Australian Indigenous HealthInfoNet

Overview of Aboriginal and Torres Strait Islander health status 2024

Core funding is provided by the Australian Government Department of Health and Aged Care

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Australian Indigenous Health*InfoNet*

The Australian Indigenous Health*InfoNet*'s (Health*InfoNet*) mandate 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 Health Practitioners), and researchers. The Health*InfoNet* also provides easy-to-read and summarised material for students and the general community.

The Health*InfoNet* is overseen by an Advisory Board comprising of representatives from Aboriginal and Torres Strait Islander peak bodies and Aboriginal and Torres Strait Islander health experts. The Health*InfoNet* 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 the Health*InfoNet*, the Alcohol and Other Drugs Knowledge Centre, Tackling Indigenous Smoking and WellMob websites. The research involves analysis and synthesis of data and information obtained from academic, professional, government and other sources. The Health*InfoNet*'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 Health*InfoNet* recognises and acknowledges the sovereignty of Aboriginal and Torres Strait Islander people as custodians. Aboriginal and Torres Strait Islander cultures, customs and beliefs are persistent and enduring, continuing unbroken from the past to the present and will continue well into the future. They are 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 represent a diverse range of people, communities and groups each with unique identities, cultural practices and spiritualties. 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, present and emerging throughout the country (https://healthinfonet.ecu.edu.au/acknowledging-country). In particular, we pay our respects to the Whadjuk Noongar people on whose Country our offices are located.

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Cover artwork

Bibdjool *by Donna Lei Rioli*

Donna Lei Rioli, a Western Australian Indigenous artist - was commissioned by the Health*InfoNet* to create a logo incorporating a gecko, chosen as it is one of a few animals that are found across the great diversity of Australia.

Donna is a Tiwi/Noongar woman who is dedicated to the heritage and culture of the Tiwi people on her father's side, Maurice Rioli, and the Noongar people on her mother's side, Robyn Collard. Donna enjoys painting because it enables her to express her Tiwi and Noongar 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 Health*InfoNet* in contributing to improving the health and wellbeing of Aboriginal and Torres Strait Islander Australians.

Preface

The purpose of the *Overview of Aboriginal and Torres Strait Islander health status* (*Overview*) is to provide a comprehensive summary of the most recent indicators of health for Aboriginal and Torres Strait Islander people. We adopt a holistic concept of health which includes social and cultural determinants. The *Overview* has been prepared by Health*InfoNet* staff as part of our contribution to supporting those who work in the Aboriginal and Torres Strait Islander health sector. The *Overview* is a key indicator of the Health*InfoNet*'s commitment to knowledge development and exchange.

While the *Overview* provides a comprehensive review of key indicators across a range of health topics, it is beyond the scope of this *Overview* to provide detailed information on other aspects, such as the availability and use of services (including barriers and enablers to their use) and strategies and policies related to specific health topics. Interested readers should refer to the topic-specific reviews that are available on the Health*InfoNet*'s website. Additionally, more in-depth information about the topics summarised in this *Overview* is included in the corresponding sections of the Health*InfoNet*'s website.

How to read the Overview

The *Overview* is intended to provide an easy-to-read and quick access document which provides up to date information on the status of Aboriginal and Torres Strait Islander peoples' health across Australia. The information within the *Overview* is intended to assist community members, services, and policy makers to identify emerging areas of strength, for example, where local or national statistics demonstrate positive health outcomes, as well as to identify health conditions of concern. Importantly, most of the statistics presented in the *Overview* represent population-level figures[1] . These figures can misrepresent local trends or health outcomes within specific population groups and should be taken only as broad indicators of health status. In line with the National Closing the Gap Agreement[2], all Aboriginal and Torres Strait Islander health policy decisions should be made by, and in consultation with, Aboriginal and Torres Strait Islander peoples.

Overview: Latest Information and statistics

In July 2024, the Health*InfoNet* launched the latest information and statistics webpage which provides the latest data and information since the publication of the annual *Overview*. Updates are provided for measures of population health; funded health conditions; selected risk factors contributing to Aboriginal and Torres Strait Islander health and background information.

Feedback

The key to successful knowledge exchange and transfer is authentic partnership in the development of materials, so we welcome your comments and feedback about the *Overview of Aboriginal and Torres Strait Islander health status, 2024*

Bep Uink, Director, on behalf of the Health*InfoNet* team

1 Population level data provides a broad overview of the health status of Aboriginal and Torres Strait Islander people. Where available regional data are used. For further information at a disaggregated level refer to the Health*InfoNet* topic specific portals.
2 Coalition of Peaks (2020) National Agreement on Closing the Gap. Coalition of Peaks.

Acknowledgements

Thanks are extended to:

- staff of the Health*InfoNet* for their assistance, support and encouragement in the preparation of this *Overview*.
- previous staff members of the HealthInfoNet who have contributed to earlier versions of the *Overview*.
- the Australia and New Zealand Dialysis and Transplant Registry (ANZDATA) for the provision of the notification data on end-stage renal disease (ESRD)[3].
- the Department of Health and Aged Care and other funding partners for their ongoing support of the work of the Health*InfoNet*.
- members of the Health*InfoNet* Advisory Board and Health*InfoNet* Consultants.
- users of the Health*InfoNet* resource for their ongoing support and feedback.
- readers of the Overview who provide feedback during the post-publication peer review period.

Tell us what you think

We value your opinion, so please let us know if you have any suggestions for improving this *Overview* or future editions. (See https://healthinfonet.ecu.edu.au/contact-us)

3 'Kidney failure' is the preferred, person-centred alternative to terms such as 'end-stage renal disease' [1], however, for the purposes of this *Overview*, the terms cited in the data sources will be used.

Contents

Introduction

This *Overview* provides a comprehensive summary of the most recent indicators of the health and wellbeing of Aboriginal and Torres Strait Islander people in Australia (of all ages, where data is available).

The topics included in the *Overview* are based on the original topics included on the Health*InfoNet* website when it was established. Over the years as additional funding was obtained, and in consultation with Health*InfoNet* networks, more topics were considered and added. The topics aim to reflect the status of Aboriginal and Torres Strait Islander health over this period and going forward.

What is new?

In this year's *Overview* we have included Closing the Gap (CTG) 'target boxes' which indicate where health and wellbeing topics align with any of the 17 CTG socio-economic outcome areas. This inclusion allows readers to quickly identify where the reported health topics align with national policy that has been led by Aboriginal and Torres Strait Islander people.

The Health*InfoNet* continues to develop our capacity to accurately and authentically represent the data and statistics that impact Aboriginal and Torres Strait Islander people and communities. It is a journey that we share with other data-driven organisations such as the Australian Bureau of Statistics (ABS) and the Australian Institute of Health and Welfare (AIHW) and is buoyed by the recent release of the Framework for Indigenous Data Governance [2]. Included in this year's *Overview* is a statement on how the principles of Aboriginal and Torres Strait Islander Data Sovereignty have been embedded in the *Overview.*

Structure

The initial sections of the *Overview* provide information about the social and cultural determinants of Aboriginal and Torres Strait Islander peoples' health. Prefacing information on social and cultural determinants reflects the importance of context in interpreting Aboriginal and Torres Strait Islander health statistics. The subsequent sections are about specific health conditions and risk/protective factors that contribute to the overall health of Aboriginal and Torres Strait Islander people as well as various measures of population health status. These sections comprise an introduction about the condition, alignment with associated CTG target (where appropriate), and evidence of the current status of the condition or risk/protective factors and burden of disease. Information is provided for states and territories, Indigenous Regions and remoteness, and for demographics such as sex and age when it is available.

Where possible, information is detailed for individual states and territories: New South Wales (NSW), Victoria (Vic), Queensland (Qld), Western Australia (WA), South Australia (SA), Tasmania (Tas), the Australian Capital Territory (ACT) and the Northern Territory (NT).

Aboriginal and Torres Strait Islander Data Sovereignty

The *Overview* should be read in the context of our ongoing commitment to presenting data that empowers Aboriginal and Torres Strait Islander communities while acknowledging Aboriginal and Torres Strait Islander peoples' ongoing efforts to improve the quality of current data sources in Australia.

All data presented in the *Overview* is secondary data meaning that it has been collected by organisations outside of the Health*InfoNet.* With this in mind, we have applied the principles of the Maiam nayri Wingara Indigenous Data Sovereignty Collective to the *Overview,* which state that:

> Aboriginal and Torres Strait Islander peoples have the right to:
>
> 1. exercise control of the data ecosystem including creation, development, stewardship, analysis, dissemination and infrastructure
> 2. data that are contextual and disaggregated (available and accessible at individual, community and First Nations levels)
> 3. data that are relevant and empowers sustainable self-determination and effective self-governance
> 4. data structures that are accountable to Indigenous peoples and First Nations
> 5. data that are protective and respects our individual and collective interests [3].

The list below outlines how the principles of Indigenous Data Sovereignty are embedded within the *Overview* with the caveat that only secondary data is presented:

- The Health*InfoNet* relies on advice from its Advisory Board on the direction of the *Overview*.
- A post-publication peer review period enables Aboriginal and Torres Strait Islander readers to provide feedback.
- Where available, regional data are included; examples include The Roadmap to Close the Gap for Vision project (eye health); Indigenous Regions (ear health and hearing); Mayi Kuwayu study (SEWB) and Kimberley-specific data (skin health).
- Where possible, the Health*InfoNet* has included and highlighted data that has been collected by Aboriginal and Torres Strait Islander-driven research.
- A number of sections include the results of our own analyses of data obtained from a variety of sources. For example, data are requested from ANZDATA for the kidney health topic. This request is assessed by an Indigenous Reference Group who decide which data will be released for analysis.
- Information on social determinants and the context of Aboriginal and Torres Strait Islander health is provided at the beginning of the report and, where possible, at the start of each health topic section.

Additionally, Table 1 (below) outlines how information contained within the *Overview* aligns with Indigenous health data needs.

Table 1: Indigenous data needs aligned with *Overview*, 2024

Indigenous Data Needs	*How need is met within the Overview*
Lifeworld Data Data to inform a comprehensive, nuanced narrative of who we (Aboriginal and Torres Strait Islander peoples) are as peoples, of our culture, our communities, of our resilience, our goals and our successes.	• Following on from previous editions of the *Overview*, less reliance is placed on comparisons between Indigenous and non-Indigenous data. • 'Target boxes' have been included to highlight where reported data aligns with a national health priority area outlined in the CTG targets. • The *Overview* incorporates a strengths based approach where possible. This is achieved by including data on protective factors, cultural determinants, and improvements in the health status of Aboriginal and Torres Strait Islander people.
Disaggregated Data Data that recognise our cultural and geographical diversity and can provide evidence for community-level planning and service delivery.	• Information is provided for states and territories, Indigenous Regions and remoteness, and for demographics such as sex and age when it is available. • Where possible, information is detailed for individual states and territories: NSW, Vic, Qld, WA, SA, Tas, the ACT and the NT.
Contextualised Data Data that are inclusive of the wider social structural context/complexities in which Indigenous disadvantage occurs.	• Cultural and social concepts include discussion of social determinants of poor health. • Introduction sections on disease and injury rates include the contexts which continue to contribute to these. • Inclusion of a case study on the health impact on the 2023 Voice to Parliament referendum.
Indigenous Priority Data Data that measure not just our problems but data that address our priorities and agendas.	• 'Target boxes' have been included to highlight where reported data aligns with a national health priority area outlined in the CTG targets.
Available Amenable Data	
Data that are accessible and amenable to our requirements.	• Where available, listing the Indigenous Data Governance mechanisms which oversee the sources of data used in the *Overview* (see p7). This provides readers an easy-to-use access point for assessing the level of governance attached to each dataset.

Note: Table adapted from Walter M, Lovett R, Maher B, Williamson B, Prehn J, Bodkin-Andrews G, Lee V (2021) [4].

A note on gender inclusive language:

The *Overview* draws data from a number of sources including data on pregnancy, births and certain cancers. Some of these sources use the term 'women' and 'men' to refer to sample participants. In reporting these statistics in the *Overview* we use the terminology that is consistent with the data source, and we have taken care to identify whether the original data source was referring to sex or gender. We acknowledge that 'woman' and 'man' are only two genders and trans and non-binary peoples are oftentimes ignored in statistical data collection as well as gender and sex being conflated in reporting of some datasets. For more information on inclusive language please see the *Edith Cowan University inclusive language guide* [5].

Sources of information

The *Overview* provides the latest up-to-date data on the health status of Aboriginal and Torres Strait Islander people. For readers interested in historical health data for selected health conditions, these data are available in previous editions of the *Overview*.

Research for the *Overview* involves the collection, collation and analysis of a wide range of relevant information. Sources include government reports, particularly those produced by the ABS, the AIHW, the Health Chief Executives Forum [formerly the Australian Health Ministers Advisory Council (AHMAC)] and the Steering Committee for the Review of Government Service Provision (SCRGSP). Important additions to the regular ABS and AIHW publications are a series of special reports that bring together key information about Aboriginal and Torres Strait Islander health and related areas:

- Reports in the *Aboriginal and Torres Strait Islander health performance framework* series with substantial detailed analyses, prepared by AHMAC from 2006 to 2020 and from then by the AIHW and National Indigenous Australians Agency.
- *Reports on government services*, produced by the SCRGSP and published annually by the Productivity Commission since 2003.
- *Overcoming Indigenous disadvantage* (OID) reports, produced by the SCRGSP and published biennially by the Productivity Commission, for the period 2003-2020[4].
- This *Overview* also draws on information from the main administrative data collections (such as the birth and death registration systems and the hospital inpatient collections) and national surveys, for example, the National Australian Aboriginal and Torres Strait Islander health surveys. Information from these sources has been published mainly in government reports, particularly those produced by the ABS, the AIHW and the SCRGSP. The *Overview* also relies on a wide variety of other information sources including registers for specific diseases and other conditions; regional and local surveys and epidemiological and other studies examining particular diseases, conditions and health determinants. Information from these sources is disseminated mainly through journals and similar periodicals, or in special reports, such as the annual reports of the Kirby Institute and ANZDATA.

We are pleased that many of these data sources are actively engaged in improvements in Aboriginal and Torres Strait Islander data sovereignty and governance:

- ANZDATA Indigenous Data Sovereignty has been a key project of the ANZDATA Aboriginal and Torres Strait Islander Health Working Group.
- Aboriginal and Torres Strait Islander projects undertaken at the Kirby Institute by individual Aboriginal and Torres Strait Islander researchers aim to integrating Indigenous methodologies, cultural governance, frameworks and principles of data sovereignty into their programs.
- The AIHW provides disaggregated data for CTG through the Regional Insights for Indigenous Communities. The ABS also provides this data by Data by region and their TableBuilder.
- In 2022, the ABS engaged an independent agency to conduct a private impact assessment on the privacy implications of updates to the Person Level Integrated Data Asset, formerly the Multi-agency data integration plan (MADIP). This process included the concern of self-governance for Aboriginal and Torres Strait Islander data. The ABS noted that they would view national and international best practice processes when implementing proposed updates to the MADIP. The ABS are also taking an active role in the government's consideration of embedding Indigenous Data Sovereignty into the governance of Aboriginal and Torres Strait Islander data in Australia.
- The AIHW and ABS both hold individual membership roles in the Data Champions Network and the Deputy Secretaries Data Group, formed by the Australian Public Service to develop and implement the Framework for Governance of Indigenous Data.

4 The future of the OID is being considered in the context of reporting under the National Agreement on Closing the Gap.

Cultural and social concepts

Aboriginal and Torres Strait Islander peoples have been, for millennia, a diverse mix of peoples, groups and nations [6, 7]. Settler-colonialism is now recognised as a 'traumatic disruption' to the way of life prior to colonisation when Aboriginal and Torres Strait Islander people lived relatively healthy lives [6, p.40]. This disruption is exemplified in the proportion of Aboriginal and Torres Strait Islander people who now speak languages, which has decreased markedly [7] (please see the Cultural indicators section for more information) and there has been 'irreparable' damage to ways of life and 'irreplaceable' loss of wisdom [6, p.40-41]. Nevertheless, Aboriginal and Torres Strait Islander people continue to reclaim and practice some of the world's most enduring and persistent cultures [6-8].

Aboriginal and Torres Strait Islander people have a 'whole of life' view of health that incorporates the total wellbeing of the community and not just the individual [9]. The National Aboriginal Community Controlled Health Organisation (NACCHO) has adopted the World Health Organization's (WHO) view that people should be at the centre of health care and that comprehensive primary health care is central to achieving real outcomes and health benefits for Aboriginal and Torres Strait Islander people rather than a disease focused approach [10, 11]. These fundamental rights have been reaffirmed by the WHO in the 2018 Declaration of Astana [12].

Both social and cultural factors can have a profound impact on the health of Aboriginal and Torres Strait Islander people [8, 13-16]. It is evident that the impacts of settler-colonialism (including oppression; exploitation; marginalisation; separation from culture, land and family; intergenerational trauma; racism; and poverty) have had negative impacts on health and wellbeing for many Aboriginal and Torres Strait Islander people [6-8]. Focusing less on the deficit narratives promoted by the way these indicators are framed and more on the positive affirming impacts of cultural determinants, the narrative can shift more towards strengths based understandings of Aboriginal and Torres Strait Islander health [13, 16]. Factors such as family and community; connection to Country and place; language; cultural identity, as well as self-determination have all been identified as having a positive impact on the health and wellbeing of Aboriginal and Torres Strait Islander people [13].

Statement on the First Nations Voice to Parliament Referendum

On 14 October 2023, Australians voted in a referendum on a proposal to recognise Aboriginal and Torres Strait Islander people as the First Peoples of Australia and to enshrine an Aboriginal and Torres Strait Islander Voice to Parliament in the Constitution, honouring the invitation extended by the Uluru Statement from the Heart for Voice, Treaty and Truth telling[5]. The outcome of the referendum was to not establish a Voice to Parliament. We acknowledge that the referendum campaign and outcome have had a profound impact on Aboriginal and Torres Strait Islander people. Noting this impact, we have included a case-study on Aboriginal and Torres Strait Islander peoples' wellbeing pre-and-post the national referendum compiled by Yardhura Walani, Australian National University (page 49). At the Health*InfoNet* we reaffirm our commitment to working with all communities throughout Australia to honour in principle and practice the invitation to live, learn and walk together in pursuit of a positive future for Australia.

Cultural indicators

The cultural determinants of health play an important role in Aboriginal and Torres Strait Islander people's wellbeing. Cultural determinants include factors such as family, kinship and community; language; spiritual and traditional beliefs and knowledge; connection to Country; self-determination; and cultural identity [17, 18]. While this edition of the *Overview* only covers two cultural indicators, as more data become available this section may be expanded to include additional indicators.

5 Referendum Council (2017). Uluru statement from the heart (pp. 1): Referendum Council.

Cultural identification

CTG Outcome 14: People enjoy high levels of social and emotional wellbeing

In the 2022-23 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), respondents aged 18 years and over were asked a series of questions about cultural identification and their responses were correlated with levels of psychological distress [19]. A greater proportion of those who felt satisfied or very satisfied with their level of knowledge of culture had experienced low/moderate distress levels in the past four weeks (71%) compared with those who were not very satisfied/not at all satisfied about their level of knowledge of culture (61%). A greater proportion of respondents who reported that neither themselves nor relatives had been removed from their natural family experienced low/moderate distress levels in the past four weeks (74%) compared with those who had (60%).

Languages

CTG Outcome 16: Aboriginal and Torres Strait Islander cultures and languages are strong, supported and flourishing

Language is one of the key cultural determinants of health for Aboriginal and Torres Strait Islander people and one of the CTG socioeconomic outcomes (Outcome 16: 'Aboriginal and Torres Strait Islander cultures and languages are strong, supported and flourishing') [20]. Speaking language has been found to have many positive impacts for Aboriginal and Torres Strait Islander people, these include improved physical and mental health; educational performance; self-reported levels of happiness; community interconnectedness; cultural continuity; and social and economic benefits [17, 21]. Prior to colonisation, there were around 260 Aboriginal and Torres Strait Islander language groups and 500 dialects [17]. Due to colonisation and the introduction of policies and practices which suppressed Aboriginal and Torres Strait Islander people from using these languages, many languages were lost or became endangered [21].

There are currently efforts across Australia to revitalise, renew and reawaken Aboriginal and Torres Strait Islander languages. This is happening in a variety of ways, including communities working with Elders to reintegrate languages into daily lives, educational institutions such as schools and TAFE offering opportunities for people to learn languages, and organisations such as the Australian Institute of Aboriginal and Torres Strait Islander Studies and Indigenous Language Centres working to support and preserve languages.

The 2021 Census reported that there were 167 Aboriginal and Torres Strait Islander languages being actively spoken in Australia [22]. The 2018-19 National Indigenous Languages Survey (NILS) reported that 123 Aboriginal and Torres Strait Islander languages were being spoken, and that 14 of them could be considered strong (meaning they are learnt as a first language by most children in the community) [21]. The NILS also found that there were at least 31 Aboriginal and Torres Strait Islander languages being reawakened (being used again after a time when there was no intergenerational transmission and then no speakers) by communities.

Nationally, 9.5% of Aboriginal or Torres Strait Islander people in the 2021 Census reported using or speaking an Aboriginal or Torres Strait Islander language at home (Aboriginal people: 8.9%, Torres Strait Islander people: 20%, people who are both Aboriginal and Torres Strait Islander: 12%) [22]. The proportion of people using or speaking an Aboriginal or Torres Strait Islander language at home varied by age, with the 25-44 years age-group having the largest proportion of speakers (11%), followed by 45-64 years (10%), 15-24 years (9.3%), and 0-14 years and 65 years and over (both 8.1%).

By jurisdiction, the largest proportion of Aboriginal or Torres Strait Islander people who used or spoke an Australian Indigenous language at home in 2021 was in the NT (59%), followed by WA (13%), SA (10%), Qld (8.0%), the ACT (2.9%), NSW (1.9%), Vic (1.5%) and Tas (0.6%) [22].

The language data for remote areas of Australia have not been updated since the 2014-15 National Aboriginal and Torres Strait Islander Social Survey. The findings from this survey can be found in the *Overview of Aboriginal and Torres Strait Islander health status 2023*.

The Mayi Kuwayu study analysed the association between exposure to First Nations languages and wellbeing among the 9,149 Aboriginal and Torres Strait Islander adults who participated in the first wave of the study (which began in 2018) [23]. Preliminary results indicated that participating in a language program, speaking any amount of language, and learning language were all associated with a higher prevalence of 'good to excellent' general health and never feeling disconnected from culture. Participating in a language program was also associated with high happiness and high life satisfaction, while learning language was also associated with high happiness. Similarly, the 2022-23 NATSIHS found that a higher proportion of respondents who mainly spoke an Aboriginal or Torres Strait Islander language at home, compared with those who mainly spoke English, described their health status as 'Excellent/very good' (44% compared with 38%) or 'Good' (40% compared with 34%) [19].

Social indicators

Education

CTG Outcome 5: Students achieve their full learning potential;

CTG Outcome 6: Students reach their full potential through further education pathways;

CTG Outcome 7: Youth are engaged in employment or education

The primary indicators used to assess Aboriginal and Torres Strait Islander education outcomes are enrolment, retention, and completion rates, however, it should be noted that these indicators do not provide a full picture of Aboriginal and Torres Strait Islander peoples experiences within schools and education settings [24].

In 2023, 102%[6] of those Aboriginal and Torres Strait Islander children who were in the year before full-time schooling were enrolled in early childhood education [25]. In 2023, the full-time apparent retention rates for Aboriginal and Torres Strait Islander students (the percentages of students who stayed enrolled full-time in secondary school) were:

- 56% for Year 7/8 to Year 12
- 76% for Year 7/8 to Year 11
- 98% for Year 7/8 to Year 10 [26].

Analysis of data from the 2021 Census showed that the proportion of Aboriginal and Torres Strait Islander people aged 20-24 years who had completed year 12 or equivalent[7] was 68% [25]. The proportion of Aboriginal and Torres Strait Islander people aged 18 years and over who were studying (at university, TAFE or other institutions) was 10%, while among those aged 18-24 years it was 24% [27]. The proportion of Aboriginal and Torres Strait Islander people aged 25-34 years who had completed a non-school qualification of Certificate III or above was 47% [25].

The national testing program known as the National Assessment Program – Literacy and Numeracy (NAPLAN) reports each year on primary and secondary student achievement in five domains of numeracy and literacy: reading, writing, grammar and punctuation, spelling, and numeracy [28]. For each of these areas, students are assessed as being in one of four proficiency levels: 'exceeding', 'strong', 'developing' or 'needs additional support'. Table 2 below shows the average proportion of Aboriginal and Torres Strait Islander students across all domains who were assessed as being in each proficiency level in 2024. About one-third of students achieved results that were 'strong' or 'exceeding'.

6 Enrolment rates exceed 100% as a result of the numerator and denominator coming from different data sources and being based on different assumptions. The numerator is administrative data for pre-school enrolment reported annually. The denominator is based on Aboriginal and Torres Strait Islander population projections.

7 Certificate III or above.

Table 2. Average proportion (%) of Aboriginal and Torres Strait Islander students across all NAPLAN domains, by proficiency level and year level, 2024

	Needs additional support	Developing	Strong	Exceeding
Year 3	34	30	30	3.0
Year 5	32	30	31	3.4
Year 7	34	30	30	3.8
Year 9	34	33	26	3.1

Note: Totals do not add up to 100% as some results are suppressed due to the low number of particpants in some areas.
Source: Australian Curriculum Assessment and Reporting Authority, 2024 (Derived from [28])

Employment

CTG Outcome 7: Youth are engaged in employment or education;

CTG Outcome 8: Strong economic participation and development of people and their communities

Analysis of data from the 2021 Census showed that:

- 40% of Aboriginal and Torres Strait Islander people aged 15-64 years were not in the labour force[8]
- 52% were employed
  - 29% full-time
  - 17% part-time
- 7.4% were unemployed [27].

The top three reported occupations for employed Aboriginal and Torres Strait Islander people aged 15 years and over were community and personal services worker (17%), labourer (14%) and professional (14%) [22].

Income

CTG Outcome 8: Strong economic participation and development of people and their communities

The 2021 Census reported that:

- The median weekly equivalised[9] household income for Aboriginal and Torres Strait Islander people was $830.
- The median weekly personal income for Aboriginal and Torres Strait Islander people was $540 [22].

8 Not in the work force includes people not in a paid job, and who are not looking for work.
9 Equivalised household income adjusts the actual incomes of households to make households of different sizes and compositions comparable [22].

Key facts

This section provides a snapshot of key facts relating to Aboriginal and Torres Strait Islander health and wellbeing outcomes.

Cultural indicators

- In 2021, 9.5% of Aboriginal or Torres Strait Islander people in the Census reported using or speaking an Aboriginal or Torres Strait Islander language at home (Aboriginal people: 8.9%, Torres Strait Islander people: 20%, people who are both Aboriginal and Torres Strait Islander: 12%).
- In 2021, there were 167 Aboriginal and Torres Strait Islander languages being actively spoken in Australia.
- In 2022-23 a greater proportion of those who felt satisfied or very satisfied with their level of knowledge of culture had experienced low/moderate distress levels in the past four weeks (71%) compared with those who were not very satisfied/not at all satisfied about their level of knowledge of culture (61%).
- The 2022-23 NATSIHS found that a higher proportion of respondents who mainly spoke an Aboriginal or Torres Strait Islander language at home, compared with those who mainly spoke English, described their health status as 'Excellent/very good' (44% compared with 38%) or 'Good' (40% compared with 34%).

Population

- In 2024, the estimated Australian Aboriginal and Torres Strait Islander population was 1,039,959.
- In 2024, NSW had the highest number of Aboriginal and Torres Strait Islander people (the estimated population was 358,114 people, 34% of the total Aboriginal and Torres Strait Islander population).
- In 2024, the NT had the highest proportion of Aboriginal and Torres Strait Islander people in its population, with 31% of the NT population identifying as Aboriginal and Torres Strait Islander.

Births and pregnancy outcomes

- In 2023, there were 24,737 births registered in Australia with one or both parents identified as Aboriginal and/or Torres Strait Islander (8.6% of all births registered).
- In 2023, the median age for Aboriginal and Torres Strait Islander mothers who gave birth was 26.8 years.
- In 2023, the total fertility rate was 2.2 babies per 1,000 Aboriginal and Torres Strait Islander women.
- In 2022, 87% (crude proportion) of pregnant Aboriginal and Torres Strait Islander people attended five or more antenatal visits.
- In 2022, 12% of babies born to Aboriginal and Torres Strait Islander mothers were of LBW [29], of which 2.0% combined were very LBW (less than 1,500 grams) and extremely LBW (less than 1,000 grams) [30].

Mortality

- In 2023, the age-standardised death rate for Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT was 9.4 per 1,000.
- For Aboriginal and Torres Strait Islander people born in 2020-2022, life expectancy was estimated to be 71.9 years for males and 75.6 years for females.
- In 2023, the median age at death for Aboriginal and Torres Strait Islander people in NSW, Qld, WA, SA and the NT was 63.0 years.

- In 2018-2022, among Aboriginal and Torres Strait Islander children aged 0-4 years, living in NSW, Qld, WA, SA and the NT, there were 633 deaths; 532 in children aged 0-1 years (84% of deaths) and 101 in children aged 1-4 years.
- In 2023, the leading causes of death among Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT were ischaemic heart disease (IHD), chronic lower respiratory diseases, diabetes, cancer of trachea, bronchus and lung and intentional self-harm (suicide).
- In 2013-2022, the maternal mortality ratio for Aboriginal and Torres Strait Islander women was 14 deaths per 100,000 people who gave birth.
- In 2018-2022, there were 8,371 deaths from avoidable causes among Aboriginal and Torres Strait Islander people aged under 75 years living in NSW, Qld, WA, SA and the NT.
- In 2019-2023, suicide was the leading cause of death for Aboriginal and Torres Strait Islander children aged 5-17 years, living in NSW, Vic, Qld, SA, WA and the NT.

Hospitalisation

- In 2022-23, 5.4% of all hospital separations were for Aboriginal and Torres Strait Islander people.
- In 2022-23, the age-standardised hospital separation rate for Aboriginal and Torres Strait Islander people was 914 per 1,000, with the highest rate in the NT of 2,380 per 1,000.
- In 2017-19, age-specific hospital separation rates (excluding dialysis) for Aboriginal and Torres Strait Islander people increased with age (except for 0–4 year olds among males and females, and 35-44 year olds among females), with the highest rate in the 65 years and over age-group.
- In 2022-23, the main cause of hospitalisation for Aboriginal and Torres Strait Islander people was for 'Factors influencing health status and contact with health services' (mostly for care involving dialysis), responsible for 46% of all Aboriginal and Torres Strait Islander hospital separations.
- In 2022-23, the age-standardised rate of overall potentially preventable hospitalisations for Aboriginal and Torres Strait Islander people was 66 per 1,000.

Selected health conditions

Cardiovascular health

- In 2022-23, 14% of Aboriginal and Torres Strait Islander people reported having cardiovascular disease (CVD).
- In 2023, in Qld, WA, SA and the NT combined, there were 282 new diagnoses of rheumatic heart disease (RHD) among Aboriginal and Torres Strait Islander people, at a crude rate of 56 per 100,000.
- In 2022-23, there were 18,439 hospital separations for CVD among Aboriginal and Torres Strait Islander people, representing 5.2% of all Aboriginal and Torres Strait Islander hospital separations (excluding dialysis).
- In 2023, IHD was the leading specific cause of death for Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT.

Cancer

- In the 2022-23 NATSIHS, 1.1% of Aboriginal and Torres Strait Islander people reported having neoplasms[10] as a long-term health condition.
- In 2014-2018, there were 9,262 new cases of cancer diagnosed among Aboriginal and Torres Strait Islander people living in NSW, Vic, Qld, WA and the NT, at an average of 1,852 new cases per year.
- In 2014-2018, the most common cancers diagnosed among Aboriginal and Torres Strait Islander people living in NSW, Vic, Qld, WA and the NT were lung cancer, breast cancer (in females), bowel and prostate cancer.
- Survival rates indicated that of the Aboriginal and Torres Strait Islander people living in NSW, Vic, Qld, WA and the NT who were diagnosed with cancer between 2009 and 2018, just over half (55%) had survived for five years or more after their diagnosis.
- In 2022-23, there were 12,570 hospital separations for neoplasms among Aboriginal and Torres Strait Islander people.
- In 2023, cancers of the trachea, bronchus and lung combined were the fourth leading cause of death overall for Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT, being responsible for 264 deaths.
- In 2018-2022, the age-standardised mortality rate for cancer in NSW, Qld, WA, SA and the NT was 254 per 100,000.
- In 2018, cancer accounted for 9.9% of the total burden of disease among Aboriginal and Torres Strait Islander people.

Diabetes

- In 2022-23, 7.4% of Aboriginal and Torres Strait Islander people reported having diabetes.
- In 2021-22, there were 4,850 potentially preventable hospitalisations of Aboriginal and Torres Strait Islander people for a principal diagnosis of diabetes.
- In 2023, diabetes was the third leading specific cause of death for Aboriginal and Torres Strait Islander people in NSW, Qld, SA, WA and the NT.
- In 2018, endocrine disorders accounted for 3.3% of total disease burden among Aboriginal and Torres Strait Islander people. Of this, 87% was attributed to type 2 diabetes.

Social and emotional wellbeing (including mental health)

- In 2022-23, 30% of Aboriginal people and 31% of Torres Strait Islander people aged 18 years and over reported high or very high levels of psychological distress.
- In 2022-23, 30% of Aboriginal people and 22% of Torres Strait Islander people, aged two years and over, reported having a mental and/or behavioural condition.
- In 2022-23, anxiety was the most common mental or behavioural condition reported by Aboriginal and Torres Strait Islander people aged two years and over (21%), followed by depression (16%).
- In 2022-23, there were 27,645 hospital separations with a principal International Classification of Diseases (ICD) diagnosis of 'Mental and behavioural disorders' identified as Aboriginal and Torres Strait Islander.
- In 2023, 265 Aboriginal and Torres Strait Islander people living in NSW, Vic, Qld, WA, SA and the NT died from intentional self-harm.
- In 2018, mental and substance use disorders accounted for 23% of total disease burden among Aboriginal and Torres Strait Islander people. Of all disease groups, mental and substance use disorders made the highest contribution to total burden.

10 Data sources may use the term 'neoplasm' to describe conditions associated with abnormal growth of new tissue, commonly referred to as a tumour. Neoplasms can be 'malignant' (cancerous) or 'benign' (not cancerous). Other terms for neoplasms include 'in situ' (a tumour that has not spread) or those of an 'uncertain nature' [19, 31].

