**

per day were spent on sedentary activities by adults on average

### Remote areas in 2012-2013 [103]



**55%**

of adults exceeded the recommended 30 minutes of physical activity on most days



**21%**

did not participate in any physical activity in the previous day



## Good news

Aboriginal and Torres Strait Islander 5-17 year-olds in non-remote areas spent an average of 2 hours per day participating in physical activity – double the recommended amount of 1 hour [103]. This was 25 minutes more than non-Indigenous children.

In remote areas, 82% of Aboriginal and Torres Strait Islander children aged 5 years and older did more than 60 minutes of physical activity in the previous day [103].



# Tobacco use

Tobacco smoking is an issue of concern for Aboriginal and Torres Strait Islander people and communities around Australia. Smoking is a key cause of sickness and death. It can have many negative impacts on health, and contributes to:

- cancer
- lung disease
- heart disease
- eye conditions [19, 106].

Breathing in someone else's tobacco smoke (known as passive smoking) can also make people sick, especially children [107].

According to information from 2011, tobacco smoking is the biggest contributor to the burden of disease for Aboriginal and Torres Strait Islander people [28]. It is also the risk factor that contributes the most to the gap in health between Aboriginal and Torres Strait Islander and non-Indigenous people.

## The status among Aboriginal and Torres Strait Islander people in 2014-2015 [75]



**39%**  
smoked daily



**42%**  
of men smoked daily



**36%**  
of women smoked daily



**35-44 years**  
was the age group  
with the highest  
proportion of daily  
smokers



**37%**  
of people in  
non-remote areas  
smoked daily



**47%**  
of people in remote  
areas smoked daily



**2.8 times**  
more common  
than among non-  
Indigenous people

## Good news

A study of smoking among Aboriginal and Torres Strait Islander people has found important long-term reductions in smoking rates over a 20 year period (from 1994 to 2014-15) [108]. The proportion of Aboriginal and Torres Strait Islander adult smokers has reduced. The proportion of 15-17 year-olds beginning to smoke has also seen some important reductions. These are encouraging trends, which will result in better health outcomes over the long-term.





# Alcohol use

Alcohol is a drink made from the fermentation of grains (beer), vegetables (vodka) and fruits (wine) [109]. Ethanol (ethyl alcohol) is the active ingredient in alcohol that causes people to feel drunk when they have consumed an alcoholic drink [110]. Alcohol acts as a depressant, slowing down the messages between the brain and the body [111].

In small amounts, drinking alcohol can make a person feel relaxed and sociable [110]. Drinking a lot of alcohol can affect muscle control, balance and decision making [111]. People who have drunk a lot of alcohol are more likely to have accidents or falls, get into fights or do things they regret.

Consuming alcohol regularly can contribute to an increased risk of serious health problems like:

- cancer of the mouth, throat and oesophagus
- heart disease
- liver disease
- mental health conditions like depression
- dementia
- increased problems with diabetes [112-114].

Alcohol can also lead to community problems, such as:

- increases in crime and violence
- trauma
- domestic and family violence [114].

Alcohol is a serious problem in some Aboriginal and Torres Strait Islander communities. While information shows that Aboriginal and Torres Strait Islander people are less likely to drink alcohol than non-Indigenous people, those who do drink are more likely to drink at levels that could cause harm [19, 115].

In 2011, alcohol use was responsible for 8% of the total burden of disease for Aboriginal and Torres Strait Islander people [28]. The highest levels of disease burden from alcohol use among Aboriginal and Torres Strait Islander people were for mental and substance use disorders (22%), injury (19%), and gastrointestinal diseases (15%) .

## Australian Guidelines to Reduce the Health Risks From Drinking Alcohol

In 2009 the National Health and Medical Research Council (NHMRC) released the Australian Guidelines to Reduce the Health Risks From Drinking Alcohol [116]. These guidelines provide a number of recommendations to reduce the harms from drinking alcohol; they apply to both men and women.

*Guideline 1:* to reduce the risk of alcohol-related harm over a lifetime (lifetime risk), no more than 2 standard drinks should be consumed on any day.

*Guideline 2:* to reduce the risk of injury on a single occasion of drinking (short-term risk), no more than 4 standard drinks should be consumed.

## The status among Aboriginal and Torres Strait Islander people

### Abstinence (no alcohol consumption)

**38%**  
of people 15 years and older did not drink alcohol in the previous year in 2014-2015 [75]



**23%**  
of people 18 years and older had never drank alcohol or had not done so for more than 1 year in 2012-2013 [117]



**1.6 times**  
more common than among non-Indigenous people in 2012-2013 [118]

## Short-term risk (no more than four drinks on a single occasion) in 2012-2013 [117, 118]



**18%**

of adults did not exceed guideline 2



**57%**

of adults exceeded guideline 2



**more likely**

than non-Indigenous people to exceed guideline 2



**men**

were more 1.5 times more likely to exceed guideline 2 than women

## Lifetime risk (no more than two standard drinks on a single day) in 2012-2013 [118]



**20%**

of adults exceeded guideline 1



**similar**

lifetime drinking risk for Aboriginal and Torres Strait Islander people and non-Indigenous people



**men**

were more 2.7 times more likely to exceed guideline 1 than women

## Hospital admissions of Aboriginal and Torres Strait Islander people in 2014-15 [3]



The hospitalisation rate for alcohol-related conditions was 4 times higher for Aboriginal and Torres Strait Islander men than for non-Indigenous men.