Kidney health

- In 2022-23, 1.4% of Aboriginal and Torres Strait Islander people (Aboriginal people: 1.4%; Torres Strait Islander people: 1.3%) reported kidney disease as a long-term health condition.
- In 2018-2022, the age-standardised notification rate of end-stage renal disease[11] (ESRD) was 605 per 1,000,000.
- In 2023, 361 Aboriginal and Torres Strait Islander people commenced dialysis.
- In 2023, 70 Aboriginal and Torres Strait Islander people received a kidney transplant.
- In 2018-19, there were 242,274 hospitalisations for Aboriginal and Torres Strait Islander people for end-stage kidney disease (ESKD).
- In 2023, the most common cause of death for dialysis patients was CVD (101 deaths).
- In 2018-2022, the age-standardised death rate for kidney disease (as a major cause of death) for Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT was 24 per 100,000.
- In 2018, chronic kidney disease (CKD) was the 10th leading specific cause of total disease burden among Aboriginal and Torres Strait Islander people (2.5%).

Injury, including family violence

- In 2022-23, 8.9% of Aboriginal and Torres Strait Islander people aged 15 years and over had experienced violence and 4.5% a serious accident in the last 12 months.
- In 2022-23, injury was the second leading cause of hospitalisation (excluding dialysis) for Aboriginal and Torres Strait Islander people.
- In 2022-23, the leading cause of injury-related hospitalisations among Aboriginal and Torres Strait Islander people was falls (21%).
- In 2023, intentional self-harm was the leading specific cause of injury deaths in NSW, Qld, WA, SA and the NT (5.1% of all Aboriginal and Torres Strait Islander deaths).
- In 2018, of all disease groups, injury made the second highest contribution to the total disease burden among Aboriginal and Torres Strait Islander people (12%).

Respiratory health (including COVID-19)

- From December 2021 to March 2024, there were 427,906 confirmed and probable cases of coronavirus disease (COVID-19) among Aboriginal and Torres Strait Islander people.
- In 2022-23, 31% of Aboriginal and Torres Strait Islander people reported having a long-term respiratory condition.
- In 2021, 13% of Aboriginal and Torres Strait Islander people reported having asthma and 2.2% chronic obstructive pulmonary disease (COPD).
- In 2022-23, there were 32,501 hospitalisations for respiratory disease among Aboriginal and Torres Strait Islander people.
- From January 2020 to March 2024, there were 451 deaths from COVID-19 among Aboriginal and Torres Strait Islander people.
- In 2023, chronic lower respiratory disease was the second leading cause of death overall for Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT.
- In 2018, COPD was the 2nd leading specific cause of total disease burden among Aboriginal and Torres Strait Islander people, and asthma the 11th.

11 'Kidney failure' is the preferred, person-centred alternative to terms such as 'end-stage renal disease', [1], however, for the purposes of this *Overview*, the terms cited in the data sources will be used.

Eye health

- The estimated overall prevalence of active trachoma among Aboriginal and Torres Strait Islander children aged 5-9 years in selected at-risk remote communities has decreased from 15% in 2009 to 1.8% in 2023.
- In 2022-23, eye and sight problems were reported by 41% of Aboriginal people and 38% of Torres Strait Islander people.
- In 2022-23, the most common eye conditions reported by Aboriginal and Torres Strait Islander people were hyperopia (long sightedness: 23%), myopia (short sightedness: 17%), other diseases of the eye and adnexa (12%), cataract (1.5%), blindness (0.9%) and glaucoma (0.4%).
- In 2022-23, 13% of Aboriginal and Torres Strait Islander children, aged 0-14 years, were reported to have eye or sight problems.
- In 2021-23, 7,734 (58%) of the 13,329 hospitalisations for diseases of the eye among Aboriginal and Torres Strait Islander people were for disorders of the lens (mainly cataracts).
- In 2021-23, crude hospitalisation rates for eye disease, by Indigenous Regions, ranged from 3.5 per 1,000 in Hume East (Vic), to 21 per 1,000 in the Pilbara (WA).

Ear health and hearing

- In 2022-23, 13% of Aboriginal and Torres Strait Islander people reported ear and hearing problems.
- In 2021-23, there were 7,142 hospitalisations of Aboriginal and Torres Strait Islander people with a principal diagnosis related to diseases of the ear and mastoid process.
- The most common reasons for hospitalisation were diseases of the middle ear and mastoid (71% of diseases of the ear and mastoid process related hospitalisations), inner ear disease/s (8.6%), hearing loss (7.2%) and otitis externa (7.1%).
- In 2018, hearing loss was the 13th leading specific cause of total disease burden among Aboriginal and Torres Strait Islander people.

Oral health

- In 2012-2014, 61% of Aboriginal and Torres Strait Islander children aged 5-10 years had experienced tooth decay in their baby teeth, and 36% of Aboriginal and Torres Strait Islander children aged 6-14 years had experienced tooth decay in their permanent teeth.
- In 2017-18, 7.1% of Aboriginal and Torres Strait Islander people aged 15 years and over had complete tooth loss.
- In 2021-22, the age-standardised hospitalisation rate for acute dental conditions for Aboriginal and Torres Strait Islander people was 4.1 per 1,000.
- In 2018, oral disorders accounted for 2.1% of total disease burden among Aboriginal and Torres Strait Islander people. Of this, 63% was caused by dental caries.

Disability

- In 2022-23, 38% of Aboriginal people and 29% of Torres Strait Islander people reported having a disability or restrictive long-term health condition.
- In 2022-23, 7.0% of Aboriginal people and 5.9% of Torres Strait Islander people reported a profound or severe disability.
- In the 2021 Census, 8.2% of Aboriginal and Torres Strait Islander people reported a need for assistance with either self-care, mobility or communication.
- In 2018-19, the most commonly self-reported disabilities for Aboriginal and Torres Strait Islander people were physical (63%), sensory (47%), psychological (23%) and intellectual (18%).

Communicable diseases

- In 2023, there were 8,557 notifications of chlamydia for Aboriginal and Torres Strait Islander people.
- In 2023, there were 5,631 notifications of gonorrhoea for Aboriginal and Torres Strait Islander people.
- In 2023, there were 1,022 notifications of syphilis for Aboriginal and Torres Strait Islander people.
- In 2023, there were 24 notifications of human immunodeficiency virus (HIV) infection for Aboriginal and Torres Strait Islander people.
- In 2023, there were 1,499 notifications of hepatitis C virus (HCV) for Aboriginal and Torres Strait Islander people.
- In 2023, there were 135 notifications of hepatitis B virus (HBV) for Aboriginal and Torres Strait Islander people.
- In 2019-2023, there were 1,372 notifications of invasive pneumococcal disease (IPD) for Aboriginal and Torres Strait Islander people.
- In 2019-2023, 116 (18%) of the 632 notified cases of invasive meningococcal disease (IMD) were identified as Aboriginal and Torres Strait Islander.
- In 2020, the notification rate for tuberculosis (TB) among Aboriginal and Torres Strait Islander people was 3.0 per 100,000.
- In 2016-2019, there were 22 Aboriginal and Torres Strait Islander people diagnosed with invasive *Haemophilus influenzae* type b (Hib) in Australia.
- In 2022-23, 4.0% of Aboriginal and Torres Strait Islander people reported having a disease of the skin or subcutaneous tissue.
- In 2018, skin disorders accounted for 1.4% of total burden from all diseases among Aboriginal and Torres Strait Islander people.

Risk and Protective factors contributing to Aboriginal and Torres Strait Islander health

Nutrition and breastfeeding

- In 2022-23, 35% of Aboriginal and Torres Strait Islander people aged 15 years and over reported eating the recommended amount of two serves of fruit per day.
- In 2022-23, the majority (92%) of Aboriginal and Torres Strait Islander children aged 2-4 years ate an adequate amount of fruit per day, whereas 11% reportedly ate an adequate quantity of vegetables per day.
- In 2022-23, 28% of Aboriginal and Torres Strait Islander people aged 15 years and over reported that they usually consumed sugar sweetened drinks every day and 9.9% consumed diet drinks; 77% usually consumed sugar sweetened drinks or diet drinks at least once per week.
- In 2022-23, 18% of children aged 2-14 years usually consumed sugar sweetened drinks daily and 4.4% consumed diet drinks daily; 65% usually consumed sugar sweetened drinks or diet drinks at least once a week.
- In 2018-19, 87% of Aboriginal and Torres Strait Islander children aged 0-2 years had been breastfed.
- In 2018, all dietary factors were the fifth leading risk factor contributing to the total burden of disease among Aboriginal and Torres Strait Islander people, responsible for 6.2% of the total burden of disease.

Physical activity

- In 2022-23, the majority (84%) of Aboriginal and Torres Strait Islander people living in non-remote areas (aged 15 years and over) had not met the physical activity guidelines, and 19% had not participated in any physical activity in the week prior to being surveyed.
- In 2018, physical inactivity was the 11th leading risk factor contributing to the burden of disease among Aboriginal and Torres Strait Islander people, responsible for 2.4% of the total burden of disease.

Bodyweight

- In 2022-23, 68% of Aboriginal and Torres Strait Islander people aged 15 years and over were either overweight or obese (Aboriginal people: 67%; Torres Strait Islander people: 76%), 29% were in the normal weight range and 3.9% were underweight.
- In 2022-23, of Aboriginal and Torres Strait Islander children aged 2-17 years, 30% were overweight or obese; 61% were normal weight and 9.8% were underweight.
- In 2018, overweight (including obesity) was the third leading risk factor contributing to the burden of disease among Aboriginal and Torres Strait Islander people, responsible for 9.7% of the total burden of disease.

Immunisation

- As of 30 June 2024, 95.2% of Aboriginal and Torres Strait Islander five-year-old children were fully immunised against the recommended vaccine preventable diseases.

Tobacco and e-cigarette use

- In 2022-23, 29% of Aboriginal and Torres Strait Islander people aged 15 years and over reported they smoked daily, a reduction from levels reported in 2018-19 (37%).
- The proportion of Aboriginal and Torres Strait Islander mothers who reported smoking during pregnancy decreased from 48% in 2012 to 40% in 2022.
- In 2022-23, a higher proportion of Aboriginal and Torres Strait Islander people aged 15 years and over living in remote areas smoked daily (46%) than those living in non-remote areas (26%).
- A study from 2021 found half of deaths among Aboriginal and Torres Strait Islander people in NSW aged 45 years and over, and 37% of deaths among all age-groups, were caused by smoking.
- In 2018, tobacco use was the leading risk factor contributing to the burden of disease among Aboriginal and Torres Strait Islander people, responsible for 12% of the total burden of disease.
- In 2022-23, 24% of Aboriginal and Torres Strait Islander people aged 15 years and over had ever used an e-cigarette and 8.3% currently used an e-cigarette.

Alcohol use

- In the 2022-23 NATSIHS, a quarter (25%) of Aboriginal and Torres Strait Islander adults reported abstaining from alcohol.
- In 2022-23, 62% of Aboriginal and Torres Strait Islander adults did not exceed the 2020 Australian adult alcohol guideline.
- In 2022-23, 36% of Aboriginal and Torres Strait Islander adults exceeded the 2020 Australian adult alcohol guideline.
- In 2022-23, a higher proportion of Aboriginal and Torres Strait Islander males (48%) exceeded the Australian adult alcohol guideline than females (25%).
- In 2022, 88% of pregnant Aboriginal and Torres Strait Islander people self-reported not consuming alcohol during the first 20 weeks of pregnancy, increasing to 93% after 20 weeks.

- In 2017-19, the crude alcohol-related hospitalisation rate for Aboriginal and Torres Strait Islander people was 7.0 per 1,000.
- In 2015-2019 in NSW, Qld, WA, SA and the NT, the crude rate for deaths related to alcohol use among Aboriginal and Torres Strait Islander people was 13 per 100,000.
- In 2018, alcohol use was the second leading risk factor contributing to the total burden of disease among Aboriginal and Torres Strait Islander people, accounting for 11% of the burden of disease.

Illicit drug use

- In 2022-23, the majority (72%) of Aboriginal and Torres Strait Islander people aged 15 years and over reported they had not used illicit substances in the last 12 months.
- In 2022-23, 27% of Aboriginal and Torres Strait Islander people aged 15 years and over reported they had used an illicit substance in the previous 12 months.
- In 2017-19, the leading drugs of concern that Aboriginal and Torres Strait Islander people were hospitalised for were methamphetamines (1.9 per 1,000) and cannabinoids (1.1 per 1,000).
- In 2017-2021, there were 536 unintentional drug-induced deaths among Aboriginal and Torres Strait Islander people.
- In 2018, illicit drug use contributed to 6.9% of the total burden of disease among Aboriginal and Torres Strait Islander people.

Volatile substance use

- In 2022-23, the majority (94%) of Aboriginal and Torres Strait Islander people aged 14 years and over reported they had never used inhalants.
- In 2018-19, 0.9% of Aboriginal and Torres Strait Islander people aged 15 years and over reported using petrol or other inhalants in the last 12 months.
- In 2017-19, the crude hospitalisation rate for Aboriginal and Torres Strait Islander people due to volatile solvent use (based on principal diagnosis) was 0.1 per 1,000.

Environmental health

- In 2022-23, 82% of Aboriginal and Torres Strait Islander households reported living in houses of an acceptable standard.
- In 2018-19, Aboriginal and Torres Strait Islander crude hospitalisation rates for selected diseases related to environmental health were 9.2 per 1,000 for influenza and pneumonia, 9.0 per 1,000 for intestinal infectious diseases, 8.0 per 1,000 for bacterial diseases, 4.6 per 1,000 for acute upper respiratory infections, 2.7 per 1,000 for asthma and 1.8 per 1,000 for scabies.
- In 2014-2018, the age-standardised death rate for Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT from conditions associated with poor environmental health was 41 per 100,000.
- In 2022-23, 58% of all households were food secure at all times in the previous 12 months. Food security was higher in non-remote areas (59%) compared with remote areas (49%).

The Aboriginal and Torres Strait Islander population

The ABS estimated[12] the Aboriginal and Torres Strait Islander population at 1,039,959 people in 2024 (Table 3) [32]. The Aboriginal and Torres Strait Islander population accounted for 3.8% of Australia's total population of just over 27 million (Derived from [32]). The Aboriginal and Torres Strait Islander population was highest in NSW (358,114 people), followed by Qld (292,735), with the lowest in the ACT (10,197). The NT had the highest proportion of Aboriginal and Torres Strait Islander people among its population (31%) and Vic the lowest (1.2%).

Table 3. Estimated Aboriginal and Torres Strait Islander (Indigenous) population, by jurisdiction, Australia, 2024

Jurisdiction	Indigenous population (number)	Proportion of Australian Indigenous population (%)	Proportion of total jurisdiction population (%)
NSW	358,114	34	4.2
Vic	83,752	8.5	1.2
Qld	292,735	28	5.2
WA	126,807	12	4.3
SA	54,626	5.3	2.9
Tas	35,246	3.4	6.1
ACT	10,197	1.0	2.2
NT	78,237	7.5	31
Australia	1,039,959	100	3.8

Note: The Australian population includes Jervis Bay Territory, the Cocos (Keeling) Islands, Christmas Island and Norfolk Island.

Source: Derived from ABS, 2024 [33], ABS, 2024 [32]

According to estimates from the 2021 Census, 91.4% of Indigenous people were Aboriginal, 4.4% Torres Strait Islander and 4.2% of both Aboriginal and Torres Strait Islander descent [22].

In 2024, according to ABS estimates, about one-third (32%) of Aboriginal and Torres Strait Islander people were aged less than 15 years and 6.1% were aged 65 years or over (Derived from [32]).

The ABS estimated that of the population of 1,039,959 Aboriginal and Torres Strait Islander people in 2024, 44% lived in inner/outer regional areas, 41% in major cities and 15% in remote/very remote areas (Derived from [32]). In terms of specific geographical areas, the top five Indigenous Regions[13] where Aboriginal and Torres Strait Islander people resided in 2024 were Brisbane (124,483 residents); NSW Central and North Coast (123,750); Sydney-Wollongong (108,623); Perth (57,003) and Vic excluding Melbourne (43,326) [32].

12 Population estimates are released regularly by the ABS and provide a more accurate measure of the actual size of a population. They are assessments of what would happen to the population if components of population change (births, deaths and migration) were to hold in the future.

13 Indigenous Regions are large geographical units loosely based on the former Aboriginal and Torres Strait Islander Commission boundaries [34].

Births and pregnancy outcomes

CTG Outcome 2: Children are born healthy and strong

Evidence shows an increase in the proportion of Aboriginal and Torres Strait Islander mothers attending antenatal care in the first trimester, a decrease in the rate of mothers smoking during pregnancy, and a majority of babies being born at a healthy birthweight and normal size for their gestational age [35]. 'Birthing on Country' is an area of maternal and infant health that is gathering momentum [36]. Researchers continue to build the evidence base to show that Birthing on Country models are effective in providing protective factors for mothers and babies [37].

In Australia, all births are required by law to be registered with the Registrar of Births, Deaths and Marriages in the jurisdiction in which the birth occurred [38]. In 2023, there were 24,737 births (12,679 males and 12,058 females) registered in Australia with one or both parents identified as Aboriginal and/or Torres Strait Islander (8.6% of all births registered). This likely underestimates the true number as Indigenous status is not always identified, and there may be a lag in birth registrations (See Appendix 1 for a discussion of data limitations).

In 2023, for births registered as Indigenous: 23% recorded both parents as Aboriginal and/or Torres Strait Islander; 46% recorded only the mother as Aboriginal and/or Torres Strait Islander (including births where paternity was not acknowledged and those where the father's Indigenous status was unknown) and in 31% of registrations only the father was recorded as Aboriginal and/or Torres Strait Islander (including births where the mother's Indigenous status was unknown) [38].

Age of mothers

About births and fertility

There are several general measures of births and fertility[14], but detailed analysis involves the use of age-specific rates. The age-specific rate is the annual number of live births per 1,000 women in five-year age-groups from 15 to 49 years (the relatively small numbers of births to women aged less than 15 years are included in the 15-19 years age-group, similarly, births to women aged 50 years and over are included in the 45-49 years age-group) [38]

In 2023, for babies born to Aboriginal and Torres Strait Islander people, 57% were born to mothers aged 20-29 years, and 8.8% were born to mothers aged 15-19 years [38].

In 2023, the median age of Aboriginal and Torres Strait Islander mothers who gave birth was 26.8 years [38]. The highest age-specific fertility rates for Aboriginal and Torres Strait Islander women were among those aged 25-29 years (125 per 1,000) and 20-24 years (114 per 1,000). The fertility rate of teenage Aboriginal and Torres Strait Islander women, aged 15-19 years, was 34 births per 1,000 women.

Total fertility rate

The summary measure of fertility is the total fertility rate, which is the sum of age-specific fertility rates divided by 1,000. It represents the number of children a female would bear if each female experienced current age specific fertility rates at each age of her reproductive life [38].

In 2023, the total fertility rate was 2.2 babies per 1,000 Aboriginal and Torres Strait Islander women [38].

14 The study of birth information is known as fertility analysis, where 'fertility' refers to the number of babies born alive. This meaning is different to the lay use of the word, which means the capacity to bear children.

Antenatal care

Antenatal care from health professionals helps pregnant women by monitoring their health screening and providing information and support during pregnancy [39]. It can help with the early identification of potentially preventable risk factors (especially when care is provided during the first trimester of pregnancy) that adversely affect maternal and child health outcomes [40]

In 2022, 87% (crude proportion) of pregnant Aboriginal and Torres Strait Islander women attended five or more antenatal visits[15] [29]. The Department of Health and Aged Care recommends 10 visits for first-time pregnancy without complications and 7 visits for subsequent uncomplicated pregnancies [39]. The proportion of women attending the first antenatal visit during the first trimester of pregnancy (less than 14 weeks) was 71% [29]. This has increased each year from 51% in 2013. The proportions decreased with remoteness, from major cities/inner regional areas (both 74%), outer regional areas (73%) and remote/very remote areas (both 60%).

Birthweight

In 2022, the average birthweight of babies born to Aboriginal and Torres Strait Islander mothers was 3,209 grams [29]. Low birthweight (LBW), defined as a birthweight of less than 2,500 grams [30], increases the risk of health problems and death in infancy [41]. In 2022, 12% of babies born to Aboriginal and Torres Strait Islander mothers were of LBW [29], of which 2.0% combined were very LBW (less than 1,500 grams) and extremely LBW (less than 1,000 grams) [30].

Factors impacting on LBW include preterm birth, mothers smoking during pregnancy, mothers being underweight prior to pregnancy and not attending antenatal care in the first trimester [42]. Other factors include socioeconomic disadvantage and the age of the mother [41].

Tobacco smoking while pregnant has a major impact on birthweight. In 2022, 40% (age-standardised proportion) of Aboriginal and Torres Strait Islander mothers reported smoking during pregnancy [29]. If smoking during pregnancy could be eliminated, the prevention of an estimated 37% of LBW births among Aboriginal and Torres Strait Islander babies could occur [42].

Mortality

CTG Outcome 1: Everyone enjoys long and healthy lives

In July 2020, the National Agreement on Closing the Gap was created in consultation with Aboriginal and Torres Strait Islander people. The initiative aims to close the gap in life expectancy between Aboriginal and Torres Strait Islander and non-Indigenous Australians by 2031 [20]. Specific outcomes, targets and indicators aimed at policy direction and monitoring progress for mortality include life expectancy, all-cause mortality, leading causes of death and potentially avoidable mortality [27]. The difference in health outcomes (health gap) between Aboriginal and Torres Strait Islander people and non-Indigenous Australians (including life expectancy and infant/child mortality) can be attributed to several factors including:

- differences in the social determinants of health
- differences in health risk factors
- differences in access to appropriate health services (not covered in this report) [27, 43].

There were 5,256 deaths in Australia in 2023 where the deceased person was identified as Aboriginal and/or Torres Strait Islander (Table 4) [44]. See Appendix 1 for discussion of data limitations.

15 This excludes very preterm births.

Table 4. Numbers and proportions (%) of Aboriginal and Torres Strait Islander deaths, Australia, 2023

Jurisdiction	Number of deaths	Proportion of deaths in total jurisdiction population %
NSW	1,779	3.0
Vic	412	0.9
Qld	1,248	3.4
WA	737	4.2
SA	319	2.1
Tas	142	2.8
ACT	37	1.5
NT	581	46
Australia	5,256	2.9

Note:

1. Australian total includes other territories including Jervis Bay Territory, the Cocos (Keeling) Islands, Christmas Island and Norfolk Island.
2. 2023 Aboriginal and Torres Strait Islander deaths is influenced by the use of additional sources of information for deriving the Indigenous status of deaths.

Source: ABS, 2024 [44]

In 2023, there were 336 deaths for which no Indigenous status was reported, representing 0.2% of registered deaths; it is very likely that some of these deaths were among Aboriginal and Torres Strait Islander people [44]. Over the past two years, the ABS has applied improvements to the way Indigenous status is derived. This has led to a decrease in the number of deaths where the Indigenous status of the deceased is unknown or not stated.

Death rates

Crude and age standardised death rates, median age at death, age specific death rates and infant/child mortality rates (see the Glossary for further information) for Aboriginal and Torres Strait Islander people are only available for NSW, Qld, WA, SA and the NT as they are the jurisdictions with adequate levels of identification and sufficient numbers of deaths for mortality analysis to be undertaken [44]. The Aboriginal and Torres Strait Islander data for these measures are based on three-year averages, calculated for each calendar year, and then averaged. The reported rate for 2023 is based on the three-year averages for the 2021-2023 period.

In 2023, the age-standardised death rate for Aboriginal and Torres Strait Islander people was 9.4 per 1,000 population (Table 5) [44]. Age-standardised death rates for Aboriginal and Torres Strait Islander people varied by jurisdiction, with the highest rate occurring in the NT (14 per 1,000) and the lowest in NSW (8.3 per 1,000).

Table 5. Number of deaths and age-standardised death rates, Aboriginal and Torres Strait Islander people, NSW, Qld, WA, SA and the NT, 2023

Jurisdiction	Numbers	Aboriginal and Torres Strait Islander people
NSW	1,779	8.3
Qld	1,248	8.4
WA	737	11
SA	319	10
NT	581	14
Total for the selected jurisdictions	4,664	9.4

Notes:

1. Rates are per 1,000 population.
2. Rates are based on three-year averages; for Aboriginal and Torres Strait Islander data, rates are calculated for each calendar year and then averaged to reduce variability in annual rates.

Source: ABS, 2024 (Derived from [44])

In 2023, the crude death rate in NSW, Qld, WA, SA and the NT for Aboriginal and Torres Strait Islander people was 4.9 per 1,000 [44]. The rate for males was higher than that for females (5.3 per 1,000 and 4.5 per 1,000 respectively).

For 2015-2019, in NSW, Qld, WA, SA and the NT, 15,439 deaths (males: 8,458; females: 6,981) were identified as Aboriginal and/or Torres Strait Islander [27]. The crude death rate for all Aboriginal and Torres Strait Islander people was 430 per 100,000, with the rate for males (472 per 100,000) higher compared with females (388 per 100,000). The age-standardised death rate for all Aboriginal and Torres Strait Islander people was 922 per 100,000, with NSW recording the lowest rate (710 per 100,000), followed by Qld (965 per 100,000); SA (974 per 100,000); WA (1,126 per 100,000) and the NT with the highest rate (1,356 per 100,000).

Expectation of life

In 2023, the ABS published revised estimates for expectation of life at birth for Aboriginal and Torres Strait Islander people [45]. According to these estimates, Aboriginal and Torres Strait Islander males born in Australia in 2020-2022 could expect to live to 71.9 years. Aboriginal and Torres Strait Islander females born in Australia in 2020-2022 could expect to live to 75.6 years. Revised estimates were also published for Aboriginal and Torres Strait Islander people living in NSW, Qld, WA and the NT (Table 6).

Table 6. Expectation of life at birth in years, by Indigenous status and sex, selected jurisdictions, Australia, 2020-2022

Jurisdiction	Aboriginal and Torres Strait Islander people	Non-Indigenous people	Difference
Males			
NSW	73.8	80.6	6.8
Qld	72.9	80.2	7.4
WA	68.9	81.2	12.3
NT	65.6	79.1	13.5
Australia	71.9	80.6	8.8
Females			
NSW	77.9	83.8	5.9
Qld	76.6	83.5	7.0
WA	72.6	84.3	11.7
NT	69.4	83.2	13.8
Australia	75.6	83.8	8.1

Notes:

1. These estimates are based on the average number of Aboriginal and Torres Strait Islander deaths registered in 2020, 2021 and 2022 adjusted for under/overidentification of Indigenous status in registrations. Final Aboriginal and Torres Strait Islander population estimates are based on the 2021 Census.
2. Australian estimates are based on deaths in all states and territories.
3. Differences are based on unrounded estimates.
4. Life expectancy estimates for Australia are calculated taking age-specific identification rates into account.

Source: ABS, 2023 [45]

Life expectancy for Aboriginal and Torres Strait Islander people was lower across all age-groups compared with non-Indigenous people. Aboriginal and Torres Strait Islander females had a greater life expectancy across all age-groups compared with Aboriginal and Torres Strait Islander males (Table 7) [45].

Table 7. Expectation of life at selected ages in years, by Indigenous status and sex, selected jurisdictions, Australia, 2020-2022

Age	Aboriginal and Torres Strait Islander people	Non-Indigenous people	Difference
Males			
0	71.9	80.6	8.8
1	71.3	79.9	8.6
5	67.4	75.9	8.6
25	48.1	56.3	8.2
50	26.4	32.5	6.1
65	15.5	19.3	3.9
85	4.4	4.7	0.3
Females			
0	75.6	83.8	8.1
1	75.0	83.0	8.0
5	71.0	79.1	8.0
25	51.4	59.2	7.8
50	28.5	34.9	6.4
65	16.7	21.1	4.4
85	4.5	4.8	0.3

Notes:

1. These estimates are based on the average number of Aboriginal and Torres Strait Islander deaths registered in 2020, 2021 and 2022 adjusted for under/overidentification of Indigenous status in registrations. Final Aboriginal and Torres Strait Islander population estimates are based on the 2021 Census.
2. Australian estimates are based on deaths in all states and territories.
3. Differences are based on unrounded estimates.
4. Life expectancy estimates for Australia are calculated taking age-specific identification rates into account.

Source: ABS, 2023 [45]

Life expectancy for Aboriginal and Torres Strait Islander people varied considerably by remoteness of residence [45]. Aboriginal and Torres Strait Islander males living in major cities had a life expectancy of 72.5 years in 2020-2022, compared with 67.3 years for those living in remote and very remote areas. For females, the figures were 76.5 years for major cities and 71.3 years for remote and very remote areas (Table 8).

Table 8. Expectation of life at birth in years, by Indigenous status and remoteness, Australia, 2020-2022

Remoteness	Aboriginal and Torres Strait Islander people		Non-Indigenous		Difference	
	Males	Females	Males	Females	Males	Females
Major cities	72.5	76.5	81.0	84.0	8.5	7.5
Inner and outer regional	72.8	76.7	79.6	83.2	6.8	6.5
Remote and very remote	67.3	71.3	79.7	83.7	12.4	12.4

Notes:

1. These estimates are based on the average number of Aboriginal and Torres Strait Islander deaths registered in 2020, 2021 and 2022 adjusted for under-identification and over-identification of Indigenous status in registrations. Aboriginal and Torres Strait Islander population estimates are based on the 2021 Census.
2. Differences are based on unrounded estimates.
3. Life expectancy estimates for Australia are calculated taking age-specific identification rates into account.

Source: ABS, 2023 [45]

The life expectancy data for 2020-2022 are not comparable to previous Census data due to changes in the identification of Indigenous status [45]. Due to this, the *Overview* does not provide trend analysis data for life expectancy.

Median age at death

In 2023, the median age at death[16] for Aboriginal and Torres Strait Islander people in NSW, Qld, WA, SA and the NT was 63.0 years [44]. The median age of death varied across the selected jurisdictions, with NSW having the highest median age of death for both males and females (63.2 years and 68.7 years respectively) (Table 9). The lowest median age of death for males was reported in WA (56.1 years) and for females, in the NT (61.5 years).

Table 9. Median age at death (in years), Aboriginal and Torres Strait Islander people, by sex, NSW, Qld, WA, SA and the NT, 2023

Jurisdiction	Aboriginal and Torres Strait Islander people		
	Males	Females	Persons
NSW	63.2	68.7	65.3
Qld	61.2	66.6	63.8
WA	56.1	63.2	59.6
SA	59.0	63.9	61.1
NT	56.6	61.5	58.9
Total for the selected jurisdictions	60.6	65.8	63.0

Notes:

1. Information is not available for the other jurisdictions because of the relatively small numbers of deaths recorded.
2. Median age of death is the age below which 50% of deaths occur.

Source: ABS, 2024 [44]

16 The median age at death is the age below which 50% of people die.

Age-specific death rates

In 2023, in NSW, Qld, WA, SA and the NT, the death rate for Aboriginal and Torres Strait Islander people for all ages was 491 per 100,000 [44]. The age-specific death rates increased with age from 5-14 years, with the highest rate reported in the 75 years and over age-group (7,561 per 100,000), followed by the 65-74 years age-group (2,594 per 100,000) and 55-64 years age-group (1,332 per 100,000). The lowest rate was in the 5-14 years age-group (19 per 100,000).

Infant mortality

The infant mortality rate (IMR) is the number of deaths of children aged less than one year in a calendar year per 1,000 live births in the same calendar year [44]. In NSW, Qld, WA, SA and the NT in 2023, the Aboriginal and Torres Strait Islander IMR was 5.4 per 1,000 live births, with rates higher for males (6.1 per 1,000) compared with females (4.8 per 1,000). The highest IMR was in the NT (14 per 1,000), followed by WA (6.2 per 1,000), Qld (5.7 per 1,000) and SA (4.2 per 1,000). The lowest rate was in NSW (3.9 per 1,000).

In the five-year period 2018-2022, in NSW, Qld, WA, SA and the NT, 532 infant deaths represented 84% of all deaths among 0-4 year old Aboriginal and Torres Strait Islander children (633 deaths) (Derived from [46]). For the selected jurisdictions combined, the IMR for Aboriginal and Torres Strait Islander infants was 5.5 per 1,000, with the highest rate in the NT (14 per 1,000), followed by Qld (5.9 per 1,000), WA (5.2 per 1,000), NSW and SA (both 3.9 per 1,000).

Child mortality

For 2018-2022, in NSW, Qld, WA, SA and the NT there were 101 deaths among Aboriginal and Torres Strait Islander children aged 1-4 years (Derived from [46]). The child mortality rate was 148 per 100,000 for 0–4-year-olds. For the selected jurisdictions, the NT had the highest child mortality rate (312 per 100,000), followed by Qld (161 per 100,000), WA (156 per 100,000), SA (125 per 100,000) and NSW (104 per 100,000).

Causes of death

Ischaemic heart disease (IHD) was the leading specific cause of death for Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT in 2023 [47]. IHD accounted for 488 deaths, representing 10% of all deaths for Aboriginal and Torres Strait Islander people (total 4,664 for selected jurisdictions) (Derived from [47]). The other leading specific causes of death were, chronic lower respiratory diseases: 342 deaths (7.3%), diabetes: 330 deaths (7.0%), cancer of trachea, bronchus and lung: 264 deaths (5.7%) and intentional self-harm (suicide) (5.1%).

In 2023, for Aboriginal and Torres Strait Islander males living in NSW, Qld, WA, SA and the NT, the leading causes of death were IHD: 327 deaths, intentional self-harm: 179 deaths, chronic lower respiratory diseases: 173 deaths, diabetes: 136 deaths, and cancer of trachea, bronchus and lung: 132 deaths [47]. For females, the leading causes of death were diabetes: 194 deaths, chronic lower respiratory diseases: 169 deaths, IHD: 161 deaths, cancer of trachea, bronchus and lung: 132 deaths, and dementia (including Alzheimer's disease): 101 deaths.

In 2019-2023, age-standardised death rates for Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT show that the leading cause of death was IHD (105 per 100,000) [47]. The next leading causes of death were chronic lower respiratory diseases (72 per 100,000) and diabetes (69 per 100,000). In 2019-2023, the age-standardised leading cause of death for both Aboriginal and Torres Strait Islander males and females living in NSW, Qld, WA, SA and the NT was IHD (138 per 100,000 and 76 per 100,000 respectively). The next leading causes of death for males were chronic lower respiratory diseases (77 per 100,000) and diabetes and cancer of the trachea, bronchus and lung (both 64 per 100,000). The next leading causes of death for females were diabetes (73 per 100,000) and chronic lower respiratory diseases (67 per 100,000).

In 2019-2023 age-specific rates, from 15 years of age and above, for underlying causes of death among Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT, indicated that intentional self-harm[17] was the leading cause of death for those aged 15-24 years (37 per 100,000), 25-34 years (49 per 100,000) and 35-44 years (48 per 100,000) [47]. The leading cause of death for the 45-54 years, 55-64 years and

17 Care needs to be taken in interpreting figures relating to intentional self-harm due to a revision process for coroner certified deaths and coding. Also, as noted above, changes in methodology for NSW.