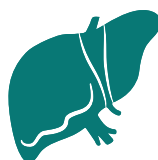


The hospitalisation rate for alcohol-related conditions was 3.4 times higher for Aboriginal and Torres Strait Islander women than for non-Indigenous women.

## Deaths of Aboriginal and Torres Strait Islander people in 2013-2017 [18]



The death rate from alcohol was 5 times higher for Aboriginal and Torres Strait Islander people than for non-Indigenous people.



The main cause of alcohol-related deaths was alcoholic liver disease.

## Fetal alcohol spectrum disorder among Aboriginal and Torres Strait Islander people

Drinking alcohol while pregnant can harm the unborn baby [119]. If a woman drinks while pregnant she risks having a baby with fetal alcohol spectrum disorder (FASD). FASD is a diagnostic term used to describe the range of mental and physical conditions that are caused by drinking alcohol when pregnant.

There good news is that there has been a significant decline in the proportion of mothers of Aboriginal and Torres Strait Islander children that drank throughout their pregnancy, from 20% of mothers in 2008 to 10% in 2014-2015 [75].



### Good news

Between 2010 and 2016 there was a significant drop (from 32% to 20%) in the proportion of Aboriginal and Torres Strait Islander people aged 12 years and older who exceeded guideline 1 (no more than two standard drinks on a single day) [115].



# Illicit drug use

Illicit drugs include substances that are illegal to use (for example, cannabis, heroin and cocaine) and the non-medical use of drugs that are legally available (for example, pain killers and sleeping pills) [120].

Using illicit drugs can lead to a number of health problems, including:

- injury
- chronic diseases like heart and liver problems
- blood-borne viruses like hepatitis C and HIV
- poor mental health [3, 121, 122].

Illicit drug use can impact on the whole community, leading to social problems including harms to children and families, violence, assaults and crime [123].

In 2011, illicit drug use contributed 4% to the burden of disease for Aboriginal and Torres Strait Islander people [28]. In contrast, illicit drug use was only responsible for 2% of the burden of disease for all Australians [124]. Illicit drug use contributed 6% to the burden of disease for mental health for Aboriginal and Torres Strait Islander people and all Australians [28, 124].

## The status among Aboriginal and Torres Strait Islander people in 2014-2015 [75]

Surveys consistently show that most Aboriginal and Torres Strait Islander people do not use illicit drugs [75, 115, 125].

The information presented below is for adults from the 2014-2015 National Aboriginal and Torres Strait Islander Social Survey (NATSISS). Similar results were

found in the 2016 National Drug Strategy Household Survey (NDSHS), but the number of Aboriginal and Torres Strait Islander people in the NDSHS was small, leading to some concerns about the accuracy of the results.



**69%**

had never used illicit drugs, or had not used them in the previous year



**30%**

reported using illicit drugs in the previous year



**a higher**

proportion of men than women used an illicit drug in the previous year



**a higher**

proportion of adults in non-remote areas used an illicit drug in the previous year than those in remote areas



**19%**

had used cannabis in the previous year; it was the most commonly used illicit drug



**13%**

had used analgesics and sedatives for non-medical uses in the previous year



**6%**

had used other drugs like heroin, cocaine, petrol, LSD, ecstasy, methadone and kava in the previous year



**5%**

had used amphetamines in the previous year

## Hospital admissions of Aboriginal and Torres Strait Islander people in 2014-15 [3]

In 2014-15, the most common drug-related conditions that resulted in hospitalisation for Aboriginal and Torres Strait Islander people were 'poisoning' and 'mental and behavioural disorders' [3].



Hospitalisation rates for poisoning due to drug use were 2.3 times higher for Aboriginal and Torres Strait Islander people than for non-Indigenous people.

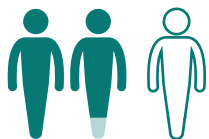


Hospitalisation rates for mental and behavioural disorders due to drug use were 3.1 times higher for Aboriginal and Torres Strait Islander people than for non-Indigenous people.



Hospitalisation rates from drug use were highest for Aboriginal and Torres Strait Islander people in major cities.

## Deaths of Aboriginal and Torres Strait Islander people in 2010-2014 [3]



The rate of drug induced deaths was 1.9 times higher for Aboriginal and Torres Strait Islander people than non-Indigenous people.



SA had the highest rate of drug-induced deaths for Aboriginal and Torres Strait Islander people.



Rates of drug induced deaths were higher for Aboriginal and Torres Strait Islander men than women.

# References

1. Dudgeon P, Wright M, Paradies Y, Garvey D, Walker I (2014) Aboriginal social, cultural and historical contexts. In: Dudgeon P, Milroy H, Walker R, eds. *Working together: Aboriginal and Torres Strait Islander mental health and wellbeing principles and practice*. 2nd ed. Canberra: Department of The Prime Minister and Cabinet:3-24
2. Gee G, Dudgeon P, Schultz C, Hart A, Kelly K (2014) Aboriginal and Torres Strait Islander social and emotional wellbeing. In: Dudgeon P, Milroy H, Walker R, eds. *Working together: Aboriginal and Torres Strait Islander mental health and wellbeing principles and practice*. 2nd ed. Canberra: Department of The Prime Minister and Cabinet:55-68
3. Steering Committee for the Review of Government Service Provision (2016) *Overcoming Indigenous disadvantage: key indicators 2016 report*. Canberra: Productivity Commission
4. National Aboriginal Community Controlled Health Organisation (2013) *Healthy Futures 2013-2030: NACCHO 10 point plan*. Canberra: National Aboriginal Community Controlled Health Organisation
5. World Health Organization (2016) *What are social determinants of health?* Retrieved 2016 from [http://www.who.int/social\\_determinants/sdh\\_definition/en/](http://www.who.int/social_determinants/sdh_definition/en/)
6. Australian Bureau of Statistics (2017) *Census of population and housing: reflecting Australia - stories from the Census, 2016: Aboriginal and Torres Strait Islander population*. Retrieved 28 June 2017 from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/2071.02016?OpenDocument>
7. Parliament of Australia (2016) *Indigenous parliamentarians, federal and state: a quick guide*. Retrieved 19 October 2016 from [http://parlinfo.aph.gov.au/parlinfo/download/library/prspub/3923594/upload\\_binary/3923594.pdf](http://parlinfo.aph.gov.au/parlinfo/download/library/prspub/3923594/upload_binary/3923594.pdf)
8. Australian Bureau of Statistics (2014) *Estimates and projections, Aboriginal and Torres Strait Islander Australians, 2001 to 2026*. (ABS Catalogue no.3238.0) Canberra: Australian Bureau of Statistics
9. Australian Bureau of Statistics (2018) *Australian demographic statistics, Jun 2018*. Retrieved 20 December 2018 from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3101.0Jun%202018?OpenDocument>
10. Australian Bureau of Statistics (2018) *Estimates of Aboriginal and Torres Strait Islander Australians, June 2016*. Retrieved 31 August 2018 from <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3238.0.55.001>
11. Human Rights and Equal Opportunity Commission (2008) *A statistical overview of Aboriginal and Torres Strait Islander peoples in Australia*. Canberra: Human Rights and Equal Opportunity Commission
12. Australian Bureau of Statistics (2018) *Births, Australia, 2017*. Retrieved 11 December 2018 from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/3301.0Main+Features12017?OpenDocument>
13. Australian Institute of Health and Welfare (2018) *Australia's mothers and babies 2016: in brief*. Canberra: Australian Institute of Health and Welfare
14. Australian Institute of Health and Welfare (2014) *Birthweight of babies born to Indigenous mothers*. (AIHW Catalogue no IHW 138) Canberra: Australian Institute of Health and Welfare
15. Australian Government Department of Health (2018) *Clinical practice guidelines: pregnancy care*. Canberra: Australian Government Department of Health
16. Australian Bureau of Statistics (2018) *Deaths, Australia, 2017*. Retrieved 26 September 2018 from <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3302.0?OpenDocument>
17. Australian Bureau of Statistics (2018) *Life tables for Aboriginal and Torres Strait Islander Australians, 2015-2017*. (ABS Cat. no. 3302.0.55.003) Canberra: Australian Bureau of Statistics
18. Australian Bureau of Statistics (2018) *Causes of death, Australia, 2017*. Retrieved 26 September 2018 from <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3303.0?OpenDocument>
19. Australian Health Ministers' Advisory Council (2017) *Aboriginal and Torres Strait Islander Health Performance Framework 2017 report*. Canberra: Department of the Prime Minister and Cabinet
20. Thomson N, Ali M (2003) Births, deaths, and hospitalisation. In: Thomson N, ed. *The health of Indigenous Australians*. South Melbourne: Oxford University Press:44-74
21. Burgess K, Gilbert M, McIntyre J, Mole T (2018) *Admitted patient care 2016-17: Australian hospital statistics*. Canberra: Australian Institute of Health and Welfare
22. Clinical Epidemiology and Health Service Evaluation Unit (2009) *Potentially preventable hospitalisations: a review of the literature and Australian policies: final report*. Sydney: Australian Commission on Safety and Quality in Health Care
23. Gray C (2013) *Plain language review of cardiovascular health among Indigenous Australians*. Perth: Australian Indigenous HealthInfoNet
24. Baker IDI (2012) *Cardiovascular disease*. Retrieved 2012 from <https://www.baker.edu.au/health-hub/fact-sheets/cardiovascular-disease>
25. World Health Organization (2016) *International Statistical Classification of Diseases and Related Health Problems 10th Revision*. Retrieved 2016 from <http://apps.who.int/classifications/icd10/browse/2016/en#/XIX>
26. Australian Bureau of Statistics (2014) *Australian Aboriginal and Torres Strait Islander health survey: updated results, 2012-13*. (ABS Catalogue no. 4727.0.55.006) Canberra: Australian Bureau of Statistics
27. Australian Bureau of Statistics (2014) *Australian Aboriginal and Torres Strait Islander health survey: biomedical results, 2012-13*. (ABS Catalogue no 4727.0.55.003) Canberra: Australian Bureau of Statistics
28. Australian Institute of Health and Welfare (2016) *Australian Burden of Disease Study: impact and causes of illness and death in Aboriginal and Torres Strait Islander people 2011*. (Australian Burden of Disease Study series no. 6, Cat no. BOD 7) Canberra: Australian Institute of Health and Welfare
29. Australian Bureau of Statistics (2014) *Australian Aboriginal and Torres Strait Islander health survey: updated results, 2012-13 - Australia: table 5.3 [data cube]*. Retrieved 6 June 2014 from <http://www.abs.gov.au/AUSSTATS/subscriber.nsf/log?openagent&472705500605.xls&4727.0.55.006&Data%20Cubes&A95A701E3429A-625CA257CEE0010D780&0&2012%9613&06.06.2014&Lat-est>