65-74 years age-groups was IHD at rates of 106 per 100,000; 168 per 100,000 and 295 per 100,000 respectively. For Aboriginal and Torres Strait Islander people aged 75 years and over, dementia (including Alzheimer's disease), was the leading cause of death at 822 per 100,000 deaths.

Maternal mortality

Maternal deaths refer to deaths of women during pregnancy or up to 42 days after delivery [29]. Direct maternal deaths refer to those resulting from obstetric complications (including in pregnancy, labour, and in the first six weeks after delivery) from interventions, omissions, and incorrect treatment. Indirect maternal deaths refer to those resulting from a previously existing disease, or a disease that developed during pregnancy, that were not a direct result of obstetrics but aggravated by pregnancy. Coincidental deaths refer to deaths from unrelated causes (accidental and/or incidental) that occur during the pregnancy or up until six weeks after delivery.

Maternal mortality ratios (MMRs) are calculated by dividing the number of maternal deaths (direct and indirect) by the number of women who gave birth to babies weighing at least 400 grams or who reached at least 20 weeks gestation; this result is then multiplied by 100,000 [29].

In Australia between 2013-2022, 20 of the 180 maternal deaths reported were of Aboriginal and Torres Strait Islander women (Indigenous status was not reported in 14 of the total deaths) [29]. Of these 20 Aboriginal and Torres Strait Islander maternal deaths, 10 were direct and 10 were indirect. The MMR for Aboriginal and Torres Strait Islander women was 14 deaths per 100,000 women who gave birth.

Between 2006-2020[18], there were 28 maternal deaths among Aboriginal and Torres Strait Islander women with the leading causes of death being cardiovascular diseases (CVD) (7 deaths: 25% of maternal deaths) and sepsis (6 deaths: 21%) [48].

Avoidable deaths

Potentially avoidable deaths refer to deaths that could have been prevented with timely and effective health care, including early detection and effective treatment [49]. They are calculated using the population data for Australians less than 75 years of age. For Aboriginal and Torres Strait Islander people, chronic disease and injury caused the highest proportion of avoidable deaths [27].

In 2018-2022, there were 8,371 deaths from avoidable causes among Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT at an age-standardised rate of 324 per 100,000 [46]. The highest rate was in the NT (510 per 100,000) followed by WA (420 per 100,000), SA (375 per 100,000), Qld (299 per 100,000) and NSW (253 per 100,000).

More detailed information is available for 2015-2019 when there were 7,366 deaths (males: 4,322; females: 3,044) from avoidable causes among Aboriginal and Torres Strait Islander people aged 0-74 years living in NSW, Qld, WA, SA and the NT [27]. The 7,366 deaths represented 60% of Aboriginal and Torres Strait Islander people who died during this period. Males were more likely to die from avoidable causes than females (crude rate 243 per 100,000 and 172 per 100,000 respectively). The age-specific avoidable mortality rate was relatively high for children under one year of age (374 per 100,000 live births), falling to the lowest rate for children aged 5-14 years (11 per 100,000 estimated resident population (ERP)) and 1-4 years (18 per 100,000 ERP), before increasing from the 15-24 years age-group through to the 65-74 years age-group (Table 10).

18 Data are not available for WA for all years. This time period is used due to the small number of maternal deaths among Aboriginal and Torres Strait Islander women.

Table 10. Numbers and age-specific rates for avoidable deaths, Aboriginal and Torres Strait Islander people, NSW, Qld, WA, SA and the NT, 2015-2019

Age-group (years)	Aboriginal and Torres Strait Islander people	
	Number	Rate per 100,000
Less than 1	335	374
1-4	60	18
5-14	92	11
15-24	492	71
25-34	690	132
35-44	982	251
45-54	1,457	402
55-64	1,678	691
65-74	1,580	1,383
All ages – crude rate	7,366	208
All ages – age-standardised rate	7,366	314

Source: AIHW, 2024 [27]

In 2015-2019, age-standardised rates for avoidable deaths were highest in the NT (513 per 100,000), followed by WA (441 per 100,000), and lowest in NSW (222 per 100,000) [27]. Aboriginal and Torres Strait Islander people living in remote areas had the highest avoidable mortality rate (467 per 100,000), 2.1 times higher than those living in major cities (227 per 100,000) and 1.7 times higher than those living in regional areas (269 per 100,000) (Derived from [27]).

In 2015-2019, the most common conditions contributing to avoidable deaths among Aboriginal and Torres Strait Islander people aged 0-74 years living in NSW, Qld, WA, SA and the NT were IHD (21%), diabetes (12%), suicide and self-inflicted injuries (11%), chronic obstructive pulmonary disease (COPD) (8.8%) and cancer (8.0%) [27].

Hospitalisation

Statistics on hospitalisation provide some indication of the burden of disease in the population [50]. They are, however, a poor reflection of the extent and patterns of treatable illness in the community because they only represent the most serious illnesses, which require hospitalisation [27]. Hospitalisations are also influenced, to some extent, by the geographic accessibility of hospitals and variations in admission policies and practices for illnesses [43, 51]. As is the case with other major health-related data collections (such as births and deaths), the identification of Indigenous status in hospital data collections is incomplete (see Appendix 1) [51].

Another limitation of the available hospital statistics as an indicator of the health of the population, is that they relate to episodes of hospitalisation rather than to individual patients [43, 52]. Also, it is difficult to analyse patterns of care for patients hospitalised multiple times (for example for kidney dialysis) from the current national hospitalisation data [43, 53].

Hospitalisation rates will be determined by advancements in the health system [27], improvements in self-identification by Aboriginal and Torres Strait Islander people [54], and reforms that tackle the social determinants of health [27].

Hospital separation rates

Of the 12.1 million hospital separations in Australia[19, 20] during 2022-23, there were 656,760 (5.4%) identified as Aboriginal and/or Torres Strait Islander (Table 11) [53]. Of these hospital separations, 91% were for Aboriginal people, 3.9% were for Torres Strait Islander people and 4.7% were for people who identified as being both Aboriginal and Torres Strait Islander. Of the 656,760 hospital separations, 58% were for females and 42% for males.

In 2022-23, the overall age-standardised hospital separation rate for Aboriginal and Torres Strait Islander people was 914 per 1,000 (Table 11) [53]. The highest age-standardised hospital separation rate was for Aboriginal and Torres Strait Islander people living in the NT (2,380 per 1,000) and the lowest in NSW (499 per 1,000).

Table 11. Numbers of hospital separations and age-standardised hospital separation rates for Aboriginal and Torres Strait Islander people, by jurisdiction, 2022-23

Jurisdiction	Number	Rate
NSW	127,806	499
Vic	40,331	682
Qld	190,465	963
WA	112,340	1,375
SA	38,015	1,034
NT	127,771	2,380
Australia	656,760	914

Notes:

1. Rates per 1,000 population.
2. Numbers and rates for the NT are for public hospitals only; numbers and rates are not included separately for public hospitals in Tas or the ACT but included in totals where applicable. The data are not published for confidentiality reasons and low numbers.

Source: AIHW, 2024 [53]

In 2017-19, there were around 1.1 million hospital separations among Aboriginal and Torres Strait Islander people at an age-standardised rate of 925 per 1,000 population (crude rate 656 per 1,000) [27]. Dialysis accounted for 475,671 of these separations and when care involving dialysis was excluded, the age-standardised rate was 470 per 1,000 (crude rate 369 per 1,000).

Age-specific hospital separation rates

In 2017-19, age-specific hospital separation rates (excluding dialysis) for Aboriginal and Torres Strait Islander people increased with age for males (except for 0-4 year olds), with the highest rate in the 65 years and over age-group (Table 12) [27]. For females, rates increased with age (except 0-4 and 35-44 year olds), the highest rate, like their male counterparts, was in the 65 years and over age-group. For Aboriginal and Torres Strait Islander females, the rates, compared with males, were higher across all age-groups from 15 to 64 years of age.

19 All hospitalisation data for Tas, the ACT and the NT includes only public [53].

20 273,440 (2.3%) had no Indigenous status reported [53].

Table 12. Age-specific hospital separation rates (excluding dialysis), by sex, Aboriginal and Torres Strait Islander people, 2017-19

Age-group (years)	Males	Females	Persons
0-4	358	284	322
5-14	115	103	109
15-24	162	399	277
25-34	242	565	402
35-44	384	550	469
45-54	532	567	550
55-64	652	661	657
65+	965	935	948
All ages (age-standardised rate)	422	520	470
All ages (crude rate)	312	427	369

Notes:

1. Rates per 1,000 population.
2. Data includes public and private hospitals in all jurisdictions.
3. Age-standardised using the Australian 2001 standard population.

Source: AIHW, 2024 [27]

Causes of hospitalisation

In 2022-23, the most common reason for the hospitalisation of Aboriginal and Torres Strait Islander people in Australia was for conditions in the ICD 'Factors influencing health status and contact with health services', mostly for care involving dialysis, responsible for 46% of Aboriginal and Torres Strait Islander hospital separations (301,049 of 656,760 separations) [53]. Many of these separations involved repeat admissions for the same people. The next ICD leading cause of hospitalisation for Aboriginal and Torres Strait Islander people was 'Injury, poisoning and certain other consequences of external causes' (including motor vehicle accidents, assaults, self-inflicted harm and falls) responsible for 43,070 hospital separations (6.6% of all separations) and 'Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified', responsible for 38,914 hospital separations (5.9% of all separations) (Table 13).

Table 13. Numbers, proportions (%), and age-standardised hospitalisation rates for leading causes of hospital separations among Aboriginal and Torres Strait Islander people, Australia, 2022-23

Principal diagnosis (ICD)	Number of separations	Proportion of separations (%)	Age-standardised separation rate
Injury, poisoning and certain other consequences of external causes	43,070	6.6	51
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	38,914	5.9	50
Diseases of the digestive system	35,437	5.4	45
Pregnancy, childbirth and the puerperium	34,940	5.3	33
Diseases of the respiratory system	32,501	4.9	39
Mental and behavioural disorders	27,645	4.2	34
Diseases of the genitourinary system	19,366	2.9	26
Diseases of the circulatory system	18,439	2.8	30
Diseases of the musculoskeletal system and connective tissue	18,137	2.8	26
Endocrine, nutritional and metabolic diseases	13,789	2.1	19
Diseases of the skin and subcutaneous tissue	13,273	2.0	16
Neoplasms	12,570	1.9	20
Diseases of the nervous system	10,121	1.5	13
Certain infectious and parasitic diseases	10,109	1.5	12
Factors influencing health status and contact with health services	301,049	46	476
All causes	656,760	100	921

Notes:

1. Hospital separation rates per 1,000 population.
2. Hospitalisation data for Tas, the ACT and the NT include only public hospitals.
3. Some principal diagnoses have been excluded.

Source: AIHW, 2024 [53]

Potentially preventable hospitalisations

Potentially preventable hospitalisations are admissions which 'could have potentially been prevented through the provision of appropriate individualised preventative health interventions and early disease management usually delivered in primary care and community-based care settings' [55]. Rates for potentially preventable hospitalisations, including those for chronic conditions, acute conditions and vaccine preventable conditions, may be used as an indirect measure of problems with access to care and effective primary care [56].

In 2022-23, the overall age-standardised rate of potentially preventable hospitalisations for Aboriginal and Torres Strait Islander people was 66 per 1,000 [53]. The highest rates for potentially preventable hospitalisations of Aboriginal and Torres Strait Islander people were for chronic conditions: 31 per 1,000 (including 6.8 per 1,000 for diabetes complications) and acute conditions (28 per 1,000).

The rate for vaccine preventable conditions was 9.5 per 1,000. Information by jurisdiction (Table 14) reveals that the NT had the highest rate for potentially preventable hospitalisations of 139 per 1,000, followed by WA of 86 per 1,000.

Table 14. Age-standardised hospital separation rates for selected potentially preventable hospitalisations for Aboriginal and Torres Strait Islander people, by condition type, by jurisdiction, all hospitals, 2022-23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Vaccine preventable conditions	4.3	4.5	7.5	17	11	1.7	4.5	35	9.5
Acute conditions	18	21	33	34	27	14	25	53	28
Chronic conditions	21	30	33	38	36	16	20	59	31
Total	43	55	73	86	71	31	49	139	66

Note: Rates are per 1,000 population.

Source: AIHW, 2024 [53]

For 2022-23, age-standardised potentially preventable hospitalisation rates by remoteness indicated that vaccine preventable conditions, acute conditions and chronic conditions all experienced the highest rates in a remote setting (27, 47 and 52 per 1,000 respectively) (Table 15) [53]. When comparing between condition types and remoteness settings, vaccine preventable conditions had the greatest difference in rates between settings, with the rate for remote areas 4.1 times the rate for major cities (27 per 1,000 compared with 6.6 per 1,000 respectively) and 3.9 times the rate for regional areas (27 per 1,000 compared with 6.9 per 1,000 respectively).

Table 15. Age-standardised hospital separation rates for potentially preventable hospitalisations for Aboriginal and Torres Strait Islander people, by condition type, by remoteness, 2022-23

	Major cities	Regional	Remote
Vaccine preventable conditions	6.6	6.9	27
Acute conditions	26	27	47
Chronic conditions	28	32	52
Total	60	65	121

Notes:

1. Rates are per 1,000 population.
2. Data are from public and private hospitals in all jurisdictions.

Source: AIHW, 2024 [53]

Selected health conditions

Cardiovascular health

Cardiovascular disease (CVD) is a term used to describe all of the major diseases of the heart and circulatory system, including ischaemic heart disease (IHD), cerebrovascular disease (including stroke), heart failure, peripheral vascular disease, hypertension (high blood pressure), and rheumatic heart disease (RHD) [57, 58].

Most types of CVD (excluding RHD) share a common set of risk factors. These include smoking, inadequate diet, physical inactivity, high alcohol use, high blood pressure, high cholesterol, overweight and obesity, and type 2 diabetes [57, 58]. Other risk factors include socioeconomic and psychosocial factors. Evidence shows that the risk of CVD starts relatively early for Aboriginal and Torres Strait Islander people, and it is recommended that Aboriginal and Torres Strait Islander people begin having CVD risk assessments at younger ages because of early disease onset [59].

Unlike other types of CVD, RHD occurs when acute rheumatic fever (ARF), an illness that affects the heart, joints, brain and skin, leads to permanent damage to the heart valves [60]. ARF is caused by an untreated bacterial - group A streptococci (GAS) - infection of the throat[21]. Reducing ARF and RHD in Aboriginal and Torres Strait Islander communities requires initiatives that address poverty, crowded housing and poor sanitation, all of which contribute to the spread of GAS infection [60, 61]. A comprehensive, long-term strategy was released in 2020 setting out the actions required to eliminate RHD in Australia [60].

Extent of cardiovascular disease among Aboriginal and Torres Strait Islander people

Prevalence of cardiovascular disease

Fourteen per cent (14%) of participants in the 2022-23 NATSIHS reported having a long-term disease of the circulatory system [19]. Circulatory disease was reported by a similar proportion of males and females. The prevalence of circulatory disease increased with age, from 2.0% among those aged 0-14 years to 49% among those aged 55 years and over (Table 16). Reported circulatory disease prevalence was 1.2 times higher in remote areas (16%) than non-remote areas (13%) (Table 16) (Derived from [19]).

'Heart, stroke and vascular disease'[22] was self-reported as a long-term condition by 4.0% of 2022-23 NATSIHS participants (4.1% of Aboriginal people and 4.7% of Torres Strait Islander people) [19]. The prevalence of 'heart, stroke and vascular disease' was higher among males (4.3%) than females (3.7%). The lowest levels of 'heart, stroke and vascular disease' were reported among children and younger adults, with disease prevalence sharply increasing between the ages of 45-54 years (6.3%) and 55 years and over (19%) (Table 16). Of Australia's states and territories, SA had the highest prevalence of self-reported 'heart, stroke and vascular disease' (7.0%), while the NT had the lowest (2.7%) (Table 16). Prevalence was 1.4 times higher in non-remote areas (4.2%) than remote areas (2.9%) (Table 16) (Derived from [19]).

Hypertension[23] was self-reported by 8.1% of NATSIHS participants (8.1% of Aboriginal people and 5.7% of Torres Strait Islander people) [19]. The prevalence of hypertension was higher for males than females (8.3% and 7.8% respectively). Prevalence increased with age, from 0.1% among those aged 0-14 years to 35% among those aged 55 years and over (Table 16). Of Australia's states and territories, SA had the highest prevalence of self-reported hypertension (11%), while Qld (7.4%) and WA (7.2%) had the lowest (Table 16). Prevalence was 1.4 times higher in remote areas (11%) than non-remote areas (7.6%) (Table 16) (Derived from [19]).

21 In some settings GAS infections can also be present in the skin [60, 61].

22 A group of long-term health conditions which includes IHD (including heart attack and angina), cerebrovascular disease (including stroke), heart failure, oedema (fluid retention), and diseases of arteries, arterioles and capillaries [19].

23 Self-reported hypertension only; excludes clinically measured high blood pressure results [19].

Table 16. Long-term circulatory diseases among Aboriginal and Torres Strait Islander people, by age-group and remoteness, all jurisdictions, 2022-23, proportion (%)

	Age-group (years)						Remoteness		
	0-14	15-24	25-34	35-44	45-54	55+	Non-Remote	Remote	Total
Heart, stroke and vascular diseases	0.2*	0.0	2.0*	2.9	6.3	19	4.2	2.9	4.0
Hypertension	0.1	1.1	2.7	6.7	22	35	7.6	11	8.1
Other diseases of the circulatory system	1.7	4.6	3.2	4.4	13	12	5.1	5.6	5.1
Total circulatory system diseases	2.0	5.7	7.3	12	33	49	13	16	14

Notes:

'Other diseases of the circulatory system' includes tachycardia, haemorrhoids, varicose veins, low blood pressure, cardiac murmurs and cardiac sounds, abnormalities of heartbeat, other heart disease, other diseases of the circulatory system, other diseases of the veins and lymphatic vessels and other diseases of the circulatory system.

* This proportion has a high margin of error and should be used with caution.

Source: ABS, 2024 [19]

Participants in the 2022-23 NATSIHS aged 18 years and over were invited to voluntarily provide a blood pressure reading at the time of the interview. When measured[24], 25% of adult participants had high blood pressure[25] (Aboriginal adults: 25%; Torres Strait Islander adults: 22%) [19]. Prevalence was higher among males (27%) than females (23%). Prevalence was higher in older age-groups, with the highest prevalence observed in those aged 45-54 years (37%) and 55 years and over (35%). Among the states and territories, prevalence ranged from 23% in Tas to 30% in SA (Table 17). Prevalence of measured high blood pressure varied little by remoteness (non-remote: 25%; remote: 26%).

Table 17. Selected self-reported long-term circulatory diseases and measured high blood pressure among Aboriginal and Torres Strait Islander people, by jurisdiction, 2022-23, proportion (%)

	Jurisdiction							
	NSW	Vic.	Qld	WA	SA	NT	Tas	Australia
Heart, stroke and vascular diseases	3.1	4.5	5.0	3.4	7.0	2.7	5.2	4.0
Hypertension	8.0	9.5	7.4	7.2	11	9.1	9.6	8.1
Measured high blood pressure (≥140/90 mmHg)	24	28	24	26	30	26	23	25

Notes:

1. Data for ACT are not able to be published separately but are included in the total.
2. Data for 'measured high blood pressure' are for people aged 18 years and over only.

Source: ABS, 2024 [19]

24 Forty-six percent (46%) of adult participants in the NATSIHS did not have a blood pressure reading taken; for these participants, imputation (estimation of data) was used to obtain blood pressure [19].

25 Measured high blood pressure is defined as a blood pressure reading of ≥140/90 mmHg. Measured high blood pressure does not necessarily mean a person has hypertension [19].

High cholesterol was self-reported by 5.6% of NATSIHS participants, with the prevalence being slightly higher for males (5.9%) than females (5.1%) [19]. The prevalence of high cholesterol increased with age, from none among those aged 0-14 years to 27% among those aged 55 years and over (Table 18). The prevalence in non-remote areas was slightly higher than in remote areas (Table 18).

Table 18. Self-reported high cholesterol among Aboriginal and Torres Strait Islander people, by age-group and remoteness, all jurisdictions, 2022-23, proportion (%)

	Age-group (years)						Remoteness		
	0-14	15-24	25-34	35-44	45-54	55+	Non-Remote	Remote	Total
Self-reported high cholesterol	0.0	0.0	1.6	4.7	12	27	5.7	4.8	5.6

Source: ABS, 2024 [19]

The 2021 Census measured the number of people who had a long-term health condition [22]. Heart disease (including heart attack or angina) was reported by 3.7% of the Aboriginal and Torres Strait Islander population and stroke by 0.9%.

In 2021, there were 2,209 acute coronary events (heart attack and unstable angina) among Aboriginal and Torres Strait Islander people aged 25 years and over in NSW, Qld, WA, SA and the NT combined [58]. The crude rate of acute coronary events was 5.9 per 1,000 (males: 7.1 per 1,000; females: 4.8 per 1,000).

Incidence and prevalence of ARF and RHD

In 2023, in NSW, Qld, WA, SA and the NT combined[26] there were 545 notifications of ARF for Aboriginal and Torres Strait Islander people [62]. The crude notification rate was 68 per 100,000. The rate for females (83 per 100,000) was higher than the rate for males (53 per 100,000). Age-specific rates were high for children aged 5-14 years (232 per 100,000), young people aged 15-24 years (120 per 100,000) and adults aged 25-34 years (101 per 100,000), and comparatively low for other ages (<25 per 100,000). Rates were highest in the NT (356 per 100,000 population) and lowest in NSW (4.6 per 100,000), with rates in other jurisdictions ranging from 55 to 68 per 100,000. Rates were higher in remote areas (292 per 100,000) than in regional areas (15 per 100,000) and major cities (9.7 per 100,000).

In 2023, in Qld, WA, SA and the NT combined[27], there were 282 new diagnoses of RHD among Aboriginal and Torres Strait Islander people [62]. The crude rate of new diagnoses was 56 per 100,000. The rate of new RHD diagnosis for females (73 per 100,000) was higher than for males (40 per 100,000). Nearly two-thirds of new diagnoses (64%) were in people aged under 25 years (Derived from [62]). Rates of new diagnoses were highest in the NT (156 per 100,000) followed by Qld and WA (both 38 per 100,000) and SA (33 per 100,000). As of 31 December 2023, there were 5,657 Aboriginal and Torres Strait Islander people living with RHD in Qld, WA, SA and the NT combined (crude rate 1,130 per 100,000).

Several studies have used echocardiographic screening (ultrasound of the heart) to determine RHD prevalence in specific regions of Australia. A study conducted in a West Arnhem Land community in the NT in 2018 found that the total prevalence of ARF and RHD among Aboriginal and Torres Strait Islander people aged 5-20 years[28] in that community was at least 10% [63].

A study published in 2024 found that nearly half the First Nations people in the Midwest region of WA who received hospital treatment for RHD during 2012-2022 had not been notified to the WA RHD Register (10 of 21 people) [64]. Similar rates of unnotified RHD may exist in surrounding regions and need further investigation.

It is important for individuals with RHD to be notified to jurisdictional RHD registers to access benefits such as monitoring and case management [64].

26 The jurisdictions where there are established ARF/RHD registers.
27 NSW data not included for RHD because NSW uses different RHD notification criteria than other jurisdictions.
28 During the data collection period March to November 2018.

Hospitalisation

There were 18,439 hospital separations for CVD[29] among Aboriginal and Torres Strait Islander people in 2022-23 [53], representing 5.2% of all Aboriginal and Torres Strait Islander hospital separations (excluding dialysis) (Derived from [53]).

In 2017-19, the crude CVD hospitalisation rate was 19 per 1,000 [27]. Rates were higher for males (19 per 1,000) than females (18 per 1,000). Age-specific hospitalisation rates for CVD rose with age, from 1.8 per 1,000 for those aged 0-4 years to 110 per 1,000 for those aged over 65 years. Although rates were highest for those aged over 65 years, CVD is recognised as having a substantial impact on younger Aboriginal and Torres Strait Islander people, with the age-specific rate for those aged 35-44 years being 20 per 1,000 in 2017-19.

In 2017-19, the crude rate of CVD hospitalisation for Aboriginal and Torres Strait Islander people was highest in the NT (31 per 1,000), WA (22 per 1,000) and Qld (20 per 1,000) and lowest in Tas (9.6 per 1,000) [27]. Other jurisdictions had rates of around 15-17 per 1,000. Rates were much higher in remote areas (30 per 1,000) than inner regional areas (16 per 1,000) and major cities (14 per 1,000).

In 2017-19, of specific CVDs, IHD was responsible for the highest number of hospitalisations of Aboriginal and Torres Strait Islander people (just over 34% of CVD hospitalisations), followed by pulmonary and other forms of heart disease (just under 34%), cerebrovascular disease (10%), hypertension (3.5%), ARF (2.7%) and RHD (1.9%)[30] [27].

Mortality

Of all specific causes of death, IHD was the leading cause of Aboriginal and Torres Strait Islander deaths in NSW, Qld, WA, SA and the NT combined in 2023 (488 deaths) [47]. For males, IHD was the leading cause of death, with a crude rate of 73 per 100,000. For females, IHD was the third leading cause of death, with a crude rate of 36 per 100,000.

In 2023, cerebrovascular diseases were the seventh leading specific cause of deaths of Aboriginal and Torres Strait Islander people in NSW, Qld, WA, SA and the NT combined (161 deaths, age-standardised rate 39 per 100,000) [47].

In 2015-2019, there were 3,471 deaths of Aboriginal and Torres Strait Islander people in NSW, Qld, WA, SA and the NT combined caused by CVD [27]. CVD was the second leading general cause of death after neoplasms (including cancer), accounting for 23% of all deaths. The crude CVD mortality rate was 97 per 100,000. The crude CVD mortality rate for Aboriginal and Torres Strait Islander males (109 per 100,000) was higher than the rate for females (84 per 100,000). Age-specific mortality rates for overall CVD increased with age, with high rates seen among people as young as 25-34 years (23 per 100,000). Crude rates were highest in the NT (154 per 100,000) and lowest in NSW (74 per 100,000). Crude rates were higher in remote areas (152 per 100,000) than non-remote areas (78 per 100,000). Of specific CVD types, IHD caused the most deaths (56% of CVD deaths), followed by other heart disease[31] (17%), cerebrovascular disease (15%), hypertensive diseases (4.8%), other diseases of the circulatory system[32] (3.7%), and RHD (3.4%).

Burden of disease

In 2018, CVD accounted for 10% of total burden, 19% of fatal burden (premature death) and 2.6% of non-fatal burden (living with illness or disability) among Aboriginal and Torres Strait Islander people [65]. It made the third highest contribution to total burden of all disease groups. The majority of CVD burden was caused by IHD (57%) followed by stroke (13%). Of total CVD burden, 86% was fatal and 14% was non-fatal.

In 2018, of all specific diseases and injuries, IHD was the leading cause of total burden among Aboriginal and Torres Strait Islander people, accounting for 5.8% of total burden [65]. Of all risk factors contributing to total burden, high blood pressure was ranked ninth and contributed to 4.3% of total burden.

29 ICD-10 codes I00-I99.

30 The remainder of CVD hospitalisations (around 14%) were due to diseases of arteries, arterioles and capillaries (I70–I79); diseases of veins, lymphatic vessels and lymph nodes, not elsewhere classified (I80–I89); and other and unspecified disorders of the circulatory system (I95–I99).

31 ICD-10 codes I26–I52.

32 ICD-10 codes I70–I99.

Cancer

Cancer is a disease that causes damage to healthy body cells [66]. It arises from changes to the genes that control the way cells grow and divide. Healthy cells grow and divide in a controlled way, whereas cancer causes some of the cells of the body to grow and divide in an abnormal way.

Cancer can form almost anywhere in the body, and refers to about 100 different diseases [66]. The location in the body where the cancer cells begin forming is known as the primary site, and cancer is usually classified by this, for example, lung cancer. When cancer cells travel and spread to other parts of the body, it is described as metastasis [67].

Data sources may use the term 'neoplasm' to describe conditions associated with abnormal growth of new tissue, commonly referred to as a tumour. Neoplasms can be 'malignant' (cancerous) or 'benign' (not cancerous). Other terms for neoplasms include 'in situ' (a tumour that has not spread) or those of an 'uncertain nature' [19, 31].

Extent of cancer among Aboriginal and Torres Strait Islander people

Incidence and prevalence

In the 2022-23 NATSIHS, 1.1% of Aboriginal and Torres Strait Islander people reported having neoplasms (including malignant, benign, in situ and of an uncertain nature) as a long-term health condition [19]. The proportion of females reporting neoplasms was slightly higher than that of males, with percentages of 1.2% and 0.9% respectively. The proportion of people reporting a neoplasm was highest among the 55 years and over age-group (3.3%) and lowest among the 0-14 years age-group (0.2%[33]). When comparing by remoteness, non-remote areas had a higher proportion of reported neoplasm (1.2%) than remote areas (0.8%).

In the 2022-23 NATSIHS, 1.0% of Aboriginal and Torres Strait Islander people (Aboriginal people: 1.0% and Torres Strait Islander people: 1.6%) reported having cancer (malignant neoplasm) [19]. The proportion of females reporting cancer was slightly higher than that of males, with percentages of 1.1% and 0.9% respectively. For Aboriginal and Torres Strait Islander people in NSW, Vic, Qld, SA, WA, Tas and the NT, proportions of cancer were highest in SA (2.5%[34]) and lowest in both WA and the NT (0.4%). By remoteness, proportions were highest among those in outer regional and remote areas (1.2%), followed by major cities (0.9%), inner regional areas (0.8%[35]) and very remote areas (0.3%).

In 2014-2018, there were 9,262 new cases of cancer diagnosed in Aboriginal and Torres Strait Islander people living in NSW, Vic, Qld, WA and the NT (an average of 1,852 new cases per year) [68]. The figures were similar for each sex, with 4,646 new cases of cancer in males and 4,616 new cases in females (Table 19). Lung cancer had the highest incidence (15%) of all cancers among Aboriginal and Torres Strait Islander people, with an average of 281 cases diagnosed each year (Derived from [68]). Prostate cancer accounted for 17% of all cancers diagnosed among males (average of 153 cases diagnosed per year), and among females, breast cancer accounted for 25% of all cancers diagnosed, with an average of 230 cases diagnosed each year.

33 This proportion has a high margin of error and should be used with caution.
34 This proportion has a high margin of error and should be used with caution.
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Table 19. Incidence of all selected and combined cancers for Aboriginal and Torres Strait Islander people by sex, NSW, Vic, Qld, WA and the NT, 2014-2018

Cancer type	Males		Females		Persons	
	Number of new cases	Average new cases (per year)	Number of new cases	Average new cases (per year)	Number of new cases	Average new cases (per year)
Colorectal (bowel)	456	91	394	79	850	170
Lung	733	147	671	134	1,404	281
Breast	n/a	n/a	1,150	230	1,150	230
Cervical	n/a	n/a	173	35	173	35
Prostate	765	153	n/a	n/a	765	153
Head and neck	429	86	159	32	588	118
Uterine	n/a	n/a	293	59	293	59
Liver	285	57	104	21	390	78
All cancers combined	4,646	929	4,616	923	9,262	1,852

Notes:

1. Incidence of breast and uterine cancers are for females only. Incidence of prostate cancer is for males only.
2. n/a – non-applicable.
3. All cancers combined include cancer types not listed in the table.

Source: AIHW, 2023 [68]

In 2014-2018, the age-specific incidence rates for all cancers combined increased with age among Aboriginal and Torres Strait Islander people living in NSW, Vic, Qld, WA and the NT [68]. The cancer type affecting most Aboriginal and Torres Strait Islander people aged 45 years and under, 45-54 years and 55-64 years was breast cancer for females (45 years and under: 12 per 100,000; 45-54 years: 163 per 100,000; 55-64 years: 261 per 100,000). For those aged 65-74 years and 75 years and over, it was prostate cancer for males (65-74 years: 576 per 100,000; 75 years and over: 648 per 100,000).

When comparing jurisdictions (NSW, Vic, Qld, WA and the NT), in 2014-2018 the age-standardised incidence rate for all cancers combined was highest in Vic at 613 per 100,000, followed by Qld at 582 per 100,000, NSW at 511 per 100,000, WA at 422 per 100,000 and the NT had the lowest rate at 400 per 100,000 [68]. When comparing by remoteness, major cities, inner regional and outer regional locations had higher age-standardised incidence rates for all cancers combined (542, 521 and 519 per 100,000 respectively) than very remote and remote locations (466 and 464 per 100,000 respectively).

Incidence rates for Aboriginal and Torres Strait Islander people are available for some cancer types through monitoring mechanisms for national screening programs. In 2016-2020 there were 194 cases of cervical cancer among Aboriginal and Torres Strait Islander women aged 25-74 years, living in NSW, Vic, Qld, WA, the ACT and the NT, with a crude incidence rate of 22 per 100,000 [69]. In NSW, Vic, Qld, WA, the ACT and the NT, the crude incidence rate of bowel cancer among Aboriginal and Torres Strait Islander people, aged 50-74 years, was 112 per 100,000 [70]. There were 818 new cases of breast cancer diagnosed among Aboriginal and Torres Strait Islander females aged 50-74 years, across NSW, Vic, Qld, WA, the ACT and the NT, with a crude incidence rate of 274 per 100,000 [71].

Survival

Information on survival from cancer for Aboriginal and Torres Strait Islander people is available for the 10 year period 2009-2018 for NSW, Vic, Qld, WA and the NT [68]. The approximate relative survival for all cancers combined was 55%; meaning just over half of the people diagnosed with cancer had survived for five years or more after their diagnosis. The five-year approximate relative survival for Aboriginal and Torres Strait Islander males was lower than for females (52% and 58% respectively). The five-year approximate relative survival was highest for bowel cancer (64%) and head and neck cancers (47%) and lowest for lung cancer (13%) and liver cancer (11%) (Table 20).

Table 20. Five-year approximate relative survival (%) for Aboriginal and Torres Strait Islander people by sex, for selected cancers, NSW, Vic, Qld, WA and the NT, 2009-2018

Cancer type	Males	Females	Persons
Colorectal (bowel)	63	64	64
Lung	12	14	13
Breast	n/a	85	n/a
Cervical	n/a	56	n/a
Prostate	94	n/a	n/a
Head and neck	46	50	47
Uterine	n/a	82	n/a
Liver	11	n.p.	11
Bladder	45	42	44
Stomach	23	n.p.	24
All cancers combined	52	58	55

Notes:

1. Survival for breast, uterine and cervical cancers are for females only. Survival for prostate cancer is for males only.
2. n/a – non-applicable.
3. n.p. – not published (estimate not reliable as there were not enough cases).
4. All cancers combined include cancer types not listed in the table.