30. Australian Bureau of Statistics (2014) *Australian Aboriginal and Torres Strait Islander health survey: updated results, 2012-13 - Australia: table 6.3 [data cube]*. Retrieved 6 June 2014 from <http://www.abs.gov.au/AUSSTATS/subscriber.nsf/log?openagent&472705500606.xls&4727.0.55.006&Data%20Cubes&7F2DBD07A515E7A-2CA257CEE0010D7BF&0&2012%9613&06.06.2014&Latest>
31. Australian Bureau of Statistics (2014) *Australian Aboriginal and Torres Strait Islander health survey: updated results, 2012-13 - Australia: table 21.3 [data cube]*. Retrieved 6 June 2014 from <http://www.abs.gov.au/AUSSTATS/subscriber.nsf/log?openagent&472705500621.xls&4727.0.55.006&Data%20Cubes&166861F2585F8D-85CA257CEE0010DAE7&0&2012%9613&06.06.2014&Latest>
32. Australian Bureau of Statistics (2014) *Australian Aboriginal and Torres Strait Islander health survey: updated results, 2012-13 - Australia: table 2.3 [data cube]*. Retrieved 6 June 2014 from <http://www.abs.gov.au/AUSSTATS/subscriber.nsf/log?openagent&472705500602.xls&4727.0.55.006&Data%20Cubes&A0A5C6AE5F15C5DE-CA257CEE0010D6DC&0&2012%9613&06.06.2014&Latest>
33. Australian Institute of Health and Welfare (2017) *Aboriginal and Torres Strait Islander Health Performance Framework*. Retrieved 30 May 2017 from <https://www.aihw.gov.au/reports/indigenous-health-welfare/health-performance-framework/contents/overview>
34. Rheumatic Heart Disease Australia (2012) *What is acute rheumatic fever and rheumatic heart disease?* Darwin: Rheumatic Heart Disease Australia
35. Australian Institute of Health and Welfare (2013) *Rheumatic heart disease and acute rheumatic fever in Australia: 1996-2012*. (AIHW Catalogue no CVD 60, cardiovascular disease series no 36) Canberra: Australian Institute of Health and Welfare
36. Rheumatic Heart Disease Australia, National Heart Foundation of Australia, Cardiac Society of Australia and New Zealand (2012) *The Australian guideline for prevention, diagnosis and management of acute rheumatic fever and rheumatic heart disease: 2nd edition*. Darwin: Menzies School of Health Research
37. RHD Australia (2016) *Rheumatic fever and rheumatic heart disease: fast facts*. Darwin: RHD Australia
38. Australian Institute of Health and Welfare (2016) *Better Cardiac Care measures for Aboriginal and Torres Strait Islander people: second national report 2016*. Canberra: Australian Institute of Health and Welfare
39. Tong B, Sheppard C, Guda R, Penm R, Gersekowski A K (2018) *Better Cardiac Care measures for Aboriginal and Torres Strait Islander people: third national report*. Canberra: Australian Institute of Health and Welfare
40. Cancer Council Australia (2014) *What is cancer?* Retrieved 1 December 2014 from <http://www.cancer.org.au/about-cancer/what-is-cancer/>
41. Australian Cancer Research Foundation (2014) *What is cancer?* Retrieved 1 December 2014 from <http://www.acrf.com.au/on-cancer/>
42. Australian Institute of Health and Welfare (2018) *Cancer in Aboriginal and Torres Strait Islander people of Australia*. Retrieved 15 March 2018 from <https://www.aihw.gov.au/reports/cancer/cancer-in-indigenous-australians/contents/table-of-contents>
43. Australian Institute of Health and Welfare, Cancer Australia (2013) *Cancer in Aboriginal and Torres Strait Islander peoples of Australia: an overview*. (AIHW Catalogue no CAN 75, cancer series no 78) Canberra: Australian Institute of Health and Welfare
44. Condon J, Garvey G, Whop L, Valery P, Thomas D, Gruen R, Cunningham J (2013) Aboriginal and Torres Strait Islander Australians and cancer. *Cancer Forum*;37(1):27-30
45. Valery PC, Coory M, Stirling J, Green AC (2006) Cancer diagnosis, treatment, and survival in Indigenous and non-Indigenous Australians: a matched cohort study. *The Lancet*;367(9525):1842-1848