Source: AIHW, 2023 [68]

Crude survival rates are available for the same jurisdictions in the period 2009-2018, which show survival decreased with remoteness [68]. The five-year crude survival rate for major cities was 54%, while for inner and outer regional locations it was 48% and for remote and very remote locations 39%.

Hospitalisation

In 2022-23, there were 12,570 hospital separations for neoplasms (including all types of cancer), representing 3.5% of all separations (excluding dialysis) among Aboriginal and Torres Strait Islander people (Derived from [53]). More detailed hospitalisation data for Aboriginal and Torres Strait Islander people are available for 2017-19 [68]. In this period there were 11,970 hospitalisations for cancer as the principal diagnosis, at a crude rate of 7.2 per 1,000. The rate was higher for males (7.9 per 1,000) than for females (6.5 per 1,000). The age-specific rate of hospitalisations increased with age (except for the 0-4 years age-group at 1.8 per 1,000), with the highest age-specific rate being 51 per 1,000 among the 65 years and over age-group. When comparing crude hospitalisation rates for cancer by jurisdictions, Vic had the highest rate (9.7 per 1,000) followed by SA (9.5 per 1,000), Qld (7.7 per 1,000), Tas (7.0 per 1,000), NSW (6.9 per 1,000), WA (5.9 per 1,000), the ACT (5.7 per 1,000) and the NT (5.5 per 1,000). Most hospitalisations were in outer regional and remote locations (both 7.8 per 1,000), followed by inner regional areas (7.5 per 1,000), major cities (7.0 per 1,000) and very remote locations (5.8 per 1,000).

The numbers of hospitalisations are available for selected cancer types for 2017-19, including: 1,517 (13% of the 11,970 hospitalisations) for cancers of unknown primary site; 1,128 (9.4%) for lung cancer; 720 (6.0%) for bowel cancer; 665 (5.6%) for breast cancer; 542 (4.5%) for prostate cancer (in males); 491 (4.1%) for cancers of the mouth and throat; and 214 (1.8%) for cervical cancer (in females) (Derived from [68]).

Mortality

In 2018-2022, the age-standardised mortality rate for cancer among Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT was 254 per 100,000 [46]. When comparing jurisdictions, the mortality rate was highest in Qld and the NT (both 277 per 100,000), followed by WA (260 per 100,000), NSW (233 per 100,000) and SA (219 per 100, 000).

More detailed information is available for 2015-2019 for Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT. The age-standardised mortality rate due to cancer of any type was 230 per 100,000 [72]. The rate for males (276 per 100,000), was higher than for females (194 per 100,000). The combined total number of deaths for all cancers was 3,576, comprising 1,939 males and 1,637 females.

Table 21 shows numbers of deaths for males and females for selected cancers.

Table 21. Number of deaths for Aboriginal and Torres Strait Islander people by sex, for all cancers combined and selected cancers, NSW, Qld, WA, SA and the NT, 2015-2019

Cancer site/type	Males	Females	Total number of deaths
Lung	526	416	942
Breast	6	185	191
Colorectal (bowel)	148	128	276
Prostate	119	n/a	n/a
Head and neck	162	57	219
Melanoma (skin)	19	11	30
Liver	170	97	267
Non-Hodgkin lymphoma	38	28	66
Uterine	n/a	39	n/a
Unknown primary site	126	106	232
Pancreatic	117	123	240
Cervical	n/a	69	n/a
Kidney	32	18	50
Bladder	35	19	54
All cancers combined	1,939	1,637	3,576

Notes:

1. Numbers of deaths due to cervical cancer are for females only, and prostate cancer are for males only.
2. All cancers combined include cancer types not listed in the table.
3. This table only includes deaths due to malignant neoplasms (cancerous tumours) and excludes deaths due to non-malignant neoplasms (in situ tumours, benign tumours and tumours of uncertain or unknown malignancy).
4. n/a – non applicable.

Source: AIHW, 2021 [72]

In 2023, cancers of the trachea, bronchus and lung combined were the fourth leading cause of death overall for Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT, being responsible for 264 deaths [47]. The crude death rate was 30 per 100,000 (males: 29 per 100,000; females: 30 per 100,000). Age-standardised death rates for other types of cancer in 2023 include cancers of the liver and intrahepatic bile ducts, cancer of the colon (bowel), sigmoid, rectum and anus and pancreatic cancer (all 17 per 100,000), and cancers of the lymphoid, haematopoietic and related tissue (16 per 100,000).

Indigenous identification data for cervical, bowel and breast cancer mortality were collected by cancer databases in NSW, Qld, WA, SA and the NT. In 2018-2022, there were 64 deaths due to cervical cancer among Aboriginal and Torres Strait Islander women aged 25-74 years, with a crude mortality rate of 7.1 per 100,000 women [69]. The crude mortality rate for bowel cancer among Aboriginal and Torres Strait Islander people aged 50-74 years was 36 per 100,000 [70]. There were 237 deaths due to breast cancer. One hundred and fifty-four (65%) of these deaths were among women aged 50-74 years, with a crude mortality rate of 49 per 100,000 (for this age-group) [71].

Burden of disease

In 2018, cancer accounted for 9.9% of the total burden of disease among Aboriginal and Torres Strait Islander people [65]. Of all disease groups, cancer made the fourth highest contribution to total burden. It was the fourth leading cause of disease burden among males (9.8%) and second among females (10%).

Among the top 20 causes of total disease burden, lung cancer was 8th for males (2.6% of total disease burden) and 11th for females (2.3% of total disease burden) [65]. It was the fourth leading cause of burden for those aged 45 to 64 years (4.7% of total disease burden) and the third for those aged 65-74 years (6.5% of total disease burden).

Diabetes

Diabetes is a chronic disease marked by high levels of glucose in the blood, caused by the pancreas not producing enough insulin, not being able to use the insulin effectively, or both [73].

There are several types of diabetes. The most frequently occurring are type 1, type 2 and gestational diabetes mellitus (GDM) [74]. Type 1 diabetes is usually diagnosed in people aged under 30 years but can develop at any age. Type 2 diabetes is the most common form and is largely preventable by maintaining a healthy lifestyle. GDM is a form of diabetes that can occur in pregnancy [75].

Diabetes can cause life-threatening complications [73], and reducing its impact among Aboriginal and Torres Strait Islander people is one of the key goals of the *Australian national diabetes strategy 2021-2030* [76]. Type 2 diabetes occurs at earlier ages for Aboriginal and Torres Strait Islander people [73] and is often undetected and untreated [77]. Complications from diabetes may occur within months of diagnosis, while others may develop over several years [78]. Aboriginal and Torres Strait Islander people with diabetes tend to have higher levels of risk factors such as smoking [73, 79, 80] and may show signs of other chronic conditions, including chronic kidney disease (CKD), CVD, liver disease and anaemia [81].

Extent of diabetes among Aboriginal and Torres Strait Islander people

Prevalence

In the 2022-23 NATSIHS, 7.4% of Aboriginal and Torres Strait Islander people reported having diabetes [19]. Prevalence among Torres Strait Islander and Aboriginal people was 8.6% and 7.2% respectively. The prevalence of diabetes among Aboriginal and Torres Strait Islander males and females was 6.8% and 8.0% respectively. Diabetes levels increased with age, with the prevalence among those aged 55 years and over (29%) being 8 times higher than those aged 25-34 years (3.6%). The proportion of people with diabetes was highest in the NT (13%) and WA (11%), followed by SA (9.7%), Qld (8.3%), Vic (7.3%), Tas (4.6%) and NSW (4.5%)[36]. Prevalence was higher in remote areas (14%) than non-remote areas (6.4%).

The 2021 Census measured the number of people who had a long-term health condition [22]. Diabetes (excluding GDM) was reported by 5.9% of Aboriginal and Torres Strait Islander people.

36 Estimates for the ACT are included in the total national estimates.

In 2021, there were 587 Aboriginal and Torres Strait Islander children and young adults aged 0-19 years known to be living with type 1 diabetes[37] [82]. The crude prevalence of type 1 diabetes among this group was 158 per 100,000.

A 2021 study using cross-sectional data from primary healthcare services found that in northern Australia (includes the Top End, Central Australia, Kimberley and Far North Qld), the crude prevalence of youth-onset type 2 diabetes in Aboriginal and Torres Strait Islander people aged 24 years or younger was 6.7 per 1,000 [83]. A large study using linked data from 51 of the 84 health centres that serve the NT's remote Aboriginal communities found that the prevalence of diabetes among Aboriginal adults aged ≥20 years in these communities was 29% in 2018-2019 [84].

Incidence

In 2021, the crude rate of all new diabetes diagnoses (diabetes incidence) among Aboriginal and Torres Strait Islander people was 256 per 100,000 [82]. Rates differed by diabetes type and sex (Table 22).

Table 22. Incidence of diabetes, by diabetes type and sex, Aboriginal and Torres Strait Islander people, 2021

	Number			Crude rate		
Diabetes type	Males	Females	Persons	Males	Females	Persons
Type 1	84	67	151	19	15	17
Type 2	1,009	968	1,977	230	220	225
All diabetes[38]	1,156	1,091	2,248	263	248	256

Notes:

1. Rates are per 100,000 population.
2. Rates may be influenced by the low capture on the National Diabetes Services Scheme of Aboriginal and Torres Strait Islander people living in places classified as remote and very remote.
3. Excludes persons whose Indigenous status was not stated or inadequately described.

Source: AIHW, 2024 [82]

In 2021-22, there were 2,465 new cases of GDM among Aboriginal and Torres Strait Islander women aged 15-49 years, with a crude incidence proportion of 16% [82]. Incidence increased with age, from 11% in the 15-24 years age-group to 31% in the 40-49 years age-group.

Hospitalisation

For 2021-22, hospitalisations for Aboriginal and Torres Strait Islander people with diabetes as a principal and/or additional diagnosis[39] included:

- 81,402 hospitalisations with diabetes as a principal and/or additional diagnosis, with a crude rate of 92 per 1,000
- 3,202 hospitalisations with type 1 diabetes as a principal and/or additional diagnosis, with a crude rate of 3.6 per 1,000
- 73,167 hospitalisations with type 2 diabetes as a principal and/or additional diagnosis, with a crude rate of 82 per 1,000 [82].

For 2017-19, 7,664 Aboriginal and Torres Strait Islander people were hospitalised for a principal diagnosis of diabetes, at a crude rate of 4.6 per 1,000 [27]. Rates were similar for Aboriginal and Torres Strait Islander males (4.5 per 1,000) and females (4.7 per 1,000). Age-specific hospitalisation rates increased with age, from 0.3 per 1,000 for those aged 0-4 years to 18 per 1,000 for those aged 65 years and over.

37 There is no national data available for the prevalence of type 2 diabetes.

38 Including type 1, type 2 and other diabetes, but excluding GDM [82].

39 Diabetes that co-exists with the patient's main condition, or that arises during the patient's time in hospital [82].

The age-standardised hospitalisation rates varied by jurisdiction and were lowest in Tas (4.4 per 1,000) and highest in Vic and WA (8.5 per 1,000) [27]. In the same period, the age-standardised rate was highest for Aboriginal and Torres Strait Islander people living in remote areas (10 per 1,000) and lowest for those living in major cities (5.0 per 1,000).

In 2017-19, there were 2,150 hospitalisations (24% of all diabetes hospitalisations) with a principal diagnosis of type 1 diabetes [85]. The age-standardised hospitalisation rate was 1.3 per 1,000, with higher rates among females than males (1.4 per 1,000 and 1.2 per 1,000 respectively). There were 5,389 hospitalisations (60% of all diabetes hospitalisations) with a principal diagnosis of type 2 diabetes. The age-standardised hospitalisation rate was 5.3 per 1,000, with higher rates among males than females (5.8 per 1,000 and 4.9 per 1,000 respectively). There were 1,291 hospitalisations (14% of all diabetes hospitalisations) with a principal diagnosis of diabetes during pregnancy among Aboriginal and Torres Strait Islander women.

In 2021-22, there were 4,850 potentially preventable hospitalisations of Aboriginal and Torres Strait Islander people for a principal diagnosis of diabetes [46].

Mortality

Diabetes was the third leading specific cause of death among Aboriginal and Torres Strait Islander people in NSW, Qld, SA, WA and the NT combined in 2023, accounting for 330 deaths (7.1% of all deaths) [47]. The crude mortality rate was 37 per 100,000. Crude rates were higher among females (44 per 100,000) than males (30 per 100,000).

In 2019-2023, diabetes was a major cause of death for older Aboriginal and Torres Strait Islander people; age-specific mortality rates were 47 per 100,000 for those aged 45-54 years, 111 per 100,000 for those aged 55-64 years, 266 per 100,000 for those aged 65-74 years and 522 per 100,000 for those aged 75 years and over [47]. In 2023, the age-standardised diabetes mortality rate was highest in the NT (165 per 100,000) and lowest in NSW (47 per 100,000)[40].

Burden of disease

In 2018, endocrine disorders accounted for 3.3% of total disease burden, 3.0% of fatal burden and 3.6% of non-fatal burden among Aboriginal and Torres Strait Islander people [65]. The majority of total endocrine disease burden was caused by diabetes (type 2: 87%; type 1: 7%). Of total endocrine disease burden, 43% was fatal and 57% was non-fatal.

Social and emotional wellbeing (including mental health)

CTG Outcome 14: People enjoy high levels of social and emotional wellbeing

Social and emotional wellbeing (SEWB) has been defined as a multidimensional concept of health that includes mental health, but which also encompasses domains of health and wellbeing such as connection to land, culture, spirituality, family and community, the body and emotions [86, 87].

Aboriginal and Torres Strait Islander culture and self-determination can be powerful protective factors in providing a buffer to psychological distress [13, 15, 88]. The cultural determinants of health include connection to Country, cultural beliefs and knowledge, language, family, kinship and community, cultural expression and continuity, and self-determination and leadership [15]. Continuation of existing, and revival of, Aboriginal and Torres Strait Islander culture and Indigenous knowledge systems and the capacity for self-determination is increasingly being seen as fundamental to healing and supporting SEWB [87].

In recent years, the approach to conceptualising SEWB in cultural contexts has been expanded to embrace cultural, social and emotional wellbeing (CSEWB) [89, 90]. The key to understanding this expanded framework is acceptance of the importance of challenging the denial of cultural rights, identity and expression [6, 90]. Evaluations of the National Empowerment Program utilising the CSEWB approach have demonstrated that participants in the program developed approaches and skills that they could utilise on their healing journeys [89, 90].

40 Of those four jurisdictions for which separate jurisdictional data were available (NSW, Qld, WA and the NT) [47].

Extent of social and emotional wellbeing, mental illness and mental health problems among Aboriginal and Torres Strait Islander people

Prevalence

In this section, we have provided prevalence data from the 2022-23 NATSIHS. We have also summarised the outcomes of the Mayi Kuwayu study of 9,691 respondents from 2018-2020 [15]. The authors note that while large, the sample is not representative of all Aboriginal and or Torres Strait Islander people. However, internal comparisons of, for example the relationship between exposure to discrimination and health outcomes, are understood to be representative [91]. A key strength noted by the authors is that the study was 'conceptualised, designed, conducted and analysed by Aboriginal and Torres Strait Islander people for our mobs' [15, p.25]. To enshrine the principles of data governance and sovereignty, the research team established the Mayi Kuwayu Data Governance Committee, an external panel comprising Aboriginal and Torres Strait Islander people to independently review applications for data use.

In relation to life satisfaction, 87% of Mayi Kuwayu participants reported being satisfied with their lives (30% 'a lot'; 39% 'a fair bit'; and 17% 'a little bit') [15]. Just over five percent (5.2%) of respondents reported feeling 'not at all' satisfied with their lives. The results for life satisfaction were similar across Aboriginal, Torres Strait Islander, and Aboriginal and Torres Strait Islander peoples. A number of contextual and cultural factors reported in the Mayi Kuwayu study provide some insight into the positive indicators. For example, a majority of participants (78%) reported feeling a 'fair bit' to 'a lot' of control over their lives, 48% reported high family wellbeing and a further 21% moderate family wellbeing.

Conversely, the Mayi Kuwayu study reported that only 21% of respondents felt that where they live, local mob makes community decisions 'a lot', and 30% felt that the government has 'a lot' of the final say where they live, with a further 14% agreeing that the government had a 'fair bit' of the final say [15]. A majority of participants had experienced low (44%), moderate (8.4%) or high (2.3%) everyday discrimination and all reported experiences of the Stolen Generations.

In the Mayi Kuwayu study, 36% of respondents reported high or very high levels of psychological distress, with a further 29% experiencing moderate psychological distress [15]. Twenty-seven percent (27%) reported low levels of psychological distress. Once again, these findings are consistent across identification. The results were lower for the 2022-23 NATSIHS, which found that 30% of Aboriginal and Torres Strait Islander respondents aged 18 years[41] and over reported high or very high levels of psychological distress in the four weeks prior to the interview (Aboriginal people: 30% and Torres Strait Islander people: 31%) [19]. In the 2022-23 NATSIHS, more females reported high or very high levels of psychological distress compared with males (36% and 24% respectively). Similar levels of high to very high psychological distress were reported across age-groups, with the highest proportion (34%) reported among the 18-24 years age-group. Vic and SA were the jurisdictions that reported the highest proportion of people with high levels of distress (40% and 33% respectively) with the NT and WA the lowest (both 26%). The proportion of Aboriginal and Torres Strait Islander people who experienced high or very high levels of psychological distress was higher in non-remote areas (31%) than remote areas (24%).

In the 2022-23 NATSIHS, 30% of Aboriginal people and 22% of Torres Strait Islander people, aged two years and over, reported having a mental and/or behavioural condition [19]. The proportion of people with a mental health condition was 26% for males and 33% for females. The highest reported proportion of a mental and/or behavioural condition (38%) was among respondents aged 25-54 years, with the lowest proportion in the 0-14 years age-group (19%). Across the jurisdictions, mental and behavioural conditions were reported the most in Tas (42%), followed by Vic (40%) and SA (37%), with the lowest proportion in the NT (12%). Mental and behavioural conditions were 2.7 times more likely to be reported by Aboriginal and Torres Strait Islander people living in non-remote areas (33%) than remote areas (12%) (Derived from [19]).

41 The Mayi Kuwayu study gathered data from respondents aged 16 and above.

The 2022-23 NATSIHS indicated that anxiety was the most common mental or behavioural condition reported by Aboriginal and Torres Strait Islander people aged two years and over (21%) [19]. Anxiety was 1.5 times as common among females (25%) than males (17%) (Derived from [19]). The age-groups with the highest proportions of anxiety were 25-34 years (31%) and 45-54 years (29%) [19]. The reported proportion of Aboriginal and Torres Strait Islander people who experienced anxiety was higher in non-remote areas (24%) than remote areas (6.8%).

Depression was the second most common condition reported under mental and behavioural conditions (16%), with females reporting higher levels (18%) compared with males (13%) [19]. The highest reported proportion of depression among Aboriginal and Torres Strait Islander people was among respondents aged 35-44 years (23%), with the lowest proportion in the 0-14 years age-group (2.5%). The proportion of depression was higher in non-remote areas (17%) than remote areas (5.1%).

Discrimination and racism are associated with poor SEWB and mental health outcomes. Thurber et al (2021) demonstrated a clear dose-response relationship between experiences of discrimination and SEWB/mental health, with increased discrimination leading to poorer SEWB outcomes [91]. Individuals who experienced discrimination were nearly 2.5 times more likely to report high to very high psychological distress [92]. The prevalence of depression was 1.6 times higher among those who faced discrimination compared with those who did not. Individuals who experienced discrimination had a 1.6 times higher likelihood of reporting anxiety compared with those who did not face discrimination. The prevalence of low happiness was significantly higher (3.7 times) among individuals who encountered discrimination. Those who faced discrimination were 3.4 times more likely to report low life satisfaction compared with those who did not experience discrimination [91]. Importantly, up to half of the psychological distress burden among Aboriginal and Torres Strait Islander people could be attributable to experiences of discrimination [93].

Hospitalisation

In 2022-23, there were 27,645 hospital separations of Aboriginal and Torres Strait Islander people with a principal ICD diagnosis of 'Mental and behavioural disorders' [53]. These separations accounted for 7.8% of all hospital separations (excluding dialysis) for Aboriginal and Torres Strait Islander people (Derived from [53]).

'Intentional self-harm' categorised as a principal diagnosis[42], was responsible for 2,809 (0.4%) of all hospital separations for Aboriginal and Torres Strait Islander people in 2022-23, and 0.8% when dialysis was excluded (Derived from [53]).

Mortality

In 2023, 265 Aboriginal and Torres Strait Islander people living in NSW, Vic, Qld, WA, SA and the NT died from intentional self-harm (suicide)[43][47]. It was the fifth leading cause of death overall (second for males and eighth for females). The crude death rate for suicide was 27 per 100,000. The crude rate for males (40 per 100,000) was 2.9 times higher than the rate for females (14 per 100,000) (Derived from [47]). In 2023, the median age at death from intentional self-harm (suicide) among Aboriginal and Torres Strait Islander people in NSW, Vic, Qld, WA, SA and the NT was 32.8 years (males: 34.9 years; females: 27.8 years) [47].

For 2019-2023, in NSW, Vic, Qld, WA, SA and the NT, almost 80% of the deaths by intentional self-harm (suicide) among Aboriginal and Torres Strait Islander people were aged 15-44 years [47]. Age-groups with the highest age-specific rates were 35-44 years for males (77 per 100,000) and 15-24 years for females (26 per 100,000).

In 2019-2023, age-standardised death rates from intentional self-harm (suicide) for Aboriginal and Torres Strait Islander people living in NSW, Vic, Qld, WA, SA and the NT ranged from 22 per 100,000 in NSW to 35 per 100,000 in WA [47].

42 Intentional self-harm as a principal diagnosis for external causes of injury or poisoning for Aboriginal and Torres Strait Islander people.

43 Care needs to be taken in interpreting figures relating to intentional self-harm due to a revision process for coroner certified deaths and coding, together with enhancements to the methods in deriving Indigenous status [94].

Suicide was the leading cause of death for Aboriginal and Torres Strait Islander children aged 5-17 years, living in NSW, Vic, Qld, SA, WA and the NT, in the period 2019-2023 at an age-specific rate of 6.1 per 100,000 [47]. Almost 25% of deaths among children resulted from suicide. A little over 75% of children who died by suicide were aged between 15 and 17 years. Over half (56%) of Aboriginal and Torres Strait Islander children who died by suicide were female.

Burden of disease

In 2018, mental and substance use disorders accounted for 23% of total burden among Aboriginal and Torres Strait Islander people [95]. Of all disease groups, mental and substance use disorders made the highest contribution to total burden. Males experienced more than three times the amount of burden due to suicide and self-inflicted injuries than females (ranked fourth in males). Females experienced more burden from anxiety (ranked second in females) and depressive disorders (ranked fourth in females) compared with males. Across the life course, mental and substance use disorders and injuries (including suicide) were the main cause of burden for older children, adolescents and adults up to 44 years of age.

In 2018, anxiety was the third leading specific cause of total burden with an age-standardised rate of 17 disability-adjusted life years (DALY) per 1,000 people, depressive disorders the sixth leading (14 DALY per 1,000) and suicide and self-inflicted injuries the ninth leading (13 DALY per 1,000) [95].

Social and emotional wellbeing of Aboriginal and Torres Strait Islander people, and the First Nations Voice to Parliament Referendum

On 14 October 2023, Australians voted in a referendum on a proposal to recognise Aboriginal and Torres Strait Islander people as the First Peoples of Australia and to enshrine an Aboriginal and Torres Strait Islander Voice to Parliament in the Constitution.

A study by Yardhura Walani[44] found that while some aspects of wellbeing remained strong, for example happiness, life satisfaction and feelings of being in control, there were significant declines in other aspects post-referendum [96]. The study reported a high prevalence of diagnosed anxiety (39%), high/very high levels of psychological distress (46%) and less than 60% of the population reporting being in good health. Experiences of vicarious racism among Aboriginal and Torres Strait Islander people increased from 72% pre-referendum to 78% post-referendum[45].

Kidney health

Kidneys clean the blood by processing excess fluid, unwanted chemicals and waste, and producing urine [97]. If the kidneys stop working properly, waste can build up in the body and lead to kidney disease (sometimes called renal disease) [98, 99].

The most common cause of kidney disease is diabetes and there is a strong link between kidney disease and high blood pressure [100]. Other causes include immune diseases, congenital conditions and genetic disorders, such as polycystic kidney disease. Many people are unaware that they have kidney disease as up to 90% of kidney function can be lost before symptoms appear [101].

Chronic kidney disease (CKD) refers to conditions of the kidney that cause dysfunction or kidney damage and last for three months or more [102]. There are five stages of CKD according to the level of kidney function. In early stages (1-2), there are usually no symptoms, and the kidneys are still able to function when they are slightly damaged, making diagnosis difficult. In middle stages (3-4), levels of waste (urea and creatinine) in the blood rise and the person starts to feel unwell and kidney function slows down with increased urination. In end-stage renal disease (ESRD)[46] (stage 5), a person will require dialysis or a transplant to stay alive.

44 Data used in this study are from Mayi Kuwayu: the National Study of Aboriginal and Torres Strait Islander Wellbeing.

45 Pre-referendum is defined as the year immediately prior to the referendum period. Post-referendum is defined as the first six months after the referendum.

46 'Kidney failure' is the preferred, person-centred alternative to terms such as 'end-stage renal disease', [1], however, for the purposes of this *Overview*, the terms cited in the data sources are used.

CKD can be prevented by a healthy lifestyle or treatment, if detected early [103]. Modifiable risk factors include high blood pressure, tobacco smoking, overweight and obesity and impaired glucose regulation [101]. For Aboriginal and Torres Strait Islander people, non-modifiable risk factors associated with CKD also include being over the age of 30 years, family history of CKD, history of acute kidney injury and established vascular disease [104].

Extent of kidney disease among Aboriginal and Torres Strait Islander people

Prevalence and incidence

In the 2022-23 NATSIHS, 1.4% of Aboriginal and Torres Strait Islander people (Aboriginal people: 1.4% and Torres Strait Islander people: 1.3%) reported kidney disease as a long-term health condition [19]. The proportion of Aboriginal and Torres Strait Islander people reporting kidney disease was slightly higher for females (1.5%) than males (1.3%). The reported prevalence of kidney disease among Aboriginal and Torres Strait Islander people was less than 1.1% for all age-groups 44 years and below, increasing to 3.2% for people aged 45-54 years and 5.4% for people aged 55 years and over. By jurisdiction, the highest proportions of kidney disease were reported for the NT (2.8%) and Tas (2.0%), with the other states and territories (excluding ACT) less than 1.8% each. By remoteness, proportions were highest among those living in remote areas (2.7%), followed by very remote areas (2.5%), outer regional areas (1.8%), major cities (1.5%) and lowest in inner regional areas (0.4%[47]).

With most information on CKD limited to self-reported data, the primary focus in the literature has been on ESRD. Data from the ANZDATA for the five-year period 2018-2022 reveals that the age-standardised notification rate of ESRD for Aboriginal and Torres Strait Islander people was 605 per 1,000,000 population (Derived from [105, 106]). The highest notification rates of ESRD were recorded for Aboriginal and Torres Strait Islander people living in the NT (1,781 per 1,000,000), WA (1,071 per 1,000,000), and SA (709 per 1,000,000) (Table 23).

Table 23. Numbers of notifications and age-standardised notification rates for ESRD for Aboriginal and Torres Strait Islander people, selected jurisdictions, Australia, 2018-2022

Jurisdiction	Aboriginal and Torres Strait Islander people	
	Number	Rate
NSW	173	153
Vic	55	277
Qld	492	637
WA	401	1,071
SA	111	709
NT	533	1,781
Australia	1,788	605

Notes:

1. Rates per 1,000,000 population have been standardised using the ERP from 30 June 2001.
2. Notification rates for Tas and the ACT have not been shown separately because of the small numbers of notifications but are included in the figures for Australia.

Source: Derived from ANZDATA, 2023 [105], ABS, 2019 [106]

Of people newly registered with the ANZDATA in 2018-2022, 54% of Aboriginal and Torres Strait Islander people were aged less than 55 years (Table 24) (Derived from [105]).

47 This proportion has a high margin of error and should be used with caution.

Table 24. Numbers of notifications and notification rates of ESRD for Aboriginal and Torres Strait Islander people by age-group, Australia, 2018-2022

Age-group (years)	Aboriginal and Torres Strait Islander people	
	Number	Crude rate
0-14	16	11
15-24	36	44
25-34	139	211
35-44	249	550
45-54	521	1,220
55-64	509	1,638
65-74	271	1,695
75+	47	779
All ages (crude)	1,788	415
All ages (age-standardised)	1,788	605

Note: Rates per 1,000,000 population.

Source: Derived from ANZDATA, 2023 [107], ABS, 2019 [106]

Hospitalisation, dialysis and transplantation

Detailed information from ANZDATA is available for 2023, when a total of 361 Aboriginal and Torres Strait Islander people commenced haemodialysis (HD) and peritoneal dialysis (PD) (HD: 318 and PD: 43), a decrease from 2022 (375 people) [108]. The NT accounted for the highest proportion of patients commencing dialysis (30%), followed by Qld (25%) and WA (19%).

In 2023, there were 2,185 prevalent dialysis patients in Australia (PD and HD treatments), who identified as an Aboriginal and/or Torres Strait Islander person [108]. HD accounted for the majority of treatment (94%), with only 5.7% of Aboriginal and Torres Strait Islander dialysis patients receiving PD (Derived from [108]). The highest proportion of patients on dialysis were from the NT (32%), followed by Qld (25%) and WA (23%) [108]. By modality, the NT had the highest proportion of patients on HD (33%) and Qld on PD (37%).

In 2021-22, the crude hospitalisation rate for Aboriginal and Torres Strait Islander people with CKD as a principal or additional diagnosis was 34 per 1,000 (27 per 1,000 for males and 41 per 1,000 for females) [109]. For regular dialysis as a principal diagnosis, the rate was 299 per 1,000 hospitalisations (256 per 1,000 for males and 342 per 1,000 for females).

In 2018-19, there were 242,274 hospitalisations for Aboriginal and Torres Strait Islander people with ESKD (crude rate: 289 per 1,000) [110]. Detailed information for ESKD is available for 2016-18. The crude hospitalisation rate for ESKD among Aboriginal and Torres Strait Islander people was 278 per 1,000 (males: 241 per 1,000, females: 316 per 1,000). Rates increased with remoteness: 137 per 1,000 for major cities, 229 per 1,000 for inner and outer regional areas and 681 per 1,000 for remote and very remote areas. The rate for remote and very remote areas was 5.0 times the rate for major cities.

At the start of 2023, 68 (5.1%) of the 1,330 patients on the waiting list for a kidney transplant were of Aboriginal and/or Torres Strait Islander origin [108]. In the same year, there were 70 kidney transplant operations for Aboriginal and Torres Strait Islander recipients, which comprised 6.4% of all transplant operations in Australia.

Mortality

In 2020-22, there were 2,299 deaths[48] from CKD (as an underlying or associated cause of death) among Aboriginal and Torres Strait Islander people (crude rate: 93 per 100,000)[109]. There were 1,033 deaths among males and 1,266 deaths among females, with crude rates of 83 per 100,000 and 103 per 100,000 respectively. In 2018-22, the age-standardised mortality rate for kidney disease (as a major cause of death) among Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT was 24 per 100,000 [46]. When comparing jurisdictions, the mortality rate was highest in the NT (54 per 100,000), followed by WA and SA (both 26 per 100,000), Qld (19 per 100,000) and NSW (18 per 100, 000).

In 2023, diseases of the urinary system were reported as an underlying cause of 99 deaths (males: 38, females: 61) among Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT [47]. The age-standardised death rate for diseases of the urinary system among Aboriginal and Torres Strait Islander people was 26 per 100,000 (males: 23 per 100,000, females: 28 per 100,000).

In 2023, 308 Aboriginal and Torres Strait Islander people who were receiving dialysis died [108]. The most common causes of death for the dialysis patients were CVD (101 deaths: 33%), withdrawal from treatment (69 deaths: 22%) and infection (39 deaths: 13%). Most deaths were among Aboriginal and Torres Strait Islander people on HD treatment (94%).

Burden of disease

In 2018, diseases of the kidney and urinary system[49] were the 12th leading cause of disease burden for Aboriginal and Torres Strait Islander people. For specific diseases, CKD was the 10th leading cause of disease burden, contributing to 2.5% of the total burden [95]. For females, CKD was the 8th leading cause of total disease burden (3.1% of total burden), and for males it was the 15th leading cause of total disease burden (2.0% of total burden). Across age-groups, CKD was the fourth leading cause of total disease burden for those aged 65-74 years (6.0% of proportion of total burden); fifth for those aged 45-64 years (4.0% of total burden); and sixth for those aged 75 years and over (4.7% of total burden).

Respiratory health

Conditions that affect the airways and other structures of the lung, and impair the process of breathing, can have an impact on a person's respiratory health [74]. These conditions range from acute respiratory infections to chronic respiratory conditions [112].

Respiratory disease is associated with a number of risk factors, including age; genetics; inadequate nutrition and sedentary behaviour; tobacco use; environmental conditions; occupational exposures and hazards; and health conditions (such as obesity) [74]. Aboriginal and Torres Strait Islander children are particularly susceptible to developing respiratory diseases [113], which may be due to risk factors such as premature birth, exposure to tobacco smoke; poor living conditions; inadequate nutrition and limited access to medical care [114, 115].

Extent of respiratory disease among Aboriginal and Torres Strait Islander people

Prevalence

Long-term diseases of the respiratory system[50] were reported by 31% of Aboriginal and Torres Strait Islander people who participated in the 2022-23 NATSIHS [19]. The proportion of reported respiratory disease among Aboriginal and Torres Strait Islander females was higher than for males (33% and 30% respectively). The proportion of Aboriginal and Torres Strait Islander people reporting respiratory diseases was lowest among those in the 0-14 years age-group (19%) and highest among those in the 45-54 years age-group (44%) (Table 25). Reported diseases of the respiratory system were 2.2 times as high in non-remote areas compared with remote areas (34% and 16% respectively) (Table 25).

48 Number of deaths include all states and territories of Australia. Crude rates are expressed as deaths per 100,000 population, for NSW, Qld, WA, SA and the NT.

49 Kidney and urinary conditions comprise CKD (stages 1-5), kidney stones, interstitial nephritis, enlarged prostate, and other kidney and urinary diseases [111].

50 Includes COPD, asthma, hay fever and allergic rhinitis, chronic sinusitis and other diseases of the respiratory system [19].