46. Condon JR, Cunningham J, Barnes T, Armstrong BK, Selva-Nayagam S (2006) Cancer diagnosis and treatment in the Northern Territory: assessing health service performance for Indigenous Australians. *Internal Medicine Journal*;36(8):498-505
47. Cunningham J, Rumbold AR, Zhang X, Condon JR (2008) Incidence, aetiology, and outcomes of cancer in Indigenous peoples in Australia. *The Lancet Oncology*;9(6):585-595
48. Harvey J, Budd A, Tanevska B, Ng F, Meere D (2018) *Cervical screening in Australia 2018*. Canberra: Australian Institute of Health and Welfare
49. Australian Institute of Health and Welfare (2016) *Australia's health 2016*. Canberra: Australian Institute of Health and Welfare
50. Australian Institute of Health and Welfare (2015) *Cardiovascular disease, diabetes and chronic kidney disease - Australian facts: Aboriginal and Torres Strait Islander people*. Canberra: Australian Institute of Health and Welfare
51. Australian Institute of Health and Welfare (2018) *Diabetes indicators for the Australian National Diabetes Strategy 2016-2020*. Retrieved 10 October 2018 from <https://www.aihw.gov.au/reports/diabetes/diabetes-indicators-strategy-2016-2020/contents/summary>
52. Evans R, Liu J, Miller D, Harvey M, Howle T, Seebus I (2018) *National Key Performance Indicators for Aboriginal and Torres Strait Islander primary health care: results for 2017*. Canberra: Australian Institute of Health and Welfare
53. Kidney Health Australia (2014) *What is kidney disease?* Retrieved 2014 from <http://www.kidney.org.au/kidneydisease/tabid/578/default.aspx>
54. National Kidney and Urologic Diseases Information Clearinghouse (2014) *The kidneys and how they work*. Retrieved 2014 from <http://kidney.niddk.nih.gov/kudiseases/pubs/yourkidneys/>
55. Johnson D (2013) *Risk factors for early chronic kidney disease*. Melbourne: Kidney Health Australia
56. Australian Institute of Health and Welfare (2011) *Chronic kidney disease in Aboriginal and Torres Strait Islander people 2011*. (AIHW Catalogue no PHE 151) Canberra: Australian Institute of Health and Welfare
57. Australian Institute of Health and Welfare (2017) *Chronic kidney disease compendium [web report]*. Retrieved 22 December 2017 from <https://www.aihw.gov.au/reports/chronic-kidney-disease/chronic-kidney-disease-compendium/>
58. Australian Bureau of Statistics (2003) *Australian demographic statistics quarterly: September quarter 2002*. (ABS catalogue no. 3101.0) Canberra: Australian Bureau of Statistics
59. Australian Bureau of Statistics (2014) *Australian demographic statistics, Dec 2013*. Retrieved 19 June 2014 from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/3101.0Main+Features1Dec%202013?OpenDocument>
60. Australian and New Zealand Dialysis and Transplant Registry (2017) *End stage renal disease notifications, by Indigenous status, age, jurisdiction and year [2011 to 2015, unpublished]*. Adelaide: Australian and New Zealand Dialysis and Transplant Registry
61. Steering Committee for the Review of Government Service Provision (2018) *Report on government services 2018, Volume E: Health*. Canberra: Productivity Commission
62. Australian Institute of Health and Welfare (2010) *Asthma, chronic obstructive pulmonary disease and other respiratory diseases in Australia*. (AIHW Catalogue no ACM 20) Canberra: Australian Institute of Health and Welfare
63. World Health Organization (2017) *About chronic respiratory diseases*. Retrieved 2017 from [http://www.who.int/respiratory/about\\_topic/en/](http://www.who.int/respiratory/about_topic/en/)
64. Australian Institute of Health and Welfare (2005) *Chronic respiratory diseases in Australia: their prevalence, consequences and prevention*. (AIHW Catalogue no PHE 63) Canberra: Australian Institute of Health and Welfare

65. Janu EK, Annabattula BI, Kumariah S, Zajackowska M, Whitehall JS, Edwards MJ, Lujic S, Masters IB (2014) Paediatric hospitalisations for lower respiratory tract infections in Mount Isa. *Medical Journal of Australia*;200(10):591-594
66. Hall KK, Chang AB, Anderson J, Dunbar M, Arnold D, O'Grady KF (2017) Characteristics and respiratory risk profile of children aged less than 5 years presenting to an urban, Aboriginal-friendly, comprehensive primary health practice in Australia. *Journal of Paediatrics and Child Health*;53(7):636-643
67. Australian Bureau of Statistics (2013) *Australian Aboriginal and Torres Strait Islander health survey: first results, Australia, 2012-13: Table 5 [data cube]*. Retrieved 27 November 2013 from <http://www.abs.gov.au/AUSSTATS/subscriber.nsf/log?openagent&table%205%20long-term%20conditions%20by%20sex%20by%20indigenous%20status,%202012-13%20-%20australia.xls&4727.0.55.001&Data%20Cubes&5C97CE7DA7059C-06CA257C2F00145D5A&0&2012-13&27.11.2013&Latest>
68. Department of the Prime Minister and Cabinet (2017) *National strategic framework for Aboriginal and Torres Strait Islander peoples' mental health and social and emotional wellbeing 2017-2023*. Canberra: Commonwealth of Australia
69. Zubrick SR, Shepherd CCJ, Dudgeon P, Gee G, Paradies Y, Scrine C, Walker R (2014) Social determinants of social and emotional wellbeing. In: Dudgeon P, Milroy H, Walker R, eds. *Working together: Aboriginal and Torres Strait Islander mental health and wellbeing principles and practice*. 2nd edition ed. Canberra: Department of The Prime Minister and Cabinet:93-112 (chapter 6)
70. Australian Bureau of Statistics (2013) *Australian Aboriginal and Torres Strait Islander health survey: first results, Australia, 2012-13*. (ABS Catalogue no. 4727.0.55.001) Canberra: Australian Bureau of Statistics
71. Australian Bureau of Statistics (2016) *National Aboriginal and Torres Strait Islander Social Survey, 2014-15: Table 14. Stressors, by sex and remoteness [data cube]*. Retrieved 28 April 2016 from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4714.02014-15?OpenDocument>
72. Australian Bureau of Statistics (2013) *Australian Aboriginal and Torres Strait Islander health survey: first results, Australia, 2012-13: Table 7 [data cube]*. Canberra: Australian Bureau of Statistics
73. Steering Committee for the Review of Government Service Provision (2014) *Overcoming Indigenous disadvantage: key indicators 2014*. Canberra: Productivity Commission
74. Australian Bureau of Statistics (2016) *National Aboriginal and Torres Strait Islander Social Survey, 2014-15: Table 17. Overall life satisfaction, by selected characteristics [data cube]*. Retrieved 28 April 2016 from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4714.02014-15?OpenDocument>
75. Australian Bureau of Statistics (2016) *National Aboriginal and Torres Strait Islander Social Survey, 2014-15*. Canberra: Australian Bureau of Statistics
76. International Centre for Eyecare Education (2009) *Eye health education resource kit: I see for culture*. Sydney: Brien Holden Vision Institute, Public Health Division
77. Taylor HR, National Indigenous Eye Health Survey Team (2009) *National Indigenous eye health survey: minum barrng (tracking eyes): summary report*. Melbourne: Indigenous Eye Health Unit, The University of Melbourne
78. Foreman J, Keel S, Xie J, van Wijngaarden P, Crowston J, Taylor HR, Dirani M (2016) *The National Eye Health Survey 2016 report*. Melbourne: Vision 2020 Australia
79. The Kirby Institute (2018) *Australian trachoma surveillance report 2017*. Sydney: The Kirby Institute, University of New South Wales
80. Australian Bureau of Statistics (2014) *Australian Aboriginal and Torres Strait Islander health survey: first results, Australia, 2012-13: Table 25 [data cube]*. Retrieved 26 March 2014 from <http://www.abs.gov.au/ausstats/subscriber.nsf/log?openagent&table%2025%20selected%20health%20characteristics%20by%20aboriginal%20torres%20strait%20islander%202012-13%20-%20australia.xls&4727.0.55.001&Data%20Cubes&8759176B7100FFF-0CA257CA6000E3759&0&2012-13&2>
81. Australian Bureau of Statistics (2014) *Australian Aboriginal and Torres Strait Islander health survey: first results, Australia, 2012-13: Table 2 [data cube]*. Retrieved 26 March 2014 from <http://www.abs.gov.au/AUSSTATS/subscriber.nsf/log?openagent&table%202%20selected%20health%20characteristics,%20by%20remoteness%20area%202012-13%20-%20australia.xls&4727.0.55.001&Data%20Cubes&9F3D9B7052520B1B-CA257CA6000E31B5&0&2012-13&26.03.2014&Latest>
82. Australian Institute of Health and Welfare (2018) *Indigenous eye health measures 2017*. Retrieved 26 April 2018 from <https://www.aihw.gov.au/reports/indigenous-australians/indigenous-eye-health-measures-2017/contents/summary>
83. HealthConsult (2010) *Review of current arrangements for the collection, recording, transfer and reporting of national trachoma data*. Canberra: Office of Aboriginal and Torres Strait Islander Health, Department of Health and Ageing
84. Australian Institute of Health and Welfare (2017) *Indigenous eye health measures 2016*. Canberra: Australian Institute of Health and Welfare
85. enHealth (2016) *Preventing disease and injury through healthy environments: Environmental Health Standing Committee (enHealth) strategic plan 2016 to 2020*. Canberra: enHealth
86. Clifford HD, Pearson G, Franklin P, Walker R, Zosky GR (2015) Environmental health challenges in remote Aboriginal Australian communities: clean air, clean water and safe housing. *Australian Indigenous Health Bulletin*;15(2):1-14
87. enHealth (2010) *Environmental health practitioner manual: a resource manual for environmental health practitioners working with Aboriginal and Torres Strait Islander communities*. Canberra: Department of Health, Australia
88. Australian Institute of Health and Welfare (2017) *National Social Housing Survey: detailed results 2016*. Canberra: Australian Institute of Health and Welfare
89. Australian Bureau of Statistics (2018) *Census of population and housing: characteristics of Aboriginal and Torres Strait Islander Australians, 2016*. Canberra: Australian Bureau of Statistics
90. National Heart Foundation of Australia (2013) *Nutrition*. Canberra: National Heart Foundation of Australia
91. National Health and Medical Research Council (2013) *Australian Dietary Guidelines: providing the scientific evidence for healthier Australian diets*. Canberra: National Health and Medical Research Council
92. National Health and Medical Research Council (2000) *Nutrition in Aboriginal and Torres Strait Islander peoples: an information paper*. Canberra: National Health and Medical Research Council
93. National Public Health Partnership (2001) *National Aboriginal and Torres Strait Islander Nutrition Strategy and Action Plan 2000-2010 and first phase activities 2000-2003*. Canberra: National Public Health Partnership
94. Australian Bureau of Statistics (2016) *Australian Aboriginal and Torres Strait Islander Health Survey: consumption of food groups from the Australian Dietary Guidelines, 2012-13*. (4727.0.55.008) Canberra: Australian Bureau of Statistics
95. National Health and Medical Research Council (2012) *Infant feeding guidelines: information for health workers*. Canberra: National Health and Medical Research Council
96. Ferguson M, Brown C, Georga C, Miles E, Wilson A, Brimblecombe J (2017) Traditional food availability and consumption in remote Aboriginal communities in the Northern Territory, Australia. *Australian and New Zealand Journal of Public Health*;41(3):294-298