Asthma was reported by 17% of Aboriginal and Torres Strait Islander people (Aboriginal people: 17%; Torres Strait Islander people: 19%) in the 2022-23 NATSIHS [19]. In the 2021 Census, 13% of Aboriginal and Torres Strait Islander people self-reported asthma as a long-term health condition [22]. In the 2022-23 NATSIHS, asthma was reported more commonly by females (18%) than by males (16%). It was lowest among those in the 0-14 years age-group (12%) and highest among those in the 45-54 years age-group (26%) (Table 25). For Aboriginal and Torres Strait Islander people living in NSW, Vic, Qld, SA, WA, Tas and the NT, proportions of reported asthma were lowest in the NT (7.7%) and highest in Vic (24%). Reported asthma was 2.2 times higher in non-remote areas compared with remote areas (18% and 8.1% respectively) [19] (Table 25).

COPD[51] was reported by 2.1% of Aboriginal and Torres Strait Islander people (Aboriginal people: 2.2%; Torres Strait Islander people: 1.0%) in the 2022-23 NATSIHS [19]. In the 2021 Census, 2.2% of Aboriginal and Torres Strait Islander people self-reported COPD as a long-term health condition [22]. In the 2022-23 NATSIHS, COPD was more commonly reported by males (2.4%) than females (1.9%). It was lowest among those in the 25-34 years age-group (0.4%) and highest among those in the 55 years and over age-group (6.9%). For Aboriginal and Torres Strait Islander people living in NSW, Vic, Qld, SA, WA, Tas and the NT, proportions of reported COPD were lowest in SA (1.0%) and highest in Tas (4.1%). Reported COPD was 2.0 times higher in non-remote areas compared with remote areas (2.4% and 1.2% respectively) [19] (Table 25).

Hay fever and allergic rhinitis were the most prevalent respiratory conditions reported by Aboriginal and Torres Strait Islander people in the 2022-23 NATSIHS, affecting 19% of respondents [19]. The conditions were more common among females (21%) than males (17%), lowest among those in the 0-14 years age-group (8.7%) and highest among those in both the 35-44- and 45-54-years age-group (26%). For Aboriginal and Torres Strait Islander people living in NSW, Vic, Qld, SA, WA, Tas and the NT, proportions of reported hay fever and allergic rhinitis were lowest in the NT (7.3%) and highest in Vic (29%). Reported hay fever and allergic rhinitis were 2.7 times higher in non-remote areas compared with remote areas (21% and 7.7% respectively) (Table 25).

Chronic sinusitis was reported among 8.5% of Aboriginal and Torres Strait Islander people in the 2022-23 NATSIHS, and was more common among females (10%) than males (6.9%) [19]. Proportions for chronic sinusitis increased with age, except for the 45-54 years age-group, which had the highest proportion at 17%. Reported chronic sinusitis was 3.1 times more common in non-remote areas compared with remote areas (9.5% and 3.1% respectively) (Table 25).

51 In the 2022-23 NATSIHS, COPD includes chronic bronchitis, emphysema and chronic airflow limitation. Collection methodology may affect the number of respondents reporting emphysema [19].

Table 25. Long-term respiratory diseases among Aboriginal and Torres Strait Islander people, by age-group and remoteness, all jurisdictions, 2022-23, proportion (%)

	Age-group (years)						Remoteness		
	0-14	15-24	25-34	35-44	45-54	55+	Non-Remote	Remote	Total
COPD	1.3	1.5	0.4	1.6	3.7	6.9	2.4	1.2	2.1
Asthma	12	13	17	18	26	25	18	8.1	17
Hay fever and allergic rhinitis	8.7	25	22	26	26	21	21	7.7	19
Chronic sinusitis	3.1	7.9	8.5	12	17	13	9.5	3.1	8.5
Other diseases of the respiratory system	0.3	0.2*	0.4*	0.0	1.2*	0.4	0.5	0.5	0.5
Total respiratory system diseases	19	34	33	39	44	41	34	16	31

Notes:

'Other diseases of the respiratory system' includes influenza and pneumonia, asbestosis, acute bronchiolitis, other diseases of the respiratory system, and signs and symptoms involving the respiratory system.

* This proportion has a high margin of error and should be used with caution.

Source: ABS, 2024 [19]

Coronavirus disease (COVID-19) incidence

For December 2021 – March 2024, there were 427,906[52,53] confirmed and probable cases of COVID-19 among Aboriginal and Torres Strait Islander people [116]. Most cases occurred in NSW (140,498: 33%), followed by Qld (114,825: 27%) and WA (61,905: 14%). The ACT had the fewest reported cases (4,324: 1.0%). Confirmed and probable cases decreased by remoteness, with 3.6 times as many cases in major cities compared with remote areas (191,171 and 53,021 respectively).

Hospitalisation

For 2022-23, there were 32,501 hospital separations with a principal diagnosis of respiratory disease among Aboriginal and Torres Strait Islander people [53] representing 9.1% of all separations (excluding dialysis) among Aboriginal and Torres Strait Islander people (Derived from [53]).

Further detailed information is available for asthma. In 2021-22, there were 1,780 hospitalisations for asthma among Aboriginal and Torres Strait Islander people, with a crude rate of 2.0 per 1,000 [117]. Hospitalisations were highest among those aged 0-14 years (710: crude rate 2.5 per 1,000) and lowest among those aged 65 years and over (96: crude rate 2.0 per 1,000).

For 2018-19, the crude hospitalisation rates for Aboriginal and Torres Strait Islander people by respiratory condition were influenza and pneumonia (9.2 per 1,000), COPD (6.7 per 1,000), acute upper respiratory infection (4.6 per 1,000) and asthma (2.7 per 1,000) [110].

52 This data are for the Omicron wave.

53 Six jurisdictions have ceased collecting and reporting data on probable COVID-19 cases, NSW, Vic, Qld, WA, ACT and the NT.

For 2016-18, detailed information is available regarding hospitalisation rates for specific respiratory conditions including COPD, acute upper respiratory infections, influenza and pneumonia and asthma, by age and remoteness [110]. Crude hospitalisation rates were highest for Aboriginal and Torres Strait Islander people presenting with influenza and pneumonia (8.3 per 1,000), followed by COPD (6.0 per 1,000), acute upper respiratory infections (4.4 per 1,000) and asthma (2.8 per 1,000) (Table 26). The age-specific hospitalisation rates for acute upper respiratory infections were highest in the 0-14 years age-group (8.3 per 1,000), for influenza and pneumonia in the 65 years and over age-group (31 per 1,000), followed by the 45-64 years age-group (17 per 1,000), and for asthma in the 0-14 years age-group (4.0 per 1,000).

Table 26. Hospitalisation rates for selected respiratory diseases among Aboriginal and Torres Strait Islander people, by age-group and remoteness, 2016-18

	Age-group (years)					Remoteness		
	0-14	15-24	25-44	45-64	65+	Major Cities	Remote/ Very Remote	Crude rate
Influenza and pneumonia	5.5	2.2	6.7	17	31	7.2	25	8.3
COPD	n/a	n/a	n/a	n/a	n/a	4.2	8.9	6.0
Acute upper respiratory infection	8.3	2.9	2.4	2.1	2.0	2.6	5.8	4.4
Asthma	4.0	1.5	2.3	2.9	2.6	2.5	3.5	2.8

Notes:

1. n/a – non applicable, information unavailable.
2. Crude rate per 1,000 population.

Source: SCRGSP, 2020 (Derived from [110])

For 2016-18, the age-standardised rates of hospitalisation for Aboriginal and Torres Strait Islander people with COPD, influenza and pneumonia, acute upper respiratory infections and asthma all increased with remoteness [110]. The hospitalisation rate for influenza and pneumonia was 3.4 times[54] higher for Aboriginal and Torres Strait Islander people living in remote/very remote areas (25 per 1,000) compared with the rate for those living in major cities (7.2 per 1,000).

Coronavirus disease (COVID-19) hospitalisations

In 2022-23, 4.4% of hospitalisations involving a COVID-19 diagnosis (8,046 of 182,824[55] total COVID-19 hospitalisations) were for Aboriginal and Torres Strait Islander people [53]. For the period January 2020 - March 2024, there were 797 admissions to an intensive care unit and/or deaths due to COVID-19 among Aboriginal and Torres Strait Islander people, with an age-standardised rate of 1.2 per 1,000 [116]. Admissions rates were highest among the 70 years and over age-group, with a rate of 9.6 per 1,000.

Mortality

In 2023, chronic lower respiratory disease (which includes asthma, bronchitis, bronchiectasis, emphysema and COPD) was the second leading cause of death overall for Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT, being responsible for 342 deaths [47]. There was a 6.6% increase in the age-standardised mortality rates for chronic lower respiratory diseases in Aboriginal and Torres Strait Islander people between 2014-2018 and 2019-2023 (2014-2018: 67 per 100,000 to 2019-2023: 72 per 100,000).

The crude death rate for chronic lower respiratory disease among Aboriginal and Torres Strait Islander people in 2023 was 38 per 100,000 (males: 39 per 100,000; females: 38 per 100,000) [47]. Of the top five causes of death in 2023, by sex, chronic lower respiratory disease ranked as the second most common cause of death for females (169 deaths) and third for males (173 deaths).

54 Rounding may lead to inconsistencies in rates reported.
55 COVID-19 hospitalisations where Indigenous status was not reported (3,757: 2.1%).

Age-specific information is available for Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT for 2019-2023 [47]. The rate for deaths from chronic lower respiratory diseases (as an underlying cause of death) increased with age from 35 per 100,000 in the 45-54 years age-group, 110 per 100,000 for the 55-64 years age-group, 274 per 100,000 for the 65-74 years age-group and 607 per 100,000 for the 75 years and over age-group.

In 2023, influenza and pneumonia were responsible for 84 deaths (males: 46 deaths: females: 38 deaths) among Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT, at an age-standardised rate of 18 per 100,000 [47].

In 2015-2019, there were 1,498 deaths among Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT due to respiratory diseases as an underlying cause of death [68]. This accounted for 9.7% of the total deaths of Aboriginal and Torres Strait Islander people. Of these deaths, 63% (937 deaths) were a result of COPD, 17% (247 deaths) due to pneumonia and influenza, and 4.9% (74 deaths) from asthma.

From 2017-21, there were 65 deaths from asthma among Aboriginal and Torres Strait Islander people [117].

Coronavirus disease (COVID-19) mortality

Nationally, from January 2020 to March 2024, there were 451 reported deaths from COVID-19 among Aboriginal and Torres Strait Islander people [116]. The highest number of deaths (by percentage of total Aboriginal and Torres Strait Islander deaths in this period) were reported for NSW (32%) followed by Qld (30%), WA (14%), the NT (13%), SA (5.5%), Vic (4.2%) and the ACT and Tas (both 0.4%).

Burden of disease

In 2018, respiratory diseases accounted for 7.5% of total burden among Aboriginal and Torres Strait Islander people [65]. Of all disease groups, respiratory diseases made the sixth highest contribution to total burden. They affected all age-groups, accounting for between 3% and 13% of total burden in both males and females across the age-groups.

In 2018, COPD was the second leading specific cause of total burden with an age-standardised rate of 19 DALY per 1,000 people. Asthma was the 11th leading specific cause of total burden with an age-standardised rate of 11 DALY per 1,000 people [65].

Injury, including family violence

Injury includes physical or mental harm to a person that results from either intentional or unintentional contact with an object, substance or another person [118]. Injuries can occur because of road traffic crashes, falls, drowning, burns, poisoning and acts of harm against oneself or others, among other causes [119].

When looking at injury in the Aboriginal and Torres Strait Islander context, factors such as low socioeconomic status, experiences of racism and alcohol and other drugs (AOD) use are shown to increase the risk of injury [120]. In addition, social isolation, a lack of culturally appropriate services and separation from culture can further contribute to risk.

Preventing injury among Aboriginal and Torres Strait Islander people requires acknowledgement of the physical, emotional, spiritual and cultural aspects of harm, as well as focus on the interactions between injury, mental health and substance use [120].

Extent of injury and family violence among Aboriginal and Torres Strait Islander people

Prevalence

In the 2022-23 NATSIHS, 8.9% of Aboriginal and Torres Strait Islander people (6.7% of males and 11% of females) aged 15 years and over had experienced violence in the last 12 months[56] [19]. The proportions were higher in remote areas (10%) than non-remote areas (8.8%). In 2022-23, 4.5% (6.2% of males and 3.3% of females) had experienced a serious accident in the last 12 months. The proportions were higher in remote areas (9.2%) than non-remote areas (3.9%).

56 Includes witness to violence, abuse or violent crime.

Hospitalisation

There were 43,070 hospital separations for injuries for Aboriginal and Torres Strait Islander people in 2022-23, representing 12% of all Aboriginal and Torres Strait Islander separations (excluding dialysis) (Derived from [53]). Injury was the second leading cause of hospitalisation (including dialysis). The age-standardised rate of hospitalisation was 51 per 1,000. The leading external causes of injury-related hospitalisation were falls (9,257 separations: 21%), exposure to mechanical forces (7,898 separations: 18%), assault (7,207 separations: 17%) and complications of medical and surgical care (6,356 separations: 15%) (Derived from [53]).

In 2022-23, the crude rate of hospitalised injury for Aboriginal and Torres Strait Islander people was 37 per 1,000 [121]. The rate was higher for males (41 per 1,000) than females (33 per 1,000). Rates were highest for those aged 25-44 years (51 per 1,000), followed by 65 years and over (44 per 1,000), 45-64 years (42 per 1,000), 15-24 years (40 per 1,000), 5-14 years (20 per 1,000) and 0-4 years (19 per 1,000). In 2017-19, crude rates of hospitalised injury were highest in the NT (87 per 1,000) and lowest in Tas (19 per 1,000) [27]. Rates were highest in remote areas (76 per 1,000) and very remote areas (70 per 1,000) and lowest in inner regional areas (34 per 1,000). For those living in remote areas, assault was the leading cause of hospitalised injury (34%); in non-remote, falls were the leading cause (22%).

In 2017-19, there were 6,918 non-fatal hospitalisations for family violence-related assaults for Aboriginal and Torres Strait Islander people at a crude hospitalisation rate of 4.2 per 1,000 [27]. The crude hospitalisation rate for females (6.2 per 1,000) was three times the rate for males (2.1 per 1,000). Spouses/domestic partners were the perpetrators of the majority (73%) of non-fatal hospitalised family violence assaults against females, while 'other family members' were the perpetrators of the majority (57%) against males. Rates were highest for those aged 35-44 years (10 per 1,000) and lowest for children aged 5-14 years (0.3 per 1,000). The NT and WA had the highest crude rates (19 per 1,000 and 6.7 per 1,000 respectively) and Tas had the lowest (0.2 per 1,000). Rates were highest in very remote (14 per 1,000) and remote areas (13 per 1,000) and lowest in inner regional areas (1.1 per 1,000).

Mortality

In 2023, the leading causes of death by injury among Aboriginal and Torres Strait Islander people in NSW, Qld, WA, SA and the NT were:

- intentional self-harm (239 deaths, 5.1% of all Aboriginal and Torres Strait Islander deaths[57])
- land transport accidents (107 deaths, 2.3% of all Aboriginal and Torres Strait Islander deaths)
- accidental poisoning (94 deaths, 2.0% of all Aboriginal and Torres Strait Islander deaths) (Derived from [47]).

In 2015-2019, there were 2,240 Aboriginal and Torres Strait Islander deaths from injury in NSW, Qld, WA, SA and the NT, representing 15% of all Aboriginal and Torres Strait Islander deaths (18% of male deaths and 10% of female deaths) [27]. Injury was the third leading cause of death. Leading specific causes of injury-related death, as a percentage of total injury deaths were intentional self-harm at 38% (41% for males and 31% for females); transport accidents at 19% (19% for males and 18% for females); accidental poisoning at 18% (17% for males and 22% for females); and assault at 7.8% (7.2% for males and 9.0% for females). Age-specific death rates for injury were highest for those aged 75 years and over (180 per 100,000), followed by those aged 35-44 years (124 per 100,000); and lowest for those aged 5-14 years (9.3 per 100,000). Crude injury death rates were highest in WA (96 per 100,000) and lowest in NSW (47 per 100,000). The crude injury death rate for those in remote areas (90 per 100,000) was 1.7 times the rate for those in non-remote areas (52 per 100,000) (Derived from [27]).

57 Total of 4,664 deaths among Aboriginal and Torres Strait Islander people for NSW, Qld, WA, SA and the NT.

Burden of disease

In 2018, injury accounted for 12% of total burden among Aboriginal and Torres Strait Islander people [95]. Of all disease groups, injury made the second highest contribution to total burden.

In 2018, 'suicide and self-inflicted injury' accounted for 4.6% of total burden among Aboriginal and Torres Strait Islander people [95]. It was the ninth leading specific cause of total burden, with an age-standardised rate of 13 DALY per 1,000 people.

Eye health

Eye health, particularly for Aboriginal and Torres Strait Islander people, can be affected by several factors that are complex and often dependent on a range of social determinants of health [122]. Factors can include previous eye problems; access to services; care coordination; medical factors; environmental and living conditions; use of alcohol and tobacco; and living in remote areas [122-124]. Eye disease and poor vision can limit opportunities in education, employment and social engagement and increase the risk of injury, which can lead to dependence on services and other people [27, 125]. Even partial loss of vision can reduce an individual's ability to live independently and increase their risk of mortality [124, 126].

Extent of eye health problems among Aboriginal and Torres Strait Islander people

Estimates of the prevalence of eye health problems among Aboriginal and Torres Strait Islander people have been obtained from surveys[58] and surveillance activities that rely on self-reporting or eye examinations respectively[59].

Prevalence

According to the 2015-2016 National Eye Health Survey (NEHS)[60], bilateral vision impairment (VI) (VI in both eyes) and bilateral blindness occurred among 11% and 0.3% of Indigenous people aged 40 years and over respectively [127]. There was no statistically significant difference in the prevalence of VI or blindness between males and females. VI increased with age among adults participating in the NEHS, ranging from 5.7% for those in the 40-49 years age-group to 46% for those aged 80 years and over. The prevalence of VI among adults in outer regional and very remote areas (17% and 15% respectively) was up to double that of other areas (8.2% in major cities, 8.4% in inner regional areas and 8.3% in remote areas). In 2016, it was estimated that up to 18,300 Indigenous people aged 40 years or older were living with VI or blindness.

The main causes of VI in Indigenous adults from the NEHS were uncorrected refractive error[61] (63%) and cataract (20%) [127]. Diabetic retinopathy (DR) was the third most common cause of VI (5.5%). Among those participants with self-reported diabetes, a high proportion had DR and vision-threatening DR (39% and 9.5% respectively) [128]. While not among the main causes of VI, the prevalence of vision loss due to ocular trauma (eye injury) was 0.8% [129]. Participants who were male or living in a very remote area were more likely to have vision loss from ocular trauma.

The NEHS identified five Indigenous participants with bilateral blindness, the main causes of which were cataract, DR, optic atrophy and a combination of mechanisms [127].

A new national survey of eye health, which also incorporates ear health, is currently underway, with findings due in mid-2025 [130].

58 Survey findings may not be directly comparable due to differing ways of defining and assessing vision loss [127].

59 Self-reported survey data are open to interpretation; they provide insight on an individual's view of their eye health, but these may not have been diagnosed by a health professional [122]. The surveys do not count eye conditions that the respondent is not aware of.

60 The NEHS examined the eyes of 1,738 Indigenous people (aged 40-92 years) and 3,098 non-Indigenous people (aged 50-98 years), living in 30 randomly selected urban, rural and remote sites across Australia, for VI and blindness.

61 A condition in which light that passes through the front of the eye fails to focus precisely on the retina, causing long or short sightedness and difficulties changing focus [127].

Prevalence estimates of eye health problems based on self-reported data

Although self-report is considered an imperfect population-based research tool for identifying eye disease in those with vision loss [131], self-reported information is the only recent data available for some aspects of eye health.

Eye and sight problems[62] were reported in the 2022-23 NATSIHS by 41% of Aboriginal and Torres Strait Islander people (41% of Aboriginal people and 38% of Torres Strait Islander people), making it the most commonly reported long-term condition that data were collected for in the survey [19]. Eye and sight problems were reported by 36% of males and 46% of females. Proportions of people reporting eye or sight problems varied across jurisdictions, with the highest proportion being recorded in Vic (48%) and the lowest in the NT (30%). Proportions reported for the other states and territories were: Tas: 47%; SA: 44%; NSW: 42%; Qld: 41% and WA: 39%. The proportion of Aboriginal and Torres Strait Islander people reporting eye or sight problems in non-remote areas combined[63] was 43% and in remote areas combined was 29%. The lowest proportion reported was among people living in very remote areas at 26%.

The most common eye conditions reported by Aboriginal and Torres Strait Islander people in the 2022-23 NATSIHS were: hyperopia (23%), myopia (17%), other diseases of the eye and adnexa[64] (12%), cataract (1.5%), blindness (0.9%) and glaucoma (0.4%) (Table 27) [19]. Females reported higher levels of refractive error (hyperopia and myopia) compared with males, while males reported slightly higher levels of blindness and cataract compared with females.

Table 27. Prevalence (%) of diseases of the eye and adnexa among Aboriginal and Torres Strait Islander people, by sex, 2022-23

	Males (%)	Females (%)	Persons (%)
Hyperopia (long sightedness)	19	27	23
Myopia (short sightedness)	14	21	17
Cataract	1.6	1.3	1.5
Blindness	1.0	0.7	0.9
Glaucoma	0.2	0.5	0.4
Other diseases of the eye and adnexa	13	11	12
Total	36	46	41

Note: Proportions are non-age-standardised.

Source: ABS, 2024 [19]

In 2022-23, the reported prevalence of all diseases of the eye and adnexa in the Aboriginal and Torres Strait Islander population generally increased with age [19]. The total prevalence of eye and adnexa diseases increased from 13% in the 0-14 years age-group to 89% in the 55 years and over age-group (with a small reduction of 4.0% between the ages of 25-34 years (45%) and 35-44 years (41%)).

In 2022-23, 13% of Aboriginal and Torres Strait Islander children aged 0-14 years were reported to have diseases of the eye and adnexa[65] [19]. The most commonly reported conditions[66] were hyperopia (6.5%) and myopia (3.8%).

62 Eye and sight problems include corneal disorders or defects, cataracts, glaucoma, disorders of choroid and retina, disorders of ocular muscles, binocular movement, accommodation and refraction, visual disturbances and blindness, and other diseases of the eye and adnexa [19].

63 Non-remote areas include major cities and inner and outer regional areas [19].

64 'Other diseases of the eye and adnexa' include astigmatism, macular degeneration, presbyopia, colour blind, corneal disorders or defects, other disorders of choroid and retina, other disorders of ocular muscles, other visual disturbances or loss of vision, and other diseases of the eye and adnexa [19].

65 An adult was asked to respond on behalf of children aged less than 15 years [19].

66 With the exception of 'other diseases of eye and adnexa' [19].

Prevalence of trachoma and trichiasis

The National Trachoma Surveillance and Reporting Unit provides prevalence data for trachoma [132], which shows there have been substantial improvements in trachoma control in many Aboriginal and Torres Strait Islander communities in Australia [133]. The estimated overall prevalence of active trachoma among Aboriginal and Torres Strait Islander children aged 5-9 years in selected at-risk remote communities has decreased from 15% in 2009 to 1.8% in 2023 [133]. Trachoma is largely detected in remote and very remote Aboriginal and Torres Strait Islander communities in WA, SA and the NT, with cases also found in NSW and Qld in 2008[67] [132]. In 2023, screening was undertaken in 67 at-risk communities in WA, SA and the NT. Of the 1,300 children aged 5-9 years who were screened, 74 (5.7%) were found to have trachoma: 57 in the NT, 17 in WA and 0 in SA. If left untreated, trachoma can cause scarring of the eyelid and in-turned eyelashes that lead to blindness (trichiasis) [132]. In 2023, screening was undertaken in 150 at-risk communities in WA, SA and the NT where nine cases of trichiasis were found in adults aged 40 years and over [133]. Age-specific proportions were 0.00% for Aboriginal and Torres Strait Islander people aged 15-39 years, 0.1% for those aged 40 years and over, and 0.07% for those aged 15 years and over.

Hospitalisation

In 2022-23, there were 7,351 hospital separations for diseases of the eye and adnexa among Aboriginal and Torres Strait Islander people in Australia [53], accounting for 2.1% of all separations (excluding dialysis) (Derived from [53]).

Hospitalisation data are available for 2021-23. In this period, there were 13,329 hospitalisations for diseases of the eye (by principal diagnosis) among Aboriginal and Torres Strait Islander people at a crude rate of 7.4 per 1,000 population [133]. Most hospitalisations (7,734: 58%) were for disorders of the lens (primarily refers to cataracts) at a crude rate of 4.3 per 1,000. Crude hospitalisation rates for diseases of the eye for Aboriginal and Torres Strait Islander people aged 45 years and over increased with age from 8.3 per 1,000 in the 45-54 years age-group, 24 per 1,000 in the 55-64 years age-group, 57 per 1,000 in the 65-74 years age-group and 83 per 1,000 in the 75 years and over age-group. The age-standardised hospitalisation rates by jurisdiction ranged from 7.2 per 1,000 in the NT and 7.4 per 1,000 in the ACT, to 19 per 1,000 in WA. Rates in other jurisdictions were between 10 and 14 per 1,000. Age-standardised hospitalisation rates were similar by remoteness, from 12 per 1,000 in inner/outer regional areas to 13 per 1,000 for remote/very remote areas and major cities respectively.

For 2021-23, detailed information is available for hospitalisation rates for eye diseases (by principal diagnosis) by the Roadmap to Close the Gap for Vision[68] project's Roadmap Regions. Crude hospitalisation rates ranged from 3.5 per 1,000 in Hume East (Vic) to 21 per 1,000 in the Pilbara (WA) [133]. The highest hospitalisation rates after the Pilbara were for Mid-West WA (21 per 1,000) and Great Southern WA (18 per 1,000). The lowest rates after Hume East were for Katherine (NT) (3.6 per 1,000) and the ACT (3.8 per 1,000).

Burden of disease

In 2018, hearing and vision disorders[69] accounted for approximately 2.4% of the total burden of disease among Aboriginal and Torres Strait Islander people [65]. Similar levels of overall burden from hearing and vision loss disorders were found among males (49%) and females (51%). Due to higher life expectancy for females, the overall burden for females was higher for refractive errors (53%) and cataracts and other lens disorders (54%) compared with males (47% and 46% respectively).

67 No trachoma or trichiasis screening was required in communities in NSW or Qld in 2023 [134].

68 The Roadmap to Close the Gap for Vision project was undertaken by the University of Melbourne's Indigenous Eye Health Unit to review health services and develop a model of care to improve eye care for Indigenous people. The 64 Roadmap regions provide assistance at a community level [122].

69 Vision disorders include vision loss as a result of refractive error, cataract, glaucoma and age-related macular degeneration, as well as vision loss and visual disturbance due to other causes such as eye injuries [65].

Ear health and hearing

Otitis media (OM) is the medical term for all forms of inflammation and infection of the middle ear [135]. OM can be caused by viruses or bacteria or both, and often occurs because of another illness, such as a cold [136]. The main cause of hearing loss in Aboriginal and Torres Strait Islander children is OM and its complications, including OM with effusion (glue ear) and chronic suppurative OM (CSOM) (persistent discharge through a hole in the eardrum) [135, 137].

The hearing loss associated with OM can cause speech, language and psychosocial delays, and impact education and employment outcomes [135, 138-141]. Underdetection of hearing problems further exacerbates these outcomes [142]. OM can affect Aboriginal and Torres Strait Islander babies from birth [143] and a high proportion of children living in remote communities will continue to experience CSOM throughout their developmental years [144]. In 2023, new recommendations about routine ear health and hearing checks for Aboriginal and Torres Strait Islander children were published in an effort to increase early detection of ear problems by primary care services [145].

As with many other areas of Aboriginal and Torres Strait Islander health, high rates of recurring ear infections are associated with crowded housing conditions, exposure to tobacco, low socioeconomic status, hygiene, an inadequate diet, limited community involvement in the provision of services, and cultural and language differences [110, 146]. A reduced risk of OM has been found for children who were breastfed [143, 147].

Extent of ear disease among Aboriginal and Torres Strait Islander people

Prevalence

Ear and hearing problems[70] were reported in the 2022-23 NATSIHS by 13% of Aboriginal and Torres Strait Islander people (13% of Aboriginal people and 12% of Torres Strait Islander) [19]. Proportions reported were similar among males (14%) and females (13%). Age-specific proportions indicated that ear and hearing problems increased with age, from 4.9% for 0-14 years to 33% for 55 years and over (Table 28). For Aboriginal and Torres Strait Islander people living in NSW, Vic, Qld, WA, SA, Tas and the NT, the proportions of reported ear and hearing problems were highest in Tas (17%), followed by Vic (15%), NSW, WA and SA (all 14%), Qld (12%) and the lowest in the NT (10%). Proportions were higher in non-remote areas (14%) than remote areas (11%) (Table 28).

Deafness[71] (complete and partial) was reported by 7.8% of Aboriginal and Torres Strait Islander people (males: 8.8%; females: 6.8%) in the 2022-23 NATSIHS [19]. Proportions reported increased with age from 1.9% for 0-14 year olds to 25% for 55 years and older (Table 28). Reported deafness was higher in remote areas (8.3%) than non-remote areas (7.8%).

OM was reported by 2.5% of Aboriginal and Torres Strait Islander people (males: 1.6%; females: 3.5%) in the 2022-23 NATSIHS [19]. Proportions reported were highest among the 45-54 year age-group (5.8%) and lowest among 35-44 year age-group (0.8%) (Table 28). Reported OM was higher in non-remote areas (2.6%) than remote areas (1.6%).

'Other diseases of the ear and mastoid'[72] was reported by 4.3% of Aboriginal and Torres Strait Islander people (males: 4.5%; females: 4.1%) in the 2022-23 NATSIHS [19]. Proportions reported were highest among the 55 years and over age-group (12%) and lowest among 0-14 age-group (0.5%) (Table 28). Reported 'Other diseases of the ear and mastoid' were higher in non-remote areas (4.6%) than remote areas (2.5%).

70 Includes deafness and hearing loss, diseases of the middle ear and mastoid, diseases of the inner ear, diseases of the external ear, and other diseases of the ear and mastoid process.

71 Deafness includes complete deafness, partial deafness, and hearing loss not elsewhere classified, in one or both ears.

72 Other diseases includes other diseases of the middle ear and mastoid, Meniere's disease, other diseases of the inner ear, and other diseases of the ear.

Table 28. Long-term diseases of the ear and mastoid among Aboriginal and Torres Strait Islander people, by age-group and remoteness, all jurisdictions, 2022-23, proportion (%)

	Age-group (years)						Remoteness		
	0-14	15-24	25-34	35-44	45-54	55+	Non-Remote	Remote	Total
Deafness (complete and partial)	1.9	5.0	7.0	7.1	11	25	7.8	8.3	7.8
Otitis media	2.7	2.7	2.1	*0.8	5.8	1.9	2.6	1.6	2.5
Other diseases of the ear and mastoid	0.5	2.5	3.8	6.5	9.0	12	4.6	2.5	4.3
Total diseases of the ear and mastoid	4.9	9.1	13	14	22	33	14	11	13

Notes:

1. Deafness includes complete deafness, partial deafness, and hearing loss not elsewhere classified, in one or both ears.
2. Other diseases includes other diseases of the middle ear and mastoid, Meniere's disease, other diseases of the inner ear, and other diseases of the ear.
3. Total sum of components may exceed total as the same person may have reported more than one long-term condition.

* This proportion has a high margin of error and should be used with caution.

Source: ABS, 2024 [19]

Information about the ear health and hearing status of young Aboriginal and Torres Strait Islander people in Qld is collected from the Deadly Ears program, which provides clinical services across rural and remote locations [148]. In 2021-2023, of the 2,837 Aboriginal and Torres Strait Islander children aged 0-14 years who received at least one ear, nose and throat assessment through the program, 8.0% had OM with effusion, 2.0% had dry perforation, 1.6% had CSOM, 0.5% had acute OM and 0.1% had acute OM with perforation[73] [149]. Of the children who received at least one audiology service through the program in 2021-2023, 11% of those aged 0-14 years had bilateral hearing loss and 7.3% unilateral hearing loss.

The Hearing Assessment Program – Early Ears is a preventive program that provides free ear health checks and hearing tests for Aboriginal and Torres Strait Islander children aged 0-5 years who are not at school full-time [149]. In 2022-2023, of the 4,797 children assessed, 17% had mild hearing loss and 2.3% had moderate or greater hearing loss. For Aboriginal and Torres Strait Islander males, 0-5 years of age, 16% had mild hearing loss and 2.4% moderate or greater hearing loss. For females, 17% had mild hearing loss and 2.1% moderate or greater hearing loss.

Information about the ear health and hearing status of young Aboriginal and Torres Strait Islander people in the NT is collected from an outreach ear program funded by the Australian Government[74] [150]. Of the 1,751 Aboriginal and Torres Strait Islander people aged under 21 years who received a service through the program in 2022, 55% were diagnosed with at least one type of ear condition at their latest visit. The prevalence of ear conditions ranged from 40% among those aged 16-20 years to 68% among those aged 0-2 years. Among children and young people who had an ear condition, the most common diagnoses were eustachian tube dysfunction[75] (22%), OM with effusion (21%), CSOM without discharge (8.2%) and CSOM with discharge (6.8%). Of the 1,741 children who received an audiology service, 34% were found to have some hearing loss in one or both ears.

73 These are clinic presentation data rather than population/prevalence data.

74 Population is not a random sample and is not representative of all Aboriginal and Torres Strait Islander children and young people in the NT [150].

75 Blocking of the tubes that run between the middle ear and the upper throat.

Hospitalisation

There were 3,957 ear-related hospitalisations in 2022-23 [53], representing 1.1% of all hospitalisations (excluding dialysis) of Aboriginal and Torres Strait Islander people (Derived from [53]). Aboriginal and Torres Strait Islander people were hospitalised for ear disease at an age-standardised rate of 3.5 per 1,000 population [53].

In 2021-23, there were 7,142 hospitalisations of Aboriginal and Torres Strait Islander people with a principal diagnosis related to diseases of the ear and mastoid process (crude rate 4.0 per 1,000) [149]. Crude hospitalisation rates were similar for males and females (3.6 per 1,000 and 3.5 per 1,000 respectively). Children aged 0-4 years were hospitalised at the highest rate (12 per 1,000) and young people aged 15-34 years at the lowest rate (1.4 per 1,000). The range for the remaining age-groups was between 7.9 per 1,000 (5-9 years) and 2.1 per 1,000 (35-44 years). Rates were highest in WA (4.5 per 1,000), followed by Qld (4.3 per 1,000), SA (4.1 per 1,000), the NT (3.9 per 1,000), Vic (2.9 per 1,000), NSW/ACT (2.8 per 1,000) and lowest in Tas (2.0 per 1,000). The highest crude hospitalisation rate by Indigenous Region was in the West Kimberley (10 per 1,000), Kununurra (9.7 per 1,000) and Mount Isa in Qld (9.5 per 1,000). The lowest rates were in Tasmania (2.0 per 1,000), South-Eastern NSW (2.1 per 1,000) and Sydney-Wollongong (2.3 per 1,000). Rates were highest in remote and very remote areas (5.3 per 1,000 and 4.9 per 1,000 respectively) and lowest in outer regional areas (3.0 per 1,000). Among the hospitalisations for diseases of the ear and mastoid process, the most common reasons were diseases of the middle ear and mastoid (71%), inner ear disease/s (8.6%), hearing loss (7.2%) and otitis externa (7.1%) (Derived from [149]). When diseases of the ear and mastoid process included any diagnosis, in numbers/rates, there were 12,321 hospitalisations of Aboriginal and Torres Strait Islander people at a crude rate of 6.9 per 1,000 [149].

Burden of disease

In 2018, the non-fatal rate of burden for ear and hearing related disorders was 6.3 years lived with disability per 1,000 [151]. The majority of non-fatal burden from ear/hearing disorders (91%) was caused by hearing loss. Among children aged 0-14 years, the majority was caused by OM (52%). Hearing loss was the 13th leading specific cause of total burden among Aboriginal and Torres Strait Islander people [95].

Oral health

Oral health is defined as the ability to speak, smile, smell, taste, touch, chew, swallow and convey a range of emotions through facial expressions with confidence and without pain, discomfort and disease of the craniofacial complex [152]. The two most common oral diseases are dental caries (tooth decay) and periodontal disease (gum disease) [153].

Dental caries occurs when bacteria in plaque interacts with sugar in food and drink to produce acids that degrade tooth enamel [154]. The stickiness of the plaque keeps these acids in contact with teeth and, over time, the enamel can break down and a cavity forms. The main contributor to caries is the consumption of free sugars[76]. Untreated caries can lead to pain and an increased likelihood of root canal therapy or tooth extraction being needed.

Periodontal diseases are a group of inflammatory diseases that affect the gums and other parts of the mouth structure [154]. Gingivitis is an early reversible form of the disease which, if untreated, can lead to a serious condition called periodontitis. The risk factors associated with periodontitis include smoking, diabetes, obesity, low socioeconomic status, adverse maternal outcomes, poor oral hygiene and older age. Racial discrimination has a significant impact on oral health, with those experiencing higher levels of racism facing worse oral health outcomes [155, 156].

76 Free sugars are added sugars plus those naturally occurring in honey, fruit juice and fruit concentrate.

Extent of oral health problems among Aboriginal and Torres Strait Islander people

Child oral health

The 2012-2014 National Child Oral Health Study (NCOHS)[77], which included a clinical examination component, found that:

- The proportion of Aboriginal and Torres Strait Islander children aged 5-10 years who had experienced any tooth decay in their primary (baby) teeth was 61% [153]. The average number of decayed, missing or filled primary tooth surfaces[78] for Aboriginal and Torres Strait Islander children aged 5-10 years was 6.3.
- The proportion of Aboriginal and Torres Strait Islander children aged 6-14 years who had experienced any tooth decay in their permanent (adult) teeth was 36% [153]. The average number of decayed, missing or filled permanent tooth surfaces for Aboriginal and Torres Strait Islander children aged 6-14 years was 1.3.
- The prevalence of visible dental plaque among Aboriginal and Torres Strait Islander children aged 5-14 years was 60% and the prevalence of gingivitis was 34% [153]. Both are indicators of oral hygiene status.

Dental services in the NT have been provided to Aboriginal and Torres Strait Islander children aged 0-15 years through a succession of programs funded by the Australian Government and delivered by the NT Government, most recently through the Northern Territory Remote Aboriginal Investment Oral Health Program [159]. In 2022, among the 3,672 recipients with complete data available, tooth decay prevalence was highest among children aged 11 years (87% of whom had decay) and lowest among children aged 1-3 years (38% of whom had decay)[79]. Children aged 5, 6 and 7 years had the highest average number of decayed, missing or filled primary teeth (5 teeth), and children aged 15 years had the highest average number of decayed, missing or filled permanent teeth (3.7 teeth).

Adult oral health

The 2017-18 National Study of Adult Oral Health (NSAOH), which included a clinical examination component, found that 7.1% of Aboriginal and Torres Strait Islander people aged 15 years and over had complete tooth loss [160]. Of those who still had some natural teeth, 13% did not have adequate natural dentition (enough natural teeth[80] to chew or function properly) and 11% wore dentures. Over half (55%) had one or more filled teeth. For those who still had some natural teeth:

- the average number of missing teeth[81] was 5.7
- the average number of decayed, missing or filled teeth was 7.5
- the average number of decayed, missing or filled tooth surfaces was 18.7.

Of those people who still had some natural teeth, 35% said they experienced toothache and 29% rated their oral health as fair or poor [160]. Of all Aboriginal and Torres Strait Islander people aged 15 years and over, 45% said they were uncomfortable about their dental appearance and 36% said they avoided foods due to dental problems.

77 Recruitment for the next ten-yearly NCOHS commenced in 2024 [157, 158].

78 Counting the number of surfaces of a person's tooth that are decayed, missing or filled, or the number of teeth that are decayed, missing or filled, gives an indication of oral health.

79 Children who receive services through this program are not a random sample of the population and, as such, the data may not be representative of the general population of Aboriginal and Torres Strait Islander children in the NT.

80 Twenty natural teeth are considered sufficient for chewing function [160].

81 Missing for any reason.

Dentist visits and hospitalisation

In the 2022-23 NATSIHS, 45% of Aboriginal and Torres Strait Islander people aged two years and over reported seeing a dentist[82] in the 12 months prior to the survey [19]. A higher proportion of females (48%) visited a dentist compared with males (43%). Among young people aged 2-17 years, 57% had seen a dentist compared with 38% of people aged 18 years and over. Survey respondents living in non-remote areas (47%) were more likely to have made a dental visit than those in remote areas (37%). Among the 22% of NATSIHS respondents in non-remote areas who needed dental care in the past 12 months but did not seek it, the most common reason was cost (49%). In contrast, for the 18% of remote respondents, the primary reason was transport or distance (51%).

In the 2017-18 NSAOH, 51% of Aboriginal and Torres Strait Islander people aged 15 years and over reported having seen a dentist in the 12 months prior to the survey [160]. The proportion decreased in older age-groups from 63% for 15-34 years to 41% for 55-74 years. The proportion of people whose last dental visit was five or more years ago was 14%.

In the 2012-2014 NCOHS, 75% of Aboriginal and Torres Strait Islander children aged 5-14 years were reported as visiting a dental provider in the 12 months prior to the survey [153].

In 2021-22, the age-standardised hospitalisation rate for acute dental conditions for Aboriginal and Torres Strait Islander people was 4.1 per 1,000 [46]. Rates were highest in the ACT (6.9 per 1,000) and lowest in Tas (2.5 per 1,000).

In 2017-19, there were 4,103 hospitalisations for dental problems (based on principal diagnosis) for Aboriginal and Torres Strait Islander people [27]. The crude hospitalisation rate was 2.5 per 1,000. Rates for females (2.5 per 1,000) were marginally higher than for males (2.4 per 1,000). Age-specific rates were highest for children aged 5-14 years (5.9 per 1,000) and 0-4 years (5.8 per 1,000), and lower for all other age-groups (ranging from 0.4 to 0.9 per 1,000). Rates were highest in the ACT (3.8 per 1,000) and lowest in WA (1.3 per 1,000).

In 2017-19, there were 2,146 hospitalisations for periodontal disease (based on principal diagnosis) for Aboriginal and Torres Strait Islander people [27]. The crude rate of hospitalisation was 1.2 per 1,000. The rate for females (1.4 per 1,000) was slightly higher than for males (1.2 per 1,000). Age-specific rates for periodontal hospitalisation were highest for 25-34 year olds (2.0 per 1,000) and lowest for those aged 65 and over (0.5 per 1,000).

In 2016-18, the crude rate of hospitalisation for potentially preventable dental conditions was highest in remote and very remote areas (6.3 per 1,000) and lowest in major cities (3.4 per 1,000) [110].

Burden of disease

In 2018, oral disorders[83] accounted for 2.1% of total disease burden and 3.9% of non-fatal burden among Aboriginal and Torres Strait Islander people [65]. The majority of burden due to oral disorders was caused by dental caries (63%), followed by periodontal disease (22%) and severe tooth loss (15%). Almost all oral disorder burden was non-fatal.

82 Or dental professional.

83 Excluding injury (to the jaw/oral cavity) and cancers (of the mouth/oral cavity) [65].

Disability

Understandings of disability by Aboriginal and Torres Strait Islander people are likely to focus on body function and be interwoven with the experience of disability, viewed within the context of their beliefs, attitudes and experiences of disability, and historic, social and economic disadvantages [110, 161, 162]. In medical literature, disability is often defined as a limitation, restriction or impairment which has lasted, or is likely to last, for at least six months and restricts the everyday activities of an individual [163]. It can be considered in terms of: the nature of the impairment in body structure or function; a limitation in activities (such as self-care, mobility and communication); a restriction in participation (involvement in life situations, such as work, education and social interaction) and the interaction between an individual and their personal and environmental context [164, 165]. The burden of disability experienced by Aboriginal and Torres Strait Islander people is often associated with poorer physical and mental health, increased exposure to risk factors and higher levels of socioeconomic disadvantage [27, 165].

Extent of disability among Aboriginal and Torres Strait Islander people

Prevalence

In the 2022-23 NATSIHS, 37% of Aboriginal and Torres Strait Islander people, (38% of Aboriginal and 29% of Torres Strait Islander) reported having a disability[84] (males 36%; females 37%) [19]. The jurisdiction with the highest reported proportion was Vic (45%) and the lowest was in the NT (29%) (Table 29). Disability was reported at similar proportions in non-remote settings (38%) and remote settings (31%) (Table 29). The survey found that 7.0% of Aboriginal and Torres Strait Islander people (7.0% of Aboriginal people and 5.9% of Torres Strait Islander people) reported a profound or severe disability. The proportion for Aboriginal and Torres Strait males and females was similar (7.0% and 6.9% respectively). The jurisdiction with the highest reported proportion was SA (12%) and the lowest was WA (6.2%) (Table 29). A profound/severe disability was reported more often in non-remote areas (7.3%) than in remote areas (5.2%) (Table 29).

Table 29. Disability among Aboriginal and Torres Strait Islander people, by jurisdiction and remoteness, 2022-23, proportion (%)

	NSW	Vic	Qld	WA	SA	NT	Tas	Non-Remote	Remote	Total
Has a core activity limitation (Profound/ severe)	27 (6.8)	36 (9.7)	25 (6.4)	22 (6.2)	35* (12)	17 (6.3)	35 (8.1)	28 (7.3)	17 (5.2)	26 (7.0)
Has a disability	37	45	37	33	42*	29	44	38	31	37

Notes:

1. Data for ACT are not able to be published separately but are included in the total.
2. Has a disability included data for 'Has a core activity limitation'.

* This proportion has a high margin of error and should be used with caution .

Source: ABS, 2024 [19]

For Aboriginal and Torres Strait Islander people with a disability or restrictive long-term health condition, the most reported disability types in 2018-19 were physical (63%), sensory (47%), psychological (23%), intellectual (18%) and head injury, stroke or brain damage (3.4%), with 30% classified as 'other' [27].

The 2021 Census provided information on assistance for Australians with a profound or severe disability. In 2021, 8.2% of Aboriginal and Torres Strait Islander people reported a need for assistance with either self-care, mobility or communication [22]. For an additional 4.7% of respondents, a need for assistance was not stated. Overall, Aboriginal and Torres Strait Islander males (8.7%) reported more need for assistance compared with females (7.6%).

84 A disability is an impairment which restricts everyday activities and has lasted or is likely to last, for at least six months.

In the 2018 Survey of Disability, Ageing and Carers (SDAC), the total number of Aboriginal and Torres Strait Islander people who reported living with a disability[85] was 139,700 or 24% of Aboriginal and Torres Strait Islander people living in households in Australia [166]. Of these, approximately 69% reported needing assistance with at least one daily activity. The age-group reporting the highest level of living with a disability was 55 years and over (54%). The proportion of people with disability varied by remoteness, with the highest proportion in inner regional areas (30%), followed by major cities (24%), outer regional areas (22%), and the lowest in remote areas (18%).

As reported in the 2018 SDAC, 8.8% of Aboriginal and Torres Strait Islander people had a profound or severe limitation [166]. The highest reported areas of need were with cognitive and emotional tasks (40%), health care (29%), mobility (27%), transport (21%), property maintenance (20%) and self-care (18%).

General practitioner (GP) visits and hospitalisation

The 2022-23 NATSIHS provided information for health service use (GP, specialist and hospital admissions) among Aboriginal and Torres Strait Islander people with a disability [19]. In the 12 months prior to the survey, 90% saw a GP or specialist and 22% were admitted to hospital.

Communicable diseases

Communicable diseases (caused by infectious agents including bacteria, viruses, parasites, fungi, or their toxic products) can be transmitted from one person or an animal to another [167]. Disease transmission may occur directly (e.g. via contact with blood or bodily fluids), indirectly (e.g. by sharing a drinking glass), or through vectors (e.g. mosquitoes). While illnesses caused by communicable disease are often mild and brief (e.g. a common cold) and do not require medical care, risk factors may vary according to the type of disease.

Sexually transmissible infections

Sexually transmissible infections (STIs) include bacterial, viral and parasitic infections that are primarily transmitted through sexual contact [168]. Young people aged 15-24 are particularly vulnerable to STIs. The use of condoms is regarded as fundamental in preventing STI transmission. Most STIs are treatable and early detection is important in the management of STIs.

Chlamydia

Chlamydia is an infection caused by the bacterium *Chlamydia trachomatis* and symptoms mainly consist of an inflamed urethra, causing discharge for males and pain during urination and intermenstrual bleeding for females [169]. However, chlamydia is asymptomatic (showing no symptoms) in about 80% of cases. Chlamydia can also lead to reproductive issues for females such as infertility, pelvic inflammatory disease and ectopic pregnancies.

In 2023, there were 8,557 notifications of chlamydia for Aboriginal and Torres Strait Islander people. The age-standardised notification rate[86] for chlamydia among Aboriginal and Torres Strait Islander people was 820 per 100,000 [170]. The rate among females (1,028 per 100,000) was higher than for males (621 per 100,000). In 2023, the highest chlamydia notifications were among Aboriginal and Torres Strait Islander people aged 15-19 years (3,088: 36%), followed by 20-24 years (2,369: 28%) (Derived from [170]).

In 2023, for the jurisdictions reported, notification rates for chlamydia were highest in the NT (1,333 per 100,000), followed by WA (943 per 100,000) and Qld (517 per 100,000) [170]. The remaining jurisdictions reported on, had notification rates ranging from 284 per 100,000 in the ACT to 495 per 100,000 in SA. The notification rate for chlamydia increased with remoteness from 599 per 100,000 in major cities, 677 per 100,000 in regional areas to 2,374 per 100,000 in remote areas.

85 The SDAC does not include Aboriginal and Torres Strait Islander people living in cared accommodation, discrete Indigenous communities and very remote areas [166].

86 Notification rates by Aboriginal and Torres Strait Islander status are only included for jurisdictions where Aboriginal and Torres Strait Islander status was reported for ≥50% of diagnoses for each of the reported years. For chlamydia this included NSW, Qld, WA, SA, the ACT and the NT.

Gonorrhoea

Gonorrhoea is an infection caused by the bacterium *Neisseria gonorrhoeae* and displays similar symptoms to chlamydia [169]. Gonorrhoea is largely asymptomatic and can lead to reproductive issues if left untreated [169, 171].

In 2023, there were 5,631 gonorrhoea notifications for Aboriginal and Torres Strait Islander people [170]. The age-standardised notification rate[87] for Aboriginal and Torres Strait Islander people was 541 per 100,000. The notification rate for gonorrhoea among females (595 per 100,000) was higher than for males (492 per 100,000).

In 2023, the highest gonorrhoea notifications were among Aboriginal and Torres Strait Islander people aged 15-19 years (1,529: 27%), followed by 20-24 years (1,335: 24%) and 30-39 years (1,148: 20%) (Derived from [170]).

In 2023, notification rates for gonorrhoea were highest in the NT (2,200 per 100,000), followed by WA (877 per 100,000) and SA (875 per 100,000) [170]. The remaining jurisdictions reported on, had notification rates ranging from 99 per 100,000 in Tas to 360 per 100,000 in Qld. The notification rate for gonorrhoea increased by remoteness from 271 per 100,000 in major cities, 292 per 100,000 in regional areas to 1,819 per 100,000 in remote areas.

Syphilis

Syphilis is an infection caused by the bacterium *Treponema pallidum* which can be contracted through sexual contact, blood-to-blood contact and from mother to child during pregnancy [169, 172]. If a fetus contracts syphilis during pregnancy, it is called congenital syphilis, and often results in the fetus dying if left untreated. The primary symptom of syphilis is a painless ulcer located at the area of infection, which appears within the first couple of weeks after infection, followed by a rash, which usually appears on the palms of the hands or soles of the feet if left untreated and progresses into what is termed secondary syphilis. Following the secondary stage, the infection is asymptomatic.

In 2023, there were 1,022 syphilis notifications for Aboriginal and Torres Strait Islander people [170]. The age-standardised notification rate[88] for Aboriginal and Torres Strait Islander people was 102 per 100,000. The notification rate for syphilis among females (104 per 100,000) was higher than for males (100 per 100,000).

In 2023, the highest syphilis notifications were among Aboriginal and Torres Strait Islander people aged 30-39 years (257: 25%), followed by 20-24 years and 15-19 years (205 and 203 respectively, both 20%) (Derived from [170]).

In 2023, notification rates for syphilis were highest in WA (242 per 100,000), followed by the NT (212 per 100,000) and Qld (103 per 100,000) [170]. The remaining jurisdictions had notification rates ranging from 18 per 100,000 in Tas, to 86 per 100,000 in SA. The notification rate for syphilis was 70 per 100,000 in regional areas, 79 per 100,000 in major cities and 249 per 100,000 in remote areas.

Human immunodeficiency virus (HIV)

The human immunodeficiency virus (HIV) affects a person's immune system and over time prevents their body's ability to overcome infections and illnesses [173]. HIV can be transmitted through certain body fluids such as blood, vaginal fluid, semen and breast milk. It can also be transmitted during pregnancy or birth from mother to child. If untreated, HIV can progress to acquired immune deficiency syndrome [169].

The risk factors associated with contracting HIV include engaging in unprotected sex (anal, oral or vaginal), having an STI, sharing injecting equipment, using unsterile piercing and tattooing equipment or accidental needle stick injuries [173, 174].

87 Notification rates by Aboriginal and Torres Strait Islander status are only included for jurisdictions where Aboriginal and Torres Strait Islander status was reported for ≥50% of notifications for each of the reported years. For gonorrhoea this included all jurisdictions except Vic.

88 Notification rates by Aboriginal and Torres Strait Islander status are only included for jurisdictions where Aboriginal and Torres Strait Islander status was reported for ≥50% of diagnoses for each of the reported years. For infectious syphilis this included all jurisdictions.

HIV symptoms often vary and develop over time, meaning it is common for people who are infected to be unaware they are HIV positive until the later stages of infection [173]. However, the most infectious time period is the first few months after infection.

In 2023, there were 24 notifications[89] of HIV infection in Australia among Aboriginal and Torres Strait Islander people [170]. The median age of diagnosis was 40.5 years. The age-standardised rate of HIV notification for Aboriginal and Torres Strait Islander people was 2.9 per 100,000 population.

In 2023, the age-standardised HIV notification rate for Aboriginal and Torres Strait Islander males (3.8 per 100,000) was higher than for females (2.1 per 100,000) [170].

In 2023, the age-standardised HIV notification rate was higher among Aboriginal and Torres Strait Islander people aged 35 years and over (3.6 per 100,000) compared with those aged under 35 years (2.0 per 100,000) [170].

In 2023, NSW accounted for the most HIV notifications (11 cases: 49%) followed by Qld (8 cases: 33%) (Derived from [170]). The HIV notification rate was highest among Aboriginal and Torres Strait Islander people living in major cities (4.4 per 100,000), followed by remote areas (2.5 per 100,000) and regional areas (1.6 per 100,000) [170].

Hepatitis

Hepatitis is an inflammation of the liver which can be caused by viruses, alcohol, drugs and other toxins [175].

Hepatitis C

Transmission of hepatitis C virus (HCV) occurs via blood to blood contact; in Australia, mainly by the use of unsterile drug injecting equipment [176]. Treatment for HCV using direct-acting antiviral (DAA) therapies has been found to be highly effective. There is no vaccine to protect people against HCV, but due to the efforts to increase access to DAAs over recent years, Australia is predicted to eliminate HCV as a public health threat by 2030.

In 2023, 1,499 (20%) of the 7,602[90] notified HCV infections[91] were among people of Aboriginal and Torres Strait Islander origin [177]. The age-standardised rate for notified HCV was 166 per 100,000 population[92]. For those aged 15 to 24 years, the age-standardised rate was 236 per 100,000. For the reported jurisdictions, rates were highest in WA (267 per 100,000), followed by Qld (190 per 100, 000), SA (73 per 100,000), NT (52 per 100,000) and lowest in Tas (13 per 100,000).

Further information is available for 2022 when 1,088 (16%) of the 6,728[93] notified HCV infections[94] were among people of Aboriginal and Torres Strait Islander origin [178]. The age-standardised rate for notified HCV was 156 per 100,000 population[95]. The rate for males was 2.3 times higher than for females (216 per 100,000 and 96 per 100,000 respectively) (Derived from [178]). Across all age-groups, from 0 years of age and above, the highest rates were in the 25-39 years age-group (313 per 100,000) followed by the 40 years and over age-group (307 per 100,000) and 15-24 years age-group (189 per 100,000) [179]. For the reported jurisdictions, rates were highest in WA (265 per 100,000), followed by Qld (167 per 100,000), with the lowest rate in the NT (30 per 100,000) [178]. Rates decreased by remoteness from 209 per 100,00 in major cities to 193 per 100,000 in regional areas and 54 per 100,000 in remote areas.

89 HIV notifications are based on small numbers so should be interpreted with caution.
90 2,310 (30%) of the 7,602 notifications had Aboriginal and Torres Strait Islander status 'not reported'.
91 Notifications include newly acquired HCV (within two years before diagnosis) and unspecified HCV (more than 24 months before diagnosis or for cases of unknown duration).
92 Notification rates by Aboriginal and Torres Strait Islander status are only included for jurisdictions where Aboriginal and Torres Strait Islander status was reported for ≥50% of diagnoses for each of the reported years. This included Qld, WA, SA, Tas and the NT for notified HCV.
93 2,419 (36%) of the 6,728 notifications had Aboriginal and Torres Strait Islander status 'not reported'.
94 Notified cases means that a person previously not known to have HCV who now has been tested and found to have HCV, or is a person who has been cured, and subsequent testing has identified reinfection.
95 Notification rates by Aboriginal and Torres Strait Islander status are only included for jurisdictions where Aboriginal and Torres Strait Islander status was reported for ≥50% of diagnoses for each of the reported years. This included Qld, WA, SA, the ACT and the NT for notified HCV.

Hepatitis B

Historically, transmission of hepatitis B virus (HBV) among Aboriginal and Torres Strait Islander people was from mother to child at birth, or between children and family members [180]. Now, more common forms of transmission are using unsterile drug injecting equipment or sexual contact without the use of condoms and lubrication. Australia is predicted to eliminate HBV as a public health threat by 2030.

In 2022, 108 (2.1%) of the 5,075[96] notified HBV infections[97, 98] were among people of Aboriginal and Torres Strait Islander origin [178]. The age-standardised rate for newly notified HBV was 19 per 100,000 population[99]. The rate for males was 1.9 times higher than that for females (25 per 100,000 and 13 per 100,000 respectively) (Derived from [178]). Across all age-groups, from 0 years of age and above, the highest rates were in the 40 years and over age-group (58 per 100,000) followed by the 35-39 years age-group (39 per 100,000) [178]. For the reported jurisdictions, rates were highest in WA (37 per 100,000), followed by the ACT (27 per 100,000), with the lowest rate in SA (5.5 per 100,000). Rates increased by remoteness from 13 per 100,000 in major cities to 20 per 100,000 in regional areas and 27 per 100,000 in remote areas.

For 2018-19, the crude hospitalisation rate for acute HBV across all jurisdictions was 2.5 per 100,000 [110].

Pneumococcal disease

Pneumococcal disease results from infection by the bacterium *Streptococcus pneumoniae*, which may cause severe invasive disease including meningitis, pneumonia, bacteraemia and non-invasive disease, including OM [181]. Pneumococcal disease is most common in very young children and the elderly [182].

Nationally-funded vaccination for pneumococcal disease is available for Aboriginal and Torres Strait Islander infants and children, and adults aged 50 years and over [183]. Funded under the National Immunisation Program (NIP), all Aboriginal and Torres Strait Islander children receive a single dose at ages 2 months, 4 months and 12 months, and children living in Qld, WA, SA and the NT receive an additional dose at 6 months of age [183, 184].

Data are available for 2019-2023 when there were 1,372 notifications (16% of the total 8,564 notifications in Australia) of invasive pneumococcal disease (IPD) for Aboriginal and Torres Strait Islander people [185]. This consisted of 725 cases for males and 647 cases for females. By clinical presentation, the highest case numbers were for pneumonia (707 cases) and bacteraemia (266 cases).

Age-specific data indicated that the age-groups most affected by IPD were 65 years and over (67 per 100,000); 55-64 years (63 per 100,000); 45-54 years (47 per 100,000); 35-44 years (38 per 100,000) and 0-4 years (33 per 100,000) [68]. For 2018-19, Aboriginal and Torres Strait Islander children aged 0-4 years living in NSW, Vic, Qld, WA, SA and the NT were hospitalised (25 hospital separations) for IPD at an age-standardised rate of 0.3 per 1,000 population [68].

Meningococcal disease

Meningococcal disease is caused by the bacterium *Neisseria meningitidis* (also known as meningococcus) [181]. The most common clinical presentations of invasive meningococcal disease (IMD) are septicaemia and/or meningitis. Meningococcal disease is more common in infants, adolescents and adults aged over 45 years [186].

96 2,210 (44%) of the 5,075 notifications had Aboriginal and Torres Strait Islander status 'not reported'.

97 Notified cases of HBV include people previously not know to have HBV who now has been tested and found to have HBV. The notifications also include newly acquired infections (previously having a negative test in the past two years) plus people with a previous test more than two years ago or an unknown time-period.

98 Caution should be taken due to low number of notifications.

99 HBV notification rates by Aboriginal and Torres Strait Islander status only included for jurisdictions where Aboriginal and Torres Strait Islander status was reported for at least 50% of diagnoses for each of the reported years. This included Qld, WA, SA, the ACT and the NT for notified infections.

The most common serogroups[100] of meningococcus found in Australia are B, Y and W [186]. The MenACWY vaccination is now funded under the NIP as a single dose for all children aged 12 months and for adolescents aged 14 to 16 years via school-based immunisation and/or primary care providers [183]. This funding covers specific populations, including Aboriginal and Torres Strait Islander people. A vaccine for serogroup B[101] (also funded under the NIP) is available Australia-wide for Aboriginal and Torres Strait Islander infants aged from 6 weeks; a catch-up vaccine is also available for children aged up to 23 months [183, 187].

For 2019-2023, 116 (18%) of the 632 notified cases of IMD were identified as Aboriginal and Torres Strait Islander[102] [189]. This consisted of 66 cases among males and 50 cases among females. Almost half (48%) of the cases were among children aged 0-4 years. The highest recorded numbers were for serogroup B with 72 cases and serogroup W with 21 cases.

Tuberculosis

Tuberculosis (TB) is primarily a lung infection caused by *Mycobacterium tuberculosis* bacteria [190]. With high incidence rates in the NT, Qld and northern SA among Aboriginal and Torres Strait Islander people, the National Tuberculosis Advisory Committee recommends neonates in these communities receive the Bacille Calmette-Guérin (BCG) vaccine.

In 2020, the notification rate for TB among Aboriginal and Torres Strait Islander people was 3.0 per 100,000 [191]. There was a 38% reduction in cases in 2020 compared with 2015.

In 2018, of the 1,438 notifications of TB in Australia, 29 (2.0%) were identified as Aboriginal and Torres Strait Islander [192].The notification rate for TB among Aboriginal and Torres Strait Islander people was 3.6 per 100,000. The rate was highest in the 35-44 years and 65 years and over age-groups (10 per 100,000 and 12 per 100,000 respectively). By jurisdiction, the rate was highest for SA (7.1 per 100,000 population), followed by Qld (6.3 per 100,000 population) and the NT (5.4 per 100,000).

In 2018-19, Aboriginal and Torres Strait Islander people were hospitalised for TB at a crude rate of 8.8 per 100,000 [110]. For 2016-18, hospitalisation rates were highest for Aboriginal and Torres Strait Islander people in the 65 years and over age-group (26 per 100,000), followed by the 45-64 years age-group (23 per 100,000)[103]. The lowest hospitalisation rate for Aboriginal and Torres Strait Islander people during the same period was reported for the 15-24 years age-group (2.2 per 100,000).

Haemophilus influenzae type b

Haemophilus influenzae type b (Hib) is a bacterium that can cause a number of conditions including meningitis, pneumonia, epiglottitis, septic arthritis and cellulitis [181]. Children are particularly susceptible to Hib, which is serious in its invasive form [193]. Vaccination has substantially reduced notifications of invasive Hib disease in Australia, with a reduction of more than 99% across both the Aboriginal and Torres Strait Islander and non-Indigenous populations compared with the pre-immunisation era. As at the end of December 2023, 91% of Aboriginal and Torres Strait Islander children were vaccinated against Hib at one year of age [194].

For 2016-2019, 22 (30%) of the 73 cases of invasive Hib disease notified in all jurisdictions were identified as Aboriginal and/or Torres Strait Islander. Of the 22 notifications, 14 were among children aged 0-4 years [195].

Skin health

Common skin infections affecting Aboriginal and Torres Strait Islander children in remote northern Australia are scabies and impetigo [196]. Scabies is a skin disease caused by the mite *Sarcoptes scabiei* that produces skin inflammation and itching [197]. Skin breaks, including those from scratching due to scabies, can result in impetigo[104], a bacterial infection of the skin [196, 197, 199]. Untreated impetigo can lead to complications including sepsis, ARF and/or kidney disease [196].

100 A serogroup is a group of bacteria containing a common antigen.
101 SA provides free vaccination for eligible children and young people.
102 Indigenous status was not reported in 11 (1.7%) of the cases [188].
103 Rates were not available for the 0-14 years age-group.
104 Impetigo is also referred to as skin sores, or the broader term, pyoderma, and these terms are commonly used interchangeably [198].

Risk factors for skin infections include perinatal risk factors (such as male sex and LBW) [200], low family income, overcrowding, quality of water supply and housing, access to affordable healthy food, poor hygiene and non-adherence to antibiotic treatments [201, 202]. Resource-poor environments [203, 204] and the 'normalisation' of infections in communities [201, 205, 206] are also associated with increased skin disease burden.

Aboriginal and Torres Strait Islander children living in the high-rainfall, humid areas of northern Australia are vulnerable to a variety of other fungal and bacterial infections [207].

Prevalence

Scabies is endemic in some remote central and northern Aboriginal and Torres Strait Islander communities, affecting both adults and children [208, 209]. Most of the available prevalence data are for children, with research indicating that the most frequent age of the first infection for both impetigo and scabies is at three to four months of age [210] and that children presenting with one of these conditions are more likely to also have the other condition [211, 212].

A systematic review (published in 2019) of the childhood population prevalence of impetigo found that the median prevalence[105] of impetigo among remote-living Aboriginal and Torres Strait Islander children in northern Australia was 45% [213, 214]. Up to about one-third of remote-living Aboriginal children were estimated to have scabies [204, 213].

An impetigo control trial conducted in 2019-2022 in the Kimberley region of WA found that the prevalence of impetigo among Aboriginal and Torres Strait Islander children aged 5-9 years was 38% [215-217]. The scabies prevalence was lower than expected at <10% [215].

Most evidence for skin health is described in a remote setting. An urban-based pilot study conducted in 2022 collected data from 80 metropolitan WA Aboriginal and Torres Strait Islander participants with a median age of eight years [218]. The study found the prevalence for bacterial skin infections was 5.1% and scabies 1.3% [218]. A one-year study of Aboriginal children and young people attending a GP at an urban Aboriginal community controlled health organisation in WA found that 27% of face-to-face consultations included a dermatological diagnosis [219]. The cumulative incidence[106] of bacterial skin infections was 13%.

The 2022-23 NATSIHS provided some data for diseases of the skin and subcutaneous tissue[107] [19]. The proportion of Aboriginal and Torres Strait Islander people reporting a disease of the skin and subcutaneous tissue was 4.0% (males: 4.0% and females: 3.9%). The prevalence reported ranged from 2.4% in the 55 years and over age-group to 5.6% in the 25-34 years age-group. Prevalence was higher in non-remote areas (4.5%) than remote areas (1.1%).

Hospitalisation

There were 13,273 hospital separations with a principal diagnosis of 'diseases of the skin and subcutaneous tissue'[108] among Aboriginal and Torres Strait Islander people in 2022-23, representing 3.7% of all Aboriginal and Torres Strait Islander hospital separations (excluding dialysis) (Derived from [53]). The age-standardised hospitalisation rate was 16 per 1,000 [53].

In 2021-22, cellulitis (a bacterial infection that infects deeper layers of the skin than impetigo) was the leading acute cause of hospitalisation for Aboriginal and Torres Strait Islander people [46]. The age-standardised hospitalisation rate was 6.4 per 1,000. The highest age-standardised rates were in the NT (11 per 1,000) and the lowest in Tas (1.6 per 1,000) with the remaining jurisdictions ranging between 3.3 per 1,000 and 8.5 per 1,000.

105 Median prevalence reported from ten available community studies over two decades [213].
106 Cumulative incidence defined as the number of patients with a new episode of bacterial skin infection over the one-year period as a proportion of the total number of patients [219].
107 Includes dermatitis and eczema, psoriasis, infections, disorders of skin appendages, other diseases of the skin and subcutaneous tissue, etc.
108 Includes hospitalisations for diagnoses including but not limited to abscess, cellulitis, scabies, impetigo, dermatitis and eczema, psoriasis and sunburn.