97. Australian Bureau of Statistics (2015) *Australian Aboriginal and Torres Strait Islander health survey: nutrition results - food and nutrients, 2012-13*. (ABS cat. no. 4727.0.55.005) Canberra: Australian Bureau of Statistics
98. Australian Bureau of Statistics (2014) *Australian Aboriginal and Torres Strait Islander health survey: updated results, 2012-13: table 13 [data cube]*. Retrieved 6 June 2014 from <http://www.abs.gov.au/AUSSTATS/subscriber.nsf/log?openagent&472705500613.xls&4727.0.55.006&Data%20Cubes&D751183318983C-51CA257CEE0010D97D&0&2012-13&20.06.2014&Latest>
99. Australian Bureau of Statistics (2015) *Australian Aboriginal and Torres Strait Islander health survey: nutrition results - food and nutrients, 2012-13: Table 4 [data cube]*. Retrieved 20 March 2015 from [http://www.abs.gov.au/ausstats/subscriber.nsf/log?openagent&4727055005\\_201213\\_04.xls&4727.0.55.005&Data%20Cubes&F3E8C224BFBA2FE-0CA257E0D000EC970&0&2012-13&20.03.2015&Latest](http://www.abs.gov.au/ausstats/subscriber.nsf/log?openagent&4727055005_201213_04.xls&4727.0.55.005&Data%20Cubes&F3E8C224BFBA2FE-0CA257E0D000EC970&0&2012-13&20.03.2015&Latest)
100. Craig P, Watson M (2018) *Nutrition across the life stages*. Canberra: Australian Institute of Health and Welfare
101. Queensland Health (2008) *Breastfeeding: good for baby, good for mum*. Brisbane: Queensland Health
102. World Health Organization (2013) *Exclusive breastfeeding*. Retrieved 2013 from [http://www.who.int/nutrition/topics/exclusive\\_breastfeeding/en/](http://www.who.int/nutrition/topics/exclusive_breastfeeding/en/)
103. Australian Bureau of Statistics (2014) *Australian Aboriginal and Torres Strait Islander health survey: physical activity, 2012-13*. (ABS cat. no. 4727.0.55.004) Canberra: Australian Bureau of Statistics
104. Australian Government Department of Health (2014) *Australia's physical activity and sedentary behaviour guidelines*. Canberra: Australian Government Department of Health
105. Australian Bureau of Statistics (2015) *National Health Survey: first results, Australia, 2014-15*. (ABS Cat. no. 4364.0.55.001) Canberra: Australian Bureau of Statistics
106. Victorian Aboriginal Community Controlled Health Organisation and Australian Drug Foundation (2014) *A guide to tobacco within our community*. Melbourne: Victorian Aboriginal Community Controlled Health Organisation and Australian Drug Foundation
107. Alcohol and Drug Foundation (2018) *Drug facts - tobacco*. Retrieved 2018 from <https://adf.org.au/drug-facts/tobacco/>
108. Australian Bureau of Statistics (2017) *Aboriginal and Torres Strait Islander peoples: smoking trends, Australia, 1994 to 2014-15*. Retrieved 19 October 2017 from <http://www.abs.gov.au/ausstats/abs@.nsf/mf/4737.0?OpenDocument>
109. Drinkaware (2016) *What is alcohol? Ingredients, chemicals and manufacture*. Retrieved 2016 from <https://www.drinkaware.co.uk/alcohol-facts/alcoholic-drinks-units/alcohols-ingredients-chemicals-and-manufacture/>
110. National Drug & Alcohol Research Centre (2016) *Alcohol*. Sydney: National Drug & Alcohol Research Centre
111. Lee K, Freeburn B, Ella S, Miller W, Perry J, Conigrave K (2012) *Handbook for Aboriginal alcohol and drug work*. Sydney: University of Sydney
112. Cancer Council NSW (2015) *Alcohol and cancer - position statement*. Retrieved 2015 from <https://www.cancercouncil.com.au/2397/about-us/our-annual-reports-and-research-activity-reports/our-position-statements-about-cancer-council-nsw/alcohol-and-cancer2/>
113. Your Room Alcohol and Drug Information Service NSW (2018) *What is alcohol?* Retrieved 23 January 2018 from <https://yourroom.health.nsw.gov.au/a-z-of-drugs/Pages/alcohol.aspx>
114. Australian Government Department of Health (2017) *National drug strategy 2017-2026*. Canberra: Australian Government Department of Health
115. Australian Institute of Health and Welfare (2017) *National Drug Strategy Household Survey 2016: detailed findings*. Canberra: Australian Institute of Health and Welfare
116. National Health and Medical Research Council (2009) *Australian guidelines to reduce health risks from drinking alcohol*. Canberra: National Health and Medical Research Council
117. Australian Bureau of Statistics (2013) *Australian Aboriginal and Torres Strait Islander health survey: first results, Australia, 2012-13: Table 14 Alcohol consumption - Short-term or Single occasion risk by age, Indigenous status and sex [data cube]*. Retrieved 27 November 2013 from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4727.0.55.001Main+Features12012-13?OpenDocument>
118. Australian Bureau of Statistics (2013) *Australian Aboriginal and Torres Strait Islander health survey: first results, Australia, 2012-13: Table 13 Alcohol consumption - Long-term or Lifetime risk by age, Indigenous status and sex [data cube]*. Retrieved 27 November 2013 from [http://www.abs.gov.au/AUSSTATS/subscriber.nsf/log?openagent&table%2013%20alcohol%20-%20long-term\\_lifetime%20risk%20by%20age,%20indigenous%20status%20and%20sex,%202012-13%20-%20australia.xls&4727.0.55.001&Data%20Cubes&51B6A88C53D6FE5BCA257CA6000E3482&0&201](http://www.abs.gov.au/AUSSTATS/subscriber.nsf/log?openagent&table%2013%20alcohol%20-%20long-term_lifetime%20risk%20by%20age,%20indigenous%20status%20and%20sex,%202012-13%20-%20australia.xls&4727.0.55.001&Data%20Cubes&51B6A88C53D6FE5BCA257CA6000E3482&0&201)
119. Bower C, Elliott EJ (2016) *Australian guide to the diagnosis of FASD*. Perth, WA: Telethon Kids Institute
120. Australian Bureau of Statistics (2006) *National Aboriginal and Torres Strait Islander Health Survey: Australia, 2004-05*. (ABS Catalogue no. 4715.0) Canberra: Australian Bureau of Statistics
121. Degenhardt L, Hall W (2012) Extent of illicit drug use and dependence, and their contribution to the global burden of disease. *The Lancet*;379(9810):55-70
122. The Kirby Institute (2018) *Bloodborne viral and sexually transmissible infections in Aboriginal and Torres Strait Islander people: annual surveillance report 2018*. Sydney: The Kirby Institute
123. MacRae A, Hoareau J (2016) *Review of illicit drug use among Aboriginal and Torres Strait Islander people*. (Australian Indigenous HealthReviews no. 18) Perth: Australian Indigenous HealthInfoNet
124. Australian Institute of Health and Welfare (2016) *Australian Burden of Disease Study: impact and causes of illness and death in Australia 2011*. Canberra: Australian Institute of Health and Welfare
125. Australian Bureau of Statistics (2013) *Australian Aboriginal and Torres Strait Islander health survey: first results, Australia, 2012-13: Table 15 Substance use by age, remoteness and sex [data cube]*. Retrieved 27 November 2013 from <http://www.abs.gov.au/AUSSTATS/subscriber.nsf/log?openagent&table%2015%20substance%20use%20by%20age,%20remoteness%20and%20sex,%202012-13%20-%20australia.xls&4727.0.55.001&Data%20Cubes&E6B1092ED1C8DC69CA257C2F00145F58&0&2012-13&27.11.2013&Latest>



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