Burden of disease

In 2018, skin disorders[109] accounted for 1.4% of total burden from all diseases, 0.3% of fatal burden (premature death) and 2.4% of non-fatal burden (living with illness or disability) among Aboriginal and Torres Strait Islander people [65]. Of total skin disorder burden, 9% was fatal and 91% was non-fatal. The majority of skin disorder burden was caused by dermatitis and eczema (34%), acne (25%) and psoriasis (17%). Among children aged less than 5 years, scabies caused 27% of total skin disorder burden.

Factors contributing to Aboriginal and Torres Strait Islander health

Selected health risk and protective factors

To support the health and wellbeing of Aboriginal and Torres Strait Islander people, reducing social and economic disadvantage and social determinants of poor health is essential. It is also important to address modifiable and non-modifiable risk and protective factors for health, which can influence the burden of disease and subsequent health outcomes [220]. Generally, risk factors are the behaviours, characteristics or exposures that may increase the likelihood of developing a particular condition or interfere with the treatment of an existing health condition [165]. Conversely, protective factors are health determinants that can influence health risks and/or outcomes in positive ways, such as a healthy diet, maintaining a healthy body weight and regular physical activity, which can assist in managing health conditions.

The selected health risk and protective factors summarised in the following sections are generally related to individual behaviours. However, factors contributing to the health status of Aboriginal and Torres Strait Islander people should be seen within the broader context of the social and cultural determinants of health [10, 165, 220]. The WHO defines the social determinants of health as the conditions in which people are born, grow, live, work and age [221]. The cultural determinants of health have been described as originating from, and promoting perspectives that are strengths based [220], and acknowledge that stronger connections to Country and culture build stronger individual and collective identities [27]. These stronger connections also help build resilience and self-esteem, and improve outcomes in education, community safety, economic stability and other health determinants [220].

For Aboriginal and Torres Strait Islander people, the social determinants of settler colonialism, education level, employment status and income, housing, and involvement with child protection and justice systems [165], alongside cultural determinants of family and community, Country and place, cultural identity and self-determination, can contribute as risk and/or protective factors for health and wellbeing [13]. The social, cultural and other determinants of health, some of which are discussed in the Cultural and social concepts section of this *Overview*, are further shaped by a wider set of forces and systems, including policies, political systems and social norms [221].

Nutrition and breastfeeding

The diets of Aboriginal and Torres Strait Islander people have generally changed since the time of colonisation, from traditional diets that were high in protein, fibre, polyunsaturated fat and complex carbohydrates to a more highly refined carbohydrate diet, with added sugars, saturated fat, sodium and low levels of fibre [222]. Traditional foods remain an important part of the diet for many people, and are strongly linked to culture, identity and Country.

The nutritional status of Aboriginal and Torres Strait Islander people is influenced by many factors which can include culture (traditional foods), society (racism and accessibility), community (affordability and housing), relationships (food for the family) and individuals (ability to cook) [223]. Inadequate diet is an important factor contributing to overweight and obesity, malnutrition, CVD, type 2 diabetes and tooth decay [223, 224].

109 Chronic and acute skin conditions including skin infections but excluding skin neoplasms.

Fruit consumption

In the 2022-23 NATSIHS, in which participants self-reported their usual serves of fruit eaten per day, 35% of Aboriginal and Torres Strait Islander people aged 15 years and over met the recommended fruit intake guidelines (at least two serves per day) [19]. Females were more likely than males to have eaten an adequate amount of fruit (38% and 33% respectively). The guideline for daily fruit intake was met by 66% of children aged 2-14 years and 92% of children aged 2-4 years. The proportion of people aged 15 years and over who met the fruit guideline was highest for those aged 15-17 years (44%) and lowest for those aged 18-24 years (32%). A higher proportion of Aboriginal and Torres Strait Islander people aged 15 years and over living in remote areas usually met the guidelines for daily serves of fruit compared with non-remote areas (44% and 33% respectively).

Vegetable consumption

In the 2022-23 NATSIHS, in which participants self-reported their usual serves of vegetables eaten per day, 5.3% of Aboriginal and Torres Strait Islander people aged 15 years and over met the recommendations for vegetable intake [225]. A greater proportion of females than males reported meeting the vegetable guideline (8.0% and 2.4% respectively). The guideline for daily vegetable intake was met by 5.8% of children aged 2-14 years and 11% of 2-4 year olds. The proportion of people aged 15 years and over who met the vegetable guideline was highest for those aged 55 years and over (6.9%) and lowest for those aged 15-17 years (2.8%). Similar, although not equal, proportions of Aboriginal and Torres Strait Islander people aged 15 years and over living in non-remote and remote areas usually met the guideline for daily serves of vegetables (5.4% and 4.8% respectively).

Discretionary foods

In the 2022-23 NATSIHS, 28% of Aboriginal and Torres Strait Islander people aged 15 years and over reported that they usually consumed sugar sweetened drinks every day and 9.9% consumed diet drinks daily; 77% (81% of males and 73% of females) usually consumed sugar sweetened drinks or diet drinks at least once per week [225]. For children (aged 2-14 years), 18% usually consumed sugar sweetened drinks daily and 4.4% consumed diet drinks daily; 65% usually consumed sugar sweetened drinks or diet drinks at least once a week. The proportion of people who usually consumed sugar sweetened or diet drinks weekly was lowest for those aged 55 years and over (63%) and 45-54 years (72%), and highest for those aged 18-24 years (87%). The proportion of people aged 15 years and over who usually consumed sugar sweetened or diet drinks was higher for people living in remote areas (83%) than for non-remote areas (76%). Among children (aged 2-17 years), there was a higher proportion who reported that they usually consumed sugar sweetened or diet drinks at least once a week living in remote areas (83%) compared with non-remote areas (66%).

Food security

The 2022-23 NATSIHS measured food security as one or more members of a household having enough food, or money to buy food, needed for an active, healthy lifestyle at all times in the past year [19]. Of all households, 58% were food secure at all times in the previous 12 months. Food security was higher in non-remote areas (59%) compared with remote areas (49%).

Breastfeeding

Sustained breastfeeding was practised by Aboriginal and Torres Strait Islander women prior to colonisation [226-229]. Descriptions of traditional practices align with the WHO and United Nations International Children's Emergency Fund recommendations of exclusive breastfeeding for six months followed by complementary feeding with continued breastfeeding for up to two years or beyond [230]. The Australian Dietary Guidelines' recommendation is to 'encourage, support and promote breastfeeding' [224].

Breast milk is the natural and optimum food for babies and provides all the energy and nutrients that a baby needs for the first six months of life [224, 230]. Breastfeeding promotes sensory and cognitive development, contributes to the development of the baby's microbiome and protects the baby against OM, sudden infant death syndrome (SIDS), asthma, obesity, infectious diseases and some chronic diseases later in life [230, 231].

Exclusive breastfeeding aids a quicker recovery from illness and reduces infant deaths from common childhood illnesses such as pneumonia and diarrhoea. Where housing conditions are poor and do not support the sterilising of bottles, breastfeeding is additionally protective [27]. Breastfeeding contributes to the health of the mother by improving metabolic health, reducing the risk of ovarian and breast cancers and reducing maternal depression [230-232].

In the 2018-19 NATSIHS, it was reported that 87% of Aboriginal and Torres Strait Islander children aged 0-2 years had been breastfed [27]. The NATSIHS found that 13% of Aboriginal and Torres Strait Islander children aged 0-2 years had never been breastfed. Of those who had been breastfed, 30% of Aboriginal and Torres Strait Islander babies had been breastfed for 1 month to less than 6 months and 12% for 6 months to less than 12 months. It was reported that 7.0% of Aboriginal and Torres Strait Islander babies were breastfed for 12 months or more.

In 2018-19, the proportion of Aboriginal and Torres Strait Islander children aged 0-2 years who had been breastfed varied across jurisdictions: 97% in Qld, 87% in the NT, 85% in NSW, 84% in WA, 79% in SA, 77% in Tas, 71% in the ACT and 64% in Vic [27]. The proportion of Aboriginal and Torres Strait Islander children aged 0-2 years who had been breastfed increased with remoteness, from 84% in major cities, to 85% in inner regional areas, 87% in outer regional areas and 92% in both remote and very remote areas.

Recent jurisdictional data on breastfeeding initiation or at discharge as recorded by health professionals, are available from NSW and the NT only. In the 2022 NSW Perinatal Data Collection[110], 56% of liveborn babies born to Aboriginal or Torres Strait Islander mothers were fully breastfed at discharge; 16% were partially breastfed and 25% received infant formula only [233]. In NSW Local Health Districts, rates of full breastfeeding by residence varied from 44% in Western Sydney to 71% in Southern NSW. In the NT in 2020, 87% of full-term singleton babies born to Aboriginal mothers were exclusively breastfed at discharge, 9.4% partially breastfed, 1.2% initiated breastfeeding but used formula at discharge and 2.2% were never breastfed [234]. In a study conducted in three maternity services in Vic from March 2017 to November 2020, the breastfeeding practices of 343 women with an Aboriginal or Torres Strait Islander baby were explored [235]. The women were offered a culturally specific caseload midwifery model, which 87% accepted. Of the 202 women who responded to questions about breastfeeding initiation and maintenance in the post-natal survey, 96% had initiated breastfeeding, 71% were giving their baby some breastmilk at three months, and 48% were giving their baby only breastmilk at three months.

Two systematic reviews published in 2022 found from the studies analysed that:

- The prevalence of the initiation of breastfeeding among Aboriginal and Torres Strait Islander women was 78% (range of 50%-100%). Exclusive rates, up to six months were between 5% and 33%, and rates of non-exclusive breastfeeding were between 12% and >95%. Maintaining breastfeeding ranged from one week to 36 months [236].
- The protective factors that encouraged breastfeeding and its continued practice included living in a remote setting, attending an Aboriginal specific health care service, attending a regional service, achieving a higher level of education, being an older mother, living in a large household, having a partner and experiencing stressful life events [237].

Burden of disease

'All dietary factors' (excluding breastfeeding) was the fifth leading risk factor contributing to the total burden of disease among Aboriginal and Torres Strait Islander people in 2018 (responsible for 6.2%) [65]. Dietary factors contributed to 2.1% of non-fatal burden and 11% of fatal burden.

110 The NSW Perinatal Data Collection covers all births including public and private hospitals and home births [233].

Physical activity

Physical activity is important for maintaining good overall health and wellbeing [238]. It is considered a protective factor against disease and, by contrast, physical inactivity is considered a risk factor for ill-health and reduced life expectancy [110]. Regular physical activity reduces the risk of many health problems, such as CVD, type 2 diabetes, anxiety, depression and some cancers [238].

Australia's Physical Activity and Exercise Guidelines for adults recommend physical activity on most, preferably all, days of the week, including moderate or vigorous intensity activities and strength training at least two days per week [238]. However, the health benefits of being physically active are cumulative so doing some physical activity is better than doing no physical activity.

In the 2022-23 NATSIHS, 17% of Aboriginal and Torres Strait Islander people (Aboriginal people: 17% and Torres Strait Islander people: 18%) aged 15 years and over, living in non-remote areas met the 2014 Physical Activity Guidelines[111] target of combining some or all of the following physical activities in the week prior to the survey: walking for exercise, recreation or sport, walking to get to places, moderate and vigorous physical activity (including moderate and vigorous physical activity undertaken in the workplace) and/or strength and toning activities [19]. Males were 1.6 times more likely to have met the guidelines than females (21% and 13% respectively). The proportion of people who met the guidelines was highest among those in the 15-24 years age-group (19%), followed by the 25-44 years age-group (18%). By jurisdiction (excluding the ACT), the proportion of people who met the guidelines was highest in the NT (23%[112]), followed by Tas (20%) and NSW (19%). In non-remote areas, the proportion of people who met the guidelines was highest in major cities (20%), followed by outer regional areas (16%) and inner regional areas (12%).

In the 2022-23 NATSIHS, 84% of Aboriginal and Torres Strait Islander people (Aboriginal people: 84% and Torres Strait Islander people: 85%[113]) aged 15 years and over, living in non-remote areas did not meet the 2014 Physical Activity Guidelines [19]. The proportion of people who did not meet the guidelines was higher for females (87%) than males (79%). By age-group, the proportion of people who did not meet the guidelines was highest among those aged 45 years and over (88%). By jurisdiction (excluding the ACT), the proportion of people who did not meet the guidelines was highest in Vic (87%), followed by Qld (86%) and SA (85%). In non-remote areas, the proportion of people who did not meet the guidelines was highest in inner regional areas (88%), followed by outer regional areas (84%) and major cities (80%).

In the week prior to the 2022-23 NATSIHS, 19% of Aboriginal and Torres Strait Islander people (Aboriginal people: 19% and Torres Strait Islander people: 11%) aged 15 years and over, living in non-remote areas had not participated in any physical activity [19]. Proportions were higher among females (20%) than males (18%). By jurisdiction (excluding the ACT), proportions for those who had not participated in any physical activity in the week prior to the survey were highest among those in the NT (21%[114]), followed by NSW and Vic (both 20%). Proportions were lowest in Qld and Tas (both 18%). In non-remote areas, the proportion of people who had not participated in any physical activity in the week prior to the survey was highest in outer regional areas (22%), followed by inner regional areas (21%) and major cities (16%).

Burden of disease

In 2018, physical inactivity was the 11th leading risk factor contributing to the burden of disease among Aboriginal and Torres Strait Islander people, responsible for 2.4% of the total burden of disease [65]. It contributed to 1.3% of non-fatal burden and 3.7% of fatal burden. For specific conditions, physical inactivity contributed to the total burden of the following disease groups: endocrine disorders (21%), CVD (14%), neurological conditions (3.9%) and cancer (1.7%).

111 The 2014 Physical Activity Guidelines differ by age-group and are based on Australia's Physical Activity and Exercise Guidelines.
112 This proportion has a high margin of error and should be used with caution.
113 This proportion has a high margin of error and should be used with caution.
114 This proportion has a high margin of error and should be used with caution.

Bodyweight

Body mass index (BMI) and waist circumference (WC) are recognised standards for classifying weight in adults. Being overweight (BMI of 25-29) or obese (BMI of 30 or more) [239] can increase the risk of CVD, stroke, type 2 diabetes, some cancers, kidney disease, sleep issues, pregnancy and labour difficulties, sexual health issues, and some musculoskeletal conditions [240]. Abdominal obesity, a risk factor for the development of metabolic syndrome[115], can be measured by WC alone (greater than 94 cm for males and greater than 80 cm for females), or waist-hip ratio (WHR) (greater than or equal to 0.90 for males and 0.85 for females) [242]. Being underweight (BMI of less than 18.5) [79] can also have adverse health consequences, including lower immunity (leading to increased susceptibility to some infectious diseases) and osteoporosis (bones becoming weak and brittle) [224].

Having access to a nutritious diet and opportunities for physical activity can support a healthy weight, however a person's weight is also influenced by genetics, health inequalities (caused by factors such as remoteness, socioeconomic disadvantage and ethnicity), environmental factors (for example, access to fast-food outlets and the quality of neighbourhood environments) and broader societal factors, including the influence of advertising and retail environments [243]. For Aboriginal and Torres Strait Islander people, food insecurity, urbanisation, inadequate housing, lack of access to health services, the loss of traditional lands and the transition from traditional to Western diets (as a result of settler-colonialism) also play a role in influencing body weight [244].

Evidence demonstrates that healthy body composition (as determined by BMI and waist/height ratio[116]) among Aboriginal and Torres Strait Islander youth aged 16-24 years is influenced by various social factors [246]. Those experiencing greater social inequalities, such as living in a crowded home and receiving government support are less likely to have a healthy body composition. Conversely, young people with tertiary educated caregivers, and those in serious relationships are more likely to have a healthy body composition.

Obesity (as measured by BMI) has been shown to be positively associated with an adverse cardio-metabolic profile [247] among Aboriginal and Torres Strait Islander people, and increased WC is a risk factor for type 2 diabetes [248] and CVD [249]. However, optimal BMI and WC cut-offs are still uncertain for Aboriginal and Torres Strait Islander people (due to differences in body shape and other physiological factors) when calculating type 2 diabetes and cardiovascular risk [250-252]. It has been suggested that a BMI of 22 might be more appropriate than 25 as a measure of acceptable BMI for Aboriginal people [252]. There is also evidence that measuring the WHR in Aboriginal people is more accurate and easier to measure than BMI. An equation has been developed for calculating fat-free mass in Aboriginal and Torres Strait Islander adults using the easily acquired variables of resistance[117], height, weight, age and sex for use in the clinical assessment and management of obesity [253].

Results from the 2022-23 NATSIHS indicated that 68% of Aboriginal and Torres Strait Islander people aged 15 years and over were either overweight or obese (Aboriginal people: 67% and Torres Strait Islander people: 76%) [19]. For participants aged 15 years and over, 26% were overweight and 41% were obese. A further 29% were in the normal weight range and 3.9% were underweight. The proportion of people who reported to be obese was higher for females (45%) than for males (38%). The proportion of males and females who reported to be overweight was the same (26%). A higher proportion of males than females reported to be a normal weight (32% and 26% respectively), and underweight (4.5% and 3.5% respectively).

115 Metabolic syndrome (also adverse cardio-metabolic profile) is a cluster of risk factors including insulin resistance, impaired glucose tolerance, abdominal obesity, lipid abnormalities and hypertension [241].

116 WC in meters divided by height in meters [245].

117 When an electrical current is passed through the body, fatty tissue offers more resistance than lean tissue. The resistance to the flow of electricity is used to calculate the proportion of body fat in the individual.

Reported proportions for overweight and obesity were highest among Aboriginal and Torres Strait Islander people in the 45-54 years age-group (84%) and those aged 55 years and over (82%), and lowest among the 15-17 years age-group (30%). Reported proportions for normal weight were highest among those in the 15-17 years age-group (63%[118]), followed by the 18-24 years age-group (43%) and lowest in the 45-54 years age-group (14%). Reported proportions for underweight were highest among those in the 15-17 years age-group (7.2%) and 18-24 years age-group (6.9%) and lowest among those in the 55 years and over age-group (2.2%). (Table 30) [19].

Table 30. Body Mass Index of Aboriginal and Torres Strait Islander people, by age-group 2022-23, proportion (%)

	Age-group (years)						
	15-17	18-24	25-34	35-44	45-54	55+	Total
Underweight	7.2	6.9	3.5	2.3	2.7*	2.2	3.9
Normal Weight	63*	43	28	19	14	16	29
Overweight	19	18	24	28	34	33	26
Obese	12	31	45	50	49	49	41
Overweight/obese	30	48	69	79	84	82	68

Notes:

* This proportion has a high margin of error and should be used with caution.

Source: ABS, 2024 [19]

In 2022-23, for Aboriginal and Torres Strait Islander people (aged 15 years and over) living in NSW, Vic, Qld, SA, WA, Tas and the NT, proportions for reported overweight and obesity were highest in SA (77%), followed by Tas (76%) and Vic (74%), and lowest in the NT (57%) [19]. The NT had the highest reported proportions for normal weight (34%) and underweight (9.1%). By remoteness, reported proportions for overweight and obesity were highest among those living in outer regional areas (71%) and lowest among those living in very remote areas (56%), while reported proportions for underweight and normal weight were highest among those living in very remote areas (44%) and lowest among those living in outer regional areas (29%).

WC[119] is used to determine a person's risk of developing long term health conditions [19]. In the 2022-23 NATSIHS, based on WC, 74% of Aboriginal and Torres Strait Islander people (Aboriginal people: 73% and Torres Strait Islander people 84%) aged 18 years of age or older were at an increased or substantially increased risk of developing long-term health conditions. A higher proportion of females (82%) than males (65%) were at risk. For those aged 15 years and over, this risk was highest among those aged 55 years and over (88%) and lowest among those in the 18-24 years age-group (49%).

In the 2022-23 NATSIHS, based on BMI information reported for children aged 2-17 years, 30% of Aboriginal and Torres Strait Islander people were overweight or obese (overweight: 20%, obese: 9.8%); 61% were normal weight and 9.8% were underweight [19]. For males, the highest proportion of participants reported as overweight and obese was in the 5-11 years age-group (38%) and lowest in the 15-17 years age-group (14%[120]). For females, the highest proportion was reported in the 15-17 years age-group (47%[121]) and the lowest in the 5-11 years age-group (25%). For normal weight, the highest reported proportion for males was in the 15-17 years age-group (74%[122]) and for females in the 5-11 years age-group (67%). For the underweight category, the highest proportion for males was in the 12-17 years age-group (16%) and for females in the 2-4 years age-group (10%).

118 This proportion has a high margin of error and should be used with caution.
119 In the 2022–23 NATSIHS, 47% of respondents aged 18 years and over did not have their waist circumference measured. For these respondents, imputation was used to obtain waist circumference.
120 This proportion has a high margin of error and should be used with caution.
121 This proportion has a high margin of error and should be used with caution.
122 This proportion has a high margin of error and should be used with caution.

Burden of disease

In 2018, overweight (including obesity) was the third leading risk factor contributing to the burden of disease among Aboriginal and Torres Strait Islander people, responsible for 9.7% of the total burden of disease [65]. It contributed to 7.4% of non-fatal burden and 12% of fatal burden. Overweight (including obesity) contributed to the total burden of the following disease groups: endocrine disorders (59%), kidney disease (52%), CVD (33%), respiratory disease (14%), musculoskeletal conditions (9.1%), cancer (8.5%), neurological conditions (8.2%), gastrointestinal disorders (1.4%), and hearing and vision disorders (0.4%).

Immunisation

Immunisation is the process of becoming immune to a disease because of a vaccine [254]. Vaccines work by producing an immune response in the body without causing illness. In recent decades, immunisation has been very successful in contributing to improvements in Aboriginal and Torres Strait Islander health and child survival [190].

The vaccines recommended for Aboriginal and Torres Strait Islander people at different stages of life are set out by the NIP Schedule [183]. Vaccines on the NIP Schedule are funded by the Australian Government and are free to Aboriginal and Torres Strait Islander people.

Vaccines given to people of all ages in Australia from birth are recorded on the Australian Immunisation Register (AIR) [255]. AIR data are used to calculate vaccination coverage for children and, as the register grows, for adolescents and adults.

Childhood vaccination

Australia's national childhood immunisation target is 95% immunisation coverage for children aged 1, 2 and 5 years [256]. Vaccinations set out in the NIP Schedule for Aboriginal and Torres Strait Islander children include HBV, diphtheria, tetanus, pertussis (whooping cough), polio, Hib, rotavirus[123], pneumococcal disease, meningococcal B[124], meningococcal ACWY, measles, mumps and rubella (MMR), varicella (chickenpox) and hepatitis A[125] [183].

As of 30 June 2024, the proportion of Aboriginal and Torres Strait Islander children aged 5 years who were fully immunised exceeded the national target, but the proportion of children aged 1 and 2 years did not (Table 31) [194].

Table 31. Percentage (%) of Aboriginal and Torres Strait Islander children assessed as fully immunised, by age, as at 30 June 2024

Age (years)	1	2	5
Percentage assessed as fully immunised	90.3%	88.8%	95.2%

Notes:

1. Proportion expressed as percentages rounded to one decimal point.
2. Combination of September 2023, December 2023, March 2024 and June 2024 quarterly coverage data.

Source: Australian Government Department of Health, 2024 [194]

The percentage[126] of Aboriginal and Torres Strait Islander children who were fully immunised at 30 June 2024 varied by state [194]:

- from 85.1% in WA to 95.1% in Tas for those aged 1 year
- from 82.2% in WA to 92.6% in Tas for those aged 2 years
- from 92.8% in NT to 96.1% in NSW for those aged 5 years.

123 Not included in definition of 'fully immunised' for purposes of calculating childhood immunisation coverage [257].
124 Not included in definition of 'fully immunised' for purposes of calculating childhood immunisation coverage [257].
125 For children in Qld, WA, SA and the NT [183]; not included in definition of 'fully immunised' for purposes of calculating childhood immunisation coverage [257].
126 Proportion expressed as percentages rounded to one decimal point.

Adolescent vaccination

Vaccinations set out in the NIP Schedule and provided through school programs for Aboriginal and Torres Strait Islander adolescents include those for human papillomavirus (HPV), diphtheria, tetanus, pertussis and meningococcal ACWY [183].

In 2023, coverage for the adolescent booster dose of the diphtheria-tetanus-acellular pertussis vaccine by 15 years of age was 80% for Aboriginal and Torres Strait Islander adolescents [258]. Coverage for the meningococcal ACWY vaccine by 17 years of age was 62%. Coverage for at least one dose of HPV vaccine by 15 years of age was 75% for males and 81% for females.

Adult vaccination

Vaccinations set out in the NIP Schedule for Aboriginal and Torres Strait Islander adults include pneumococcal and shingles [183].

In 2023, zoster (shingles) vaccine coverage in Aboriginal and Torres Strait Islander adults aged 70 was 36% [258]. Pneumococcal vaccine coverage was 43%.

Seasonal vaccination

Seasonal influenza vaccination is recommended annually for Aboriginal and Torres Strait Islander people aged six months or older [183]. Influenza vaccination coverage for Aboriginal and Torres Strait Islander people aged six months or older during the 2024 influenza season was highest among those aged 65 years and older (59%) as at 31 August 2024 (Table 32) [259].

Table 32. Influenza vaccination coverage percentage (%) for Aboriginal and Torres Strait Islander people, by age, as at 31 August 2024

Age (years)	Australia (%)
6 months - <5	18
5 - <15	12
15 - <50	18
50 - <65	37
≥65	59

Notes:

1. Proportion expressed as percentages rounded to one decimal point.
2. Coverage calculated using doses given 1 March–31 Aug 2024 using AIR data as of 8 September 2024.

Source: National Centre for Immunisation Research and Surveillance, 2024 [259]

All Australians aged 18 years and over and some children with risk factors are recommended a primary course of COVID-19 vaccination [190]. Some Australian children and adults (such as those aged 65 years and over) are recommended regular booster doses. As at 8 November 2024, 17,200 Aboriginal and Torres Strait Islander people aged 18 years and over who are registered in the AIR had received a COVID-19 vaccination in the last 6 months, and 39,300 had received one in the last 12 months [260].

Tobacco and e-cigarette use

Tobacco use has a number of health impacts, including increasing the risk of chronic disease, such as CVD, many forms of cancer, and lung diseases, as well as a variety of other health conditions [27]. Tobacco use is also a risk factor for complications during pregnancy and is associated with preterm birth, LBW and perinatal death. Environmental tobacco smoke (second-hand smoke or passive smoking) is of concern to health, with children especially susceptible to resultant problems that include exacerbation of middle ear infections, asthma and increased risk of SIDS. Third-hand smoke (the residue left from second-hand smoke on surfaces and in indoor dust) is also of concern to health, particularly for children due to spending more time near the floor and putting contaminated objects in their mouths [261]. Third-hand smoke can interact with other chemicals in the environment that can form new carcinogens and toxic substances that can stay on surfaces for months or years.

Extent of tobacco use among Aboriginal and Torres Strait Islander people

Prevalence

In the 2022-23 NATSIHS, 29% of Aboriginal and Torres Strait Islander people aged 15 years and over reported that they smoked daily, a reduction from levels reported in the 2018-19 NATSIHS (37%) [19, 225]. The *National Preventive Health Strategy 2021-2030* set a target to reduce daily smoking rates among Aboriginal and Torres Strait Islander people aged 15 years and over to 27% or less by 2030 [262].

In 2022-23, the proportion of Aboriginal and Torres Strait Islander males aged 15 years and over who smoked daily (31%) was higher than the proportion of females (27%) [19]. A greater proportion of males than females reported smoking daily across all age-groups, with the exception of the 45-54 years age-group (42% for females compared with 32% for males). Daily smoking rates for males and females in non-remote areas were 27% and 24% respectively. While in remote areas, the proportion of males who smoked daily was 51% compared with 42% of females.

When comparing smoking prevalence between the 2022-23 NATSIHS and the 2018-19 NATSIHS, the highest reductions in daily smoking were found in younger age-groups [19, 225]. Daily smoking prevalence among the 18-24 years age-group decreased from 36% in 2018-19 to 20% in 2022-23, while the daily smoking prevalence among the 25-34 years age-group decreased from 44% to 33% in the same period. The age-group with the highest proportion of people who smoked daily in 2022-23 was 35-44 years (39%). A 2017 survey among Aboriginal and Torres Strait Islander students aged 12-17 years found that 10% had reported smoking tobacco in the past week, declining from 21% in 2005 [263]. It also found that 70% of the students had never smoked tobacco, a significant increase from 49% in 2005.

In 2022-23, by jurisdiction (excluding the ACT), daily smoking rates among people aged 18 years and over were highest in the NT (44%), followed by Qld (36%), Vic (33%), SA (32%), Tas (31%), WA (30%) and NSW (25%)[127] [19].

An analysis of the 2018-19 NATSIHS smoking data found that smoking prevalence varied greatly between regions. By Indigenous Region, the lowest daily smoking prevalence in 2018-19 was in the ACT (25%), while the highest was in Nhulunbuy, NT (55%) [264]. Smoking prevalence is influenced by the broader social determinants of health in regions. Seven of the eight Indigenous Regions with a daily smoking prevalence of over 50% in 2018-19, were the same regions in the lowest quintiles for education and employment outcomes in the CTG targets.

According to the 2022-23 NATSIHS, there was a higher proportion of Aboriginal and Torres Strait Islander people aged 15 years and over living in remote areas who reported smoking daily (46%) compared with those living in non-remote areas (26%) [19]. Daily smoking rates for people aged 18 years and over, categorised by the remoteness of where they live within specific jurisdictions, were available for three states: Qld (remote areas: 54% and non-remote areas: 32%); SA (remote areas: 40% and non-remote areas: 33%[128]); and WA (remote areas: 47% and non-remote areas: 20%).

In 2022, 40% of Aboriginal and Torres Strait Islander mothers reported smoking during pregnancy (down from 48% in 2012) [29]. The smoking rate was lower after 20 weeks of pregnancy (33%) compared with the first 20 weeks (39%).

The 2018-19 NATSIHS found 57% of Aboriginal and Torres Strait Islander children aged 0-14 years lived in households with a person who smoked daily, of which 15% reported someone smoked at home indoors [265]. Overall, 8.6% of Aboriginal and Torres Strait Islander children aged 0-14 years reported living in households where someone smoked indoors.

The Tackling Indigenous Smoking (TIS) program is an Australia-wide initiative to reduce smoking rates among Aboriginal and Torres Strait Islander people through a population health promotion approach.

127 Proportions for SA and Tas have a high margin of error and should be used with caution.
128 Proportions for SA have a high margin of error and should be used with caution [19].

A 2021 study, including 8,549 Aboriginal and Torres Strait Islander participants (aged 16 years and over), sought to examine differences in smoking-related attitudes and behaviours among people residing in TIS-funded areas of Australia compared with those in non-TIS funded areas[129] [266]. The study found that there was a 15% lower prevalence of smoking inside the home in TIS-funded areas compared with non-TIS areas. Among people who currently smoked, there was a significantly lower prevalence in TIS-funded areas compared with non-TIS funded areas of smoking 21 or more cigarettes per day and smoking a cigarette within five minutes of waking (both of which are indicators of nicotine dependence).

Mortality

In 2018, 835 deaths (23% of all deaths among Aboriginal and Torres Strait Islander people) were attributable to tobacco use [65].

A 2021 prospective study conducted among 1,388 Aboriginal and Torres Strait Islander people in NSW determined that smoking was the cause of 50% of deaths for people aged 45 years and over, and 37% of deaths among all ages [267]. However, it was found that quitting smoking at any age was beneficial compared with continuing to smoke. The study is the first to give direct estimates of deaths attributable to smoking for Aboriginal and Torres Strait Islander people by analysing linked questionnaire and mortality data from 2006-2009 to mid-2019. The Aboriginal and Torres Strait Islander participants were part of a larger longitudinal study tracking the health of 267,153 people from the NSW general population.

Burden of disease

In 2018, tobacco use was the overall leading risk factor contributing to the burden of disease among Aboriginal and Torres Strait Islander people, responsible for 12% of the total burden of disease (11.5% directly from tobacco use and 0.4% from second-hand smoke) [65]. It was the leading risk factor contributing to the burden of disease among people aged 45 years and over. In the same year, 5.5% of non-fatal burden and 19% of fatal burden among Aboriginal and Torres Strait Islander people was attributable to tobacco use. Tobacco use was the leading risk factor contributing to the fatal burden of disease for both males and females [95]. The use of tobacco contributed to the total burden of the following disease groups: respiratory diseases (47%), cancer and other neoplasms (37%), CVD (34%), infectious diseases (13%), endocrine disorders (10%), musculoskeletal conditions (4.5%), neurological conditions (2.5%), gastrointestinal disorders (1.0%), and hearing and vision disorders (0.4%) [65].

E-cigarette use (vaping)

E-cigarette use (also known as vaping) is an emerging global issue in tobacco control [268]. E-cigarettes have been associated with a range of health impacts including injuries (poisoning, burns and seizures), lung injury, nicotine addiction, dual use with tobacco smoking and increased uptake of tobacco smoking among non-smokers [268]. There are also impacts on the environment such as indoor air pollution and waste.

In the 2022-23 NATSIHS, 24% of people aged 15 years and over self-reported having ever used e-cigarettes and 8.3% reported that they were currently using e-cigarettes [19]. Three-quarters (76%) of respondents had never used an e-cigarette. In the 2017 Australian Secondary Students' Alcohol and Drug (ASSAD) Survey conducted among students aged 12-17 years, of the 1,097 Aboriginal and Torres Strait Islander respondents, 22% self-reported having ever used an e-cigarette [269]. Among those who had ever used e-cigarettes, 72% had also tried smoking tobacco, while 28% had never smoked.

Similar proportions of males (9.5%) and females (7.5%) aged 15 years and over reported currently using an e-cigarette in the 2022-23 NATSIHS [19]. Likewise, 26% of males reported ever using an e-cigarette compared with 22% of females. In the 2017 ASSAD Survey, a higher proportion of males aged 12-17 years self-reported having ever used an e-cigarette (26%) compared with females (18%) [269].

The highest proportion of current e-cigarette users in the 2022-23 NATSIHS were younger Aboriginal and Torres Strait Islander adults [19]. Among the 18-24 years age-group, 16% were current e-cigarette users, followed by the 25-34 years age-group (12%), and the 35-44 years age-group (7.9%). Similarly, ever use of e-cigarettes was also highest among the younger age-groups (18-24 years age-group: 40%, 25-34 years age-group: 35%, 35-44 years age-group: 24%).

129 From 2023, TIS teams' service areas were expanded to achieve national program coverage.

The rates of having ever used an e-cigarette among people aged 18 years and over varied among jurisdictions (excluding the ACT) in the 2022-23 NATSIHS [19]. The highest proportions were found in SA and Vic (both 34%), followed by NSW and WA (both 25%), Qld (23%), Tas (21%), and the NT (8.5%).

In the 2022-23 NATSIHS, the proportion of people aged 18 years and over who had ever used an e-cigarette was higher in non-remote areas (27%) compared with remote areas (11%) [19]. Similarly, a greater proportion of people in non-remote areas reported currently using an e-cigarette (9.7%) compared with those in remote areas (2.6%).

Alcohol use

Drinking too much alcohol, both on single drinking occasions (binge drinking) and over a person's lifetime can lead to harms including chronic diseases, injury and transport accidents, mental health disorders, intergenerational trauma and violence [270, 271]. This affects individuals, families and the wider community. Many factors influence why people may drink too much alcohol, for example, socioeconomic disadvantage, stress and negative early life experiences [272, 273]. With regard to Aboriginal and Torres Strait Islander people, as noted elsewhere in the *Overview*, it is important to understand the historical and social contexts of colonisation, the ongoing effects of dispossession of land and culture, economic exclusion and how these factors influence alcohol use [270, 274].

Extent of alcohol use among Aboriginal and Torres Strait Islander people

Aboriginal and Torres Strait Islander people are less likely to drink alcohol than non-Indigenous people, but those who do drink are more likely to at levels that cause harm [27, 271].

Assessing risks from use of alcohol

The 2020 National Health and Medical Research Council Australian guidelines to reduce health risks from drinking alcohol provide recommendations on reducing the risk of alcohol-related harm for adults, children and people under 18 years of age, and women who are pregnant or breastfeeding [275]:

- Guideline 1 recommends that to reduce the risk from alcohol-related disease or injury, men and women should drink no more than 10 standard drinks a week and no more than four standard drinks on any one day. Drinking less, lowers the risk of harm from alcohol.
- Guideline 2 recommends that to reduce the risk of alcohol-related harm and injury, children and people aged under 18 years should not drink alcohol.
- Guideline 3 recommends that to prevent alcohol-related harm to an unborn child, women who are planning a pregnancy, or who are pregnant, should not drink alcohol. For women who are breastfeeding, not drinking alcohol is the safest option for their baby.

Abstinence or no consumption of alcohol in the last 12 months

The 2022-23 NATSIHS found that one in four (25%) Aboriginal and Torres Strait Islander adults reported they had either never consumed alcohol (7.3%) or had not done so for more than 12 months (18%) (Derived from [19]). The proportion was higher for females (29%) than males (21%). The proportion was lowest among people aged 25-34 years (18%) and 35-44 years (20%), and highest in people aged 55 years and over (37%). The proportion of respondents aged 18 years and over who had consumed alcohol 12 or more months ago was highest in the NT (27%), followed by WA (23%), Tas (19%), Qld (18%), SA (17%), NSW (16%), and Vic (12%). A greater proportion of people aged 15 years and over living in remote areas (44%) than non-remote areas (27%) reported that they had never consumed alcohol or had not done so for more than 12 months.

Did not exceed guideline

In the 2022-23 NATSIHS, 62% of people aged 18 years and over reported that they did not exceed the 2020 Australian adult alcohol guideline (see box above, Guideline 1) [19]. A greater proportion of females (73%) did not exceed the guideline than males (51%). The age-group with the highest proportion of people who did not exceed the guideline was 55 years and over (70%), followed by those aged 45-54 years (63%). The proportion of respondents who did not exceed the guideline was similar in both remote and non-remote areas (63% and 65% respectively).

Exceeded guideline

In the 2022-23 NATSIHS, 36% of people aged 18 years and over reported exceeding the 2020 Australian adult alcohol guideline (see box above, Guideline 1) [19]. This included those who had consumed more than 10 standard drinks in the week prior to the survey (22%) and/or had consumed 5 or more standard drinks on a single day at least 12 times in the last 12 months (32%). The proportion of males (48%) who exceeded the guideline was higher than for females (25%). By jurisdiction (excluding the ACT), NSW had the highest proportion of respondents who had exceeded the guideline (40%), followed by WA (38%), Vic and Qld (both 34%), SA (31%), and Tas and the NT (both 30%). The proportion of respondents who exceeded the guideline was similar in both remote and non-remote areas (35% and 34% respectively).

Alcohol and pregnancy

In 2022, 88% of pregnant Aboriginal and Torres Strait Islander women self-reported not consuming alcohol during the first 20 weeks of pregnancy (excluding NSW) [29]. After 20 weeks of pregnancy, this increased to 93% of women.

Treatment

In 2022-23, 18% of people aged 10 years and over who accessed publicly funded AOD treatment services for their own substance use identified as being Aboriginal and/or Torres Strait Islander [276]. Alcohol was the main drug of concern for 37% of Aboriginal and Torres Strait Islander clients who sought treatment for their own AOD use. A study conducted in 2019 among 775 Aboriginal and Torres Strait Islander people in SA (aged 16 years and over) found that 2.2% were likely dependent on alcohol (self-reported two or more dependence symptoms via the Grog Survey App) [277].

Hospitalisation

In 2017-19, the crude rate of alcohol-related hospitalisations for Aboriginal and Torres Strait Islander people was 7.0 per 1,000 [68]. The rate was higher for males than females (8.1 per 1,000 and 5.8 per 1,000 respectively). The highest crude rate of hospitalisations related to alcohol use for Aboriginal and Torres Strait Islander people was for mental and behavioural disorders at 6.3 per 1,000 (males: 7.3 per 1,000 and females: 5.3 per 1,000). Acute intoxication was the leading mental and behavioural disorder, with a crude hospitalisation rate of 4.2 per 1,000.

Across age ranges, the highest age-specific alcohol-related hospitalisation rates among Aboriginal and Torres Strait Islander people in 2017-19 were for the 45-54 years age-group (22 per 1,000), followed by the 35-44 years age-group (17 per 1,000), 55-64 years age-group (15 per 1,000), 25-34 years age-group (7.3 per 1,000), 65 years and over age-group (4.6 per 1,000), 15-24 years age-group (3.0 per 1,000) and 0-14 years age-group (0.2 per 1,000) [68]. The rankings by age-group were the same among females and males, except males in the 55-64 years age-group who had a higher hospitalisation rate than males in the 35-44 years age-group (20 per 1,000 and 19 per 1,000 respectively).

By jurisdiction, crude rates of alcohol-related hospitalisations in 2017-19 for Aboriginal and Torres Strait Islander people were highest in the NT (16 per 1,000), followed by SA (9.1 per 1,000), WA (8.6 per 1,000), Qld (7.6 per 1,000), the ACT (4.8 per 1,000), NSW (4.0 per 1,000), Vic (3.7 per 1,000) and Tas (2.8 per 1,000) [68]. Males had higher crude rates of alcohol-related hospitalisation than females across all states and territories, except the NT (males: 15 per 1,000 and females: 17 per 1,000).

Hospitalisation rates related to alcohol use in 2017-19 varied by level of remoteness [68]. Aboriginal and Torres Strait Islander people living in remote areas (excluding remote Vic) had the highest crude rates of hospitalisation related to alcohol use (15 per 1,000), followed by those in very remote areas (11 per 1,000). People in inner regional areas (3.1 per 1,000) and major cities (5.3 per 1,000) had the lowest crude rates of hospitalisation related to alcohol use.

Mortality

In 2018, 350 deaths among Aboriginal and Torres Strait Islander people (9.7% of all deaths) were attributable to alcohol use [65]. For 2015-2019 in NSW, Qld, WA, SA and the NT, the crude rate for Aboriginal and Torres Strait Islander deaths related to alcohol use was 13 per 100,000 [68]. The alcohol-related death rate for Aboriginal and Torres Strait Islander males was 2.1 times higher compared with females (17 per 100,000 and 8.1 per 100,000 respectively). The main cause of alcohol-related deaths was from alcoholic liver disease with a crude rate of 8.0 per 100,000.

Burden of disease

In 2018, alcohol use was the second leading risk factor contributing to the total burden of disease among Aboriginal and Torres Strait Islander people, accounting for 11% of the burden [65]. For non-fatal burden of disease among Aboriginal and Torres Strait Islander people, 9.2% was attributable to alcohol use, the most of any risk factor.

Alcohol use disorders were the fourth leading group of diseases causing burden among Aboriginal and Torres Strait Islander people in 2018 (4.4% of total DALY) [65]. Alcohol was a key contributor to burden of disease among males in particular, with alcohol use disorders ranked as the third leading cause of total burden, accounting for 6.2% of total DALY. Alcohol use was the leading risk factor contributing to the burden of disease for males in both the 15-24 years and 25-44 years age-groups, accounting for 26% and 23% of total disease burden respectively. For females, alcohol use disorders ranked 10th among the causes of total burden (2.4% of total DALY). Alcohol use disorders were the leading cause of total burden among Aboriginal and Torres Strait Islander people aged 25-44 years (8.4% of total DALY) and the second leading cause among those aged 15-24 years (9.9% of total DALY).

Illicit drug use

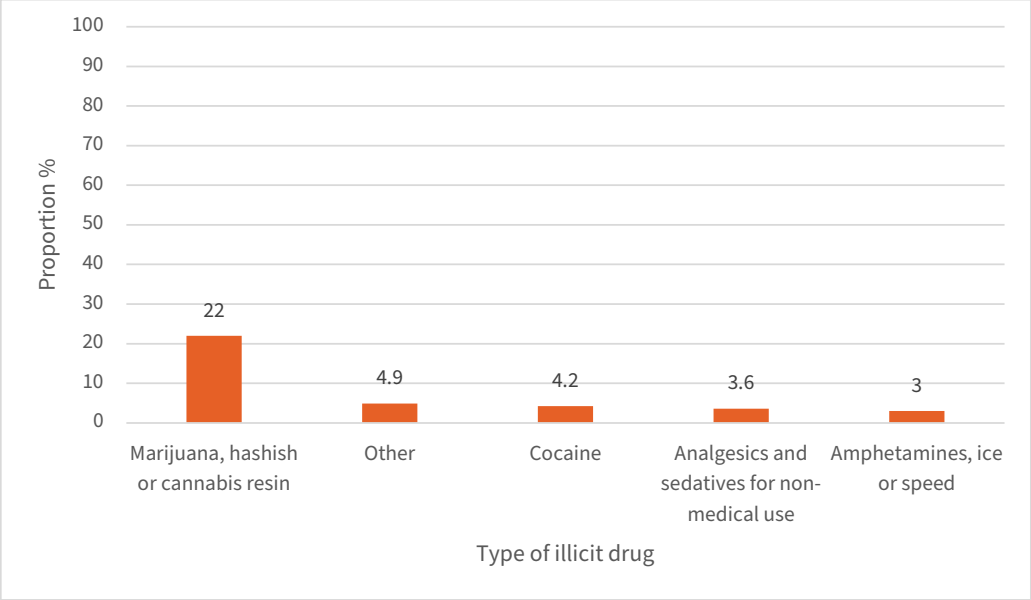
Illicit drug use describes the use of drugs that are illegal to possess (e.g., cannabis, heroin, cocaine and methamphetamine), and the non-medical use of prescribed drugs such as painkillers [271]. Illicit drug use is associated with an increased risk of mental illness, poisoning, self-harm, infection with blood borne viruses from unsafe injection practices, chronic disease and death [65, 169, 278].

Extent of illicit drug use among Aboriginal and Torres Strait Islander people

Surveys consistently show that most Aboriginal and Torres Strait Islander people report they do not use illicit drugs [19, 279]. The two most recent national surveys to collect this data, the 2022-23 NATSIHS and the 2022-2023 National Drug Strategy Household Survey (NDSHS), found that 72% of Aboriginal and Torres Strait Islander people aged 15 years and over (NATSIHS) and 72% aged 14 years and over (NDSHS) reported either they had never used illicit drugs or had not used illicit drugs in the last 12 months (Derived from [19, 279]).

The 2022-23 NATSIHS found that 27% of Aboriginal and Torres Strait Islander people aged 15 years and over reported using illicit drugs in the last 12 months [19]. Cannabis (marijuana, hashish or cannabis resin) was the most commonly used illicit drug, used by 22% of Aboriginal and Torres Strait Islander people aged 15 years and over in the previous 12 months. The next most commonly used illicit drugs were 'other drugs' (including heroin, ecstasy or other designer drugs, hallucinogens) (4.9%), cocaine (4.2%), analgesics and sedatives for non-medical use (3.6%) and amphetamines, ice or speed (3.0%) (Figure 1).

Figure 1. Proportion of Aboriginal and Torres Strait Islander people who reported illicit drug use in the last 12 months, 2022-23



Notes:

1. 'Other' includes heroin, ecstasy or other designer drugs, hallucinogens.
2. Analgesics and sedatives for non-medical use, includes painkillers, tranquilisers and sleeping pills.

Source: ABS, 2024 [19]

In 2022-23, a greater proportion of Aboriginal and Torres Strait Islander males reported having used an illicit drug in the previous 12 months compared with females (34% and 20% respectively) [19]. This was consistent across all drug types. Three times as many males as females had used amphetamines (4.7% compared with 1.5%). The proportion of respondents who had used illicit substances in the last 12 months was higher among younger age-groups: 15-29 years (35%), followed by 30-44 years (28%) and 45 years and over (18%). In 2022-23, by jurisdiction (excluding the ACT), the proportion of respondents aged 18 years and over who reported using substances for non-medical purposes in the last 12 months was highest in SA (32%[130]), followed by Qld (31%), Vic (28%), WA (26%), Tas (24%), the NT (23%), and NSW (22%). Use of illicit drugs in the previous 12 months was similar for people aged 15 years or over living in non-remote areas and remote areas in 2022-23 (27% and 24% respectively).

In 2022-23, 18% of clients who accessed treatment for their own AOD use from general AOD treatment services were Aboriginal and Torres Strait Islander people aged 10 years and over [276]. Of the Aboriginal and Torres Strait Islander clients who accessed treatment, there was a greater proportion of males (59%) than females (38%)[131]. After alcohol, the most common principal drugs of concern that Aboriginal and Torres Strait Islander people sought treatment for were amphetamines (25% of clients), cannabis (23% of clients) and heroin (5.2% of clients). The greatest proportion of clients who accessed treatment among Aboriginal and Torres Strait Islander people were in the 30-39 years age-group (30%), followed by the 20-29 years age-group (28%), 40-49 years age-group (19%), 10-19 years age-group (12%), 50-59 years age-group (8.7%), and 60 years and over age-group (2.3%).

By jurisdiction, the highest proportions of Aboriginal and Torres Strait Islander clients who accessed treatment for their own AOD use in 2022-23 were in the NT (72% of clients), followed by WA (22%), NSW (20%), Qld (19%), SA (17%), Tas and the ACT (both 13%) and Vic (9.8%) [276].

Use of amphetamines is associated with risky behaviour such as injecting drug use [280]. A 2024 report on the Needle Syringe Program (NSP) found that stimulants and hallucinogens (mainly methamphetamine) were the most commonly injected drugs reported by attendees of NSPs [281]. Of the people attending NSPs in 2024, 23% identified as Aboriginal or Torres Strait Islander.

130 The proportion for SA has a high margin of error and should be used with caution.
131 Indigenous status not stated or another term (2.9%).

Hospitalisation

In 2018-19, the most common drug-related conditions resulting in hospitalisation for Aboriginal and Torres Strait Islander people were 'poisoning' and 'mental and behavioural disorders' [110]. The crude hospitalisation rate for Aboriginal and Torres Strait Islander people from poisoning due to drug use was 3.0 per 1,000 population and for mental and behavioural disorders due to drug use 4.7 per 1,000. In 2017-19, the leading drugs of concern that Aboriginal and Torres Strait Islander people were hospitalised for (based on principal diagnosis) were methamphetamines (1.9 per 1,000), followed by cannabinoids (1.1 per 1,000), and antidepressants and antipsychotics (0.9 per 1,000) [68].

By jurisdiction, the highest crude rates of hospitalisation related to drug use (based on principal diagnosis) among Aboriginal and Torres Strait Islander people in 2017-19 were in SA (11 per 1,000), followed by the ACT (9.8 per 1,000), WA (8.2 per 1,000), Vic (8.0 per 1,000), NSW (7.8 per 1,000), Qld (6.8 per 1,000), the NT (4.9 per 1,000) and Tas (3.2 per 1,000) [68].

For 2017-19, crude hospitalisation rates related to drug use were higher for Aboriginal and Torres Strait Islander people in non-remote areas (7.7 per 1,000) compared with remote areas (4.3 per 1,000) [68].

Mortality

In 2018, 224 deaths (6.2% of all deaths) among Aboriginal and Torres Strait Islander people were attributed to illicit drug use [65]. In the period 2018-2022, there were 599 unintentional drug-induced deaths among Aboriginal and Torres Strait Islander people [282]. In the same five-year period, aggregated data for Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT showed that the leading drug types involved in unintentional drug-induced deaths were opioids (involved in 46% of deaths), followed by stimulants (involved in 45% of deaths) and benzodiazepines (involved in 24% of deaths).

In 2014-2018, age-standardised rates of drug-induced deaths were higher for Aboriginal and Torres Strait Islander males (17 per 100,000) than for females (11 per 100,000) [110]. For the same period, SA recorded the highest age-standardised rate of drug-induced deaths for Aboriginal and Torres Strait Islander people (20 per 100,000), followed by NSW (18 per 100,000) and WA (17 per 100,000).

Burden of disease

Illicit drug use was the fourth leading risk factor contributing to the burden of disease among Aboriginal and Torres Strait Islander people in 2018 [65]. It contributed to 6.9% of the total burden and was responsible for 5.1% of non-fatal burden and 8.9% of fatal burden. Among the different illicit drug types, the greatest contributors to the burden were opioids (2.2%), amphetamines (1.9%), and cannabis (1.6%). Illicit drug use contributed to the total burden of disease for multiple disease groups, particularly injuries (28%), gastrointestinal (16%), and mental disorders (12%).

Between the sexes, illicit drug use consistently contributed more to the burden of disease among males than females [65]. This was seen across age-groups, with illicit drug use contributing to 14% of disease burden among males aged 15-24 years compared with 11% among females in the same age-group; 16% and 9.5% of burden respectively among males and females aged 25-44 years; and 5.4% of burden for males aged 45-64 years (illicit drug use did not appear in the top 10 causes of disease burden for females in this age-group).

Illicit drug use was the second leading risk factor causing total burden among Aboriginal and Torres Strait Islander people aged 15-24 years and 25-44 years (13% of total DALY among both age-groups) [65].

Volatile substance use

Volatile substance use (VSU) involves sniffing substances that give off fumes at room temperature such as petrol, paint, glue or deodorants [283]. They are also called 'inhalants' because of the way people use them by inhaling the fumes through the nose or mouth. Absorbing these substances into the lungs affects different parts of the body such as the kidneys, the brain and the heart [283, 284].

Most volatile substances such as solvents and aerosol sprays, are depressant drugs that slow down the central nervous system [284]. Short-term effects include slurred speech, lack of coordination, dizziness and euphoria [283, 285]. Sniffing volatile substances, particularly butane, propane and aerosols, can cause sudden death [286]. This is known as sudden sniffing death, a syndrome where a lack of oxygen and an unexpected event that stimulates an adrenalin release causes heart failure [285, 286]. Sudden sniffing death can happen to a first-time user who is otherwise healthy. VSU can also cause a person to lose consciousness, increasing the risk of death by suffocation.

Unlike other forms of drug use, the products used in VSU are readily available in common household and commercial products, posing a particular risk for young people [285]. Typically, use of volatile substances is initiated at a young age (around 12 years, and sometimes younger), which has implications for the developing brain and long-term health [287, 288]. Sniffing volatile substances repeatedly is also associated with damage to the peripheral nervous system (resulting in numbness and limb weakness), as well as damage to the respiratory system, injury to the digestive tract, kidney damage and anaemia [284]. Exposure to toluene[132] through sniffing petrol in adolescence has been shown to be associated with impaired growth for both height and weight and a 'failure to thrive' [288]. Excessive harmful inhalant use can also lead to permanent acquired brain injury [288-290].

Extent of VSU among Aboriginal and Torres Strait Islander people

The 2022-2023 NDSHS reported that 94% of Aboriginal and Torres Strait Islander people aged 14 years and over had never used inhalants [271]. The 2018-19 NATSIHS found that 0.9% of Aboriginal and Torres Strait Islander people aged 15 years and over reported using petrol and other inhalants in the last 12 months[133] [68].

In 2022-23, 0.7% of Aboriginal and Torres Strait Islander clients aged 10 years and over identified volatile solvents as the main drug they sought treatment for in publicly funded AOD services [276].The jurisdiction with the highest proportion of Aboriginal and Torres Strait Islander clients aged 10 years and over who identified volatile solvents as the main drug they sought treatment for was the NT (6.42%), followed by Qld (0.24%), the ACT (0.23%), Vic (0.06%), NSW (0.04%), and WA, SA and Tas (all 0%).

An overall decline in VSU in communities has been reported, with one study showing that in 17 Aboriginal communities, the total number of people sniffing petrol has fallen, from 647 in 2005-06 to 78 in 2013-14, a reduction of 88% [291]. This decrease in prevalence of sniffing has been associated with the replacement of regular unleaded petrol with low aromatic fuel (LAF)[134].

A follow-up study on the effects of LAF found that in 25 Indigenous communities, for which there is comparable data, the total estimated number of people sniffing petrol fell from 453 in 2006 to 22 in 2018, a decline of 95% [287]. The number of people sniffing petrol in these communities represented just under 1% of the estimated Aboriginal and Torres Strait Islander populations in the respective communities aged 5-39 years.

While overall the number of people using volatile substances is small, the issue of VSU remains a potential for concern in some regions where opportunistic or casual sniffing of petrol and use of other volatile substances such as deodorants have been reported [287].

132 Toluene is the primary volatile solvent in misused products.

133 This estimate has a high margin of error and should be interpreted with caution [68].

134 LAF is a type of fuel with less aromatic hydrocarbons than regular unleaded petrol, that does not cause intoxication when inhaled.

Hospitalisation

In 2017-19, the crude hospitalisation rate for Aboriginal and Torres Strait Islander people due to volatile solvent use (based on principal diagnosis) was 0.1 per 1,000 [68]. The crude rates of hospitalisation for Aboriginal and Torres Strait Islander people due to mental and behavioural disorders from the use of volatile substances and poisoning due to the toxic effect of volatile solvents were both 0.1 per 1,000 [68].

Mortality

The systematic collection of VSU associated mortality data is very limited due to the practice of listing the medical explanation for death rather than the use of volatile substances as a cause [292]. For example, the death of someone who sniffs petrol chronically may be recorded as 'end-stage renal failure[135], not 'petrol sniffing'. This practice has most likely resulted in VSU mortality and morbidity rates being underestimated.

Environmental health

Environmental health refers to the physical, chemical and biological factors which can impact a person's health and wellbeing. These factors may include housing conditions, drinking water, air quality, sanitation, disease control, food safety and climate [110, 293, 294]. Health conditions associated with poor environmental health include intestinal infectious diseases; skin infections, such as scabies; middle ear infections; ARF; respiratory issues, such as asthma; and some cancers, such as lung cancer [295, 296].

Aboriginal and Torres Strait Islander people are disproportionately affected by the diseases associated with environmental health due to a number of factors, including the remoteness of some communities, overcrowding and lack of adequate housing, poor infrastructure, lack of functioning health and home hygiene hardware[136], lack of access to tradespeople and repairs, and the cost of infrastructure maintenance [293, 295, 296, 298].

The *National Aboriginal and Torres Strait Islander Health Plan 2013-2023* acknowledged that environmental health is an important issue and that addressing housing, waste management and water security are key priorities [293]. The Australian Government's *National Health and Climate Strategy*, released in 2023, described the disproportionate impacts that climate change has on the health of Aboriginal and Torres Strait Islander people, and identified approaches to climate change adaptation which empower First Nations people's wisdom and leadership [299].

This section will primarily cover housing, hospitalisation and mortality. For more detailed information about some of the health conditions associated with environmental health, see the *Cardiovascular health* section for information on ARF, the *Eye health* section for information on trachoma, the *Respiratory health* section for information on asthma, COVID-19 and other related conditions, the *Cancer* section for information on lung cancer, as well as the *Skin health* section for information about scabies and other skin health issues.

Housing

Housing issues such as overcrowding[137] and poor infrastructure contribute significantly to ill-health and poor wellbeing among Aboriginal and Torres Strait Islander people [110, 161, 301].

Overcrowding

In the 2022-23 NATSIHS, 6.8% of Aboriginal and Torres Strait Islander people reported living in overcrowded conditions (requiring one or more additional bedrooms to properly accommodate the people usually living in the house) [19]. By jurisdiction (excluding the ACT), overcrowding was highest in the NT (22%), followed by WA (8.1%), Qld (7.3%), Vic (6.4%), SA and Tas (both 5.5%) and lowest in NSW (4.9%). By remoteness, the proportion of housing with overcrowded conditions was higher in remote areas (20%) than non-remote areas (5.4%).

135 'Kidney failure' is the preferred, person-centred alternative to terms such as 'end-stage renal disease', [1], however, for the purposes of this *Overview*, the terms cited in the data sources will be used.

136 The kitchen, toilet, showers and laundry are recognised as home hygiene hardware [297].

137 As defined by The Canadian National Occupancy Standard, a measure widely used in Australia to estimate the proportion of dwellings that are overcrowded by assessing bedroom requirements [22, 300].

In the 2021 Census, 19% of Aboriginal and Torres Strait Islander people reported living in overcrowded conditions [22]. The proportions of males and females who experienced overcrowded living were approximately the same (18% and 19% respectively) [25]. Living in overcrowded conditions was most common among young people aged 15-24 years (23%) and least common among those aged 65 years and over (8.2%). The highest prevalence was in the NT (57%) and WA (21%), while the lowest was in the ACT (9.2%) [22]. The prevalence of people living in overcrowded housing increased with remoteness, from 12% in major cities to 32% in remote areas and 55% in very remote areas [25].

Infrastructure

An important contributor to the health and wellbeing of Aboriginal and Torres Strait Islander people is access to sufficient, working and regularly maintained infrastructure in housing and communities, including health hardware, clean water supply, sewerage and electricity, which support and encourage healthy living practices for hygiene, safety and nutrition [110, 220, 302].

In the 2022-23 NATSIHS, 82% of Aboriginal and Torres Strait Islander households reported living in houses of an acceptable standard[138] [19]. By jurisdiction (excluding the ACT), the highest proportion was in Tas (86%), followed by Vic (85%), Qld (84%), WA (83%), SA and NSW (both 81%) and lowest in the NT (69%). By remoteness, there was a greater proportion of houses of an acceptable standard in non-remote areas (84%) than remote areas (64%).

The latest information available for major structural issues within dwellings is from the 2018-19 NATSIHS. Thirty-three percent of Aboriginal and Torres Strait Islander households reported major structural issues within their dwelling [110]. The most significant issues for Aboriginal and Torres Strait Islander dwellings were major cracks in the walls/floors (12%), walls or windows not straight (10%), sinking/moving foundations (7.7%), major plumbing problems and wood rot/termite damage (both 6.6%). The most significant issues were reported in SA (44%) and the NT (41%) with the other jurisdictions reporting between 30% and 36%.

The latest information available for household facilities is from the 2018-19 NATSIHS. The majority of respondents reported having access to household facilities, including facilities for washing people (97%), washing bedding and clothes (96%), preparing/storing food (91%) and had working sewerage facilities (98%) (Table 33) [110]. Access to functioning facilities was lower in the NT than other jurisdictions, and lower in remote areas than non-remote areas.

Table 33. Aboriginal and Torres Strait Islander households' access to facilities, by state and territory and remoteness, all jurisdictions, 2018-19, proportion (%)

	State/Territory								Remoteness		
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Non-remote	Remote	Australia
Washing people	98	97	98	95	96	99	98	91	98	92	97
Washing bedding and clothes	98	98	97	92	94	97	99	85	97	86	96
Preparing/ storing food	94	89	93	84	88	98	95	79	93	79	91
Working sewerage	100	99	99	98	97	100	100	93	99	94	98

Source: SCRGSP, 2020 [110]

138 Housing of an acceptable standard includes two components: having four working household facilities; and not more than two major structural problems [19].

Hospitalisation

In 2018-19, the crude hospitalisation rates for Aboriginal and Torres Strait Islander people for selected diseases associated with poor environmental health were 9.2 per 1,000 for influenza and pneumonia, 9.0 per 1,000 for intestinal infectious diseases, 8.0 per 1,000 for bacterial diseases, 4.6 per 1,000 for acute upper respiratory infections, 2.7 per 1,000 for asthma and 1.8 per 1,000 for scabies [110].

In 2016-18, age-standardised hospitalisation rates for conditions associated with environmental health were higher in remote/very remote areas compared with major cities [110]. The highest differences were for scabies: 3.2 times higher in remote/very remote areas than in major cities (2.0 per 1,000 compared with 0.6 per 1,000) and influenza and pneumonia: 1.7 times higher in remote/very remote areas than in major cities (12 per 1,000 compared with 7.2 per 100,000).

Mortality

For 2014-2018, the age-standardised death rate for Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT, from conditions associated with poor environmental health was 41 per 100,000 (44 per 100,000 for males and 40 per 100,000 for females) [110]. For the jurisdictions reported (NSW, Qld, WA, SA and the NT) the highest death rate was in the NT (71 per 100,000) followed by WA (64 per 100,000) with the lowest in NSW (26 per 100,000).

Appendix 1

Limitations of the sources of Aboriginal and Torres Strait Islander health information

The following section outlines some of the current limitations of the sources of population, prevalence, hospitalisation, mortality and other data used in this *Overview*.

Population

The ABS produces estimates of the resident Aboriginal and Torres Strait Islander population following each census [303]. These estimates are commonly used as the denominator for the calculation of rates of disease and mortality among Aboriginal and Torres Strait Islander people.

The ABS has made considerable efforts to achieve accurate counts of the Aboriginal and Torres Strait Islander population in the five-yearly Australian censuses [22]. Despite these efforts, there are impacts on data quality such as non-responses for identification.

As at 30 June 2021, 88% of Aboriginal and Torres Strait Islander Australians were reported to be living in NSW, Qld, WA, SA and the NT (Derived from [303]) and the data from these jurisdictions are considered of sufficient quality for reporting on many health conditions and vital events such as deaths [44, 72].

The number of people who identified as Aboriginal and/or Torres Strait Islander increased by 25% between the 2016 and 2021 Censuses [304]. Less than half this increase is explained by demographic factors such as births between censuses; the rest is explained by non-demographic factors including changes in the way that people identify. Because estimates of the life expectancy of Aboriginal and Torres Strait Islander people are based on data from the census, there is a risk that improvements in life expectancy over time may be attributed to improvements in health rather than to changes in identification [305, 306].

Health data and vital statistics

A key concern about the various collections of health and vital statistics is that Aboriginal and Torres Strait Islander people are not always correctly identified. There is currently no national approach on how to determine Aboriginal and/or Torres Strait Islander status where classification is inconsistent or missing across multiple data sets, which may lead to different methodologies being applied and difficulties in the interpretability and comparability of data [7, 307].

Limitations of some of the specific data collections used in the *Overview* are outlined below.

Births

Variations in data collection practices and in the propensity of parents to self-identify as Aboriginal and Torres Strait Islander mean that Aboriginal and Torres Strait Islander births may be under-reported [38]. The accuracy of measures of Aboriginal and Torres Strait Islander fertility may also be affected by lags in birth registrations.

The ABS has estimated that the proportion of Indigenous births identified correctly was 96% in 2002-2006, a significant improvement over the level for previous years [308]. Completeness of identification varied across the country, with only Vic, Qld, WA, SA and the NT having levels above 90%. All jurisdictions are working towards improving the quality of Indigenous identification in perinatal data collections [27].

Hospitalisations

The level of identification in hospital admissions is variable, but it was estimated that 88% of Aboriginal and Torres Strait Islander patients were correctly identified in Australian public hospital admission records in 2011-12 [54]. The accuracy of the identification of Indigenous people varied between states and territories, from 98% in the NT to 58% in the ACT. The accuracy of identification also varied with remoteness level, from 99% in very remote areas to 77% in major cities. It has been suggested that a more accurate number of admissions is approximately 9% higher than recorded [53]. It is unknown to what extent Indigenous people are under-identified in private hospital admissions data.

All hospitalisation data for Tas, the ACT and the NT include only public hospitals [53].

Deaths

A key concern with mortality data is that not all Aboriginal and Torres Strait Islander deaths are correctly identified in death registrations [44, 307]. The level of Aboriginal and Torres Strait Islander mortality is therefore likely to be underestimated.

While most Aboriginal and Torres Strait Islander deaths are registered, and while Indigenous identification data is provided for most registered deaths (99.8% in 2023), some of this identification data is known to be inaccurate [44]. Estimating the proportions of deaths identified correctly is not simple, so it is difficult to calculate the actual number of Indigenous deaths occurring and the corresponding rates. Mortality analysis is usually restricted to the five jurisdictions where identification levels and numbers of deaths are considered sufficient to support analysis: NSW, Qld, WA, SA and the NT [44]. The ABS uses estimates of the proportions of registered deaths correctly identified as Indigenous in preparing its life tables, the source of life expectancy figures [45, 47].

Over the past two years the ABS has applied improvements to the way Indigenous status is derived. This has led to a decrease in the number of deaths where the Indigenous status of the deceased is unknown or not stated [44].

Due to concerns about the mortality rates of Aboriginal and Torres Strait Islander people relative to the total population, there has been ongoing data integration to investigate the quality of the data using health and death records by the ABS and state and territory government departments [307].

Burden of disease

As burden of disease analysis makes use of Aboriginal and Torres Strait Islander population, mortality and disease/risk factor prevalence data, it is subject to the limitations that characterise these types of data [65]. For example, the reliability of estimates of fatal burden are affected by the potential under-identification of Indigenous status in death registrations.

The accuracy of estimates of burden are also affected by gaps in national Aboriginal and Torres Strait Islander data collection [65]. For example, estimates of the burden attributable to COPD are currently based on a small study from WA because national data do not exist.

Other limitations affecting burden of disease analysis for Aboriginal and Torres Strait Islander people include small numbers in the data, the lack of suitable adjustment factors to correct for under-identification, the inability of the current method of estimating fatal burden to account for multiple causes of death, and unknown levels of Indigenous under-identification in key data collections (such as cancer incidence) [65].

National surveys

This *Overview* refers extensively to the results of the 2022-23 NATSIHS, as well as to other surveys such as the NDSHS.

Most data collected by major surveys is self-reported. Self-reported survey data are open to interpretation; they do provide insight into an individual's view of their health, but the conditions reported may not have been diagnosed by a health professional [19]. Self-reported data can underestimate conditions about which respondents may not be aware (such as high blood pressure) or be reluctant to disclose (such as drug use).

Changes in aspects like survey methodology can cause difficulties in the analysis and synthesis of information for periods of time (i.e. trend analysis). Survey results are also subject to sampling errors. Major national surveys are generally conducted at long intervals (such as every six years), which means that relevant information is often dated.

Other data collections

Other data collections on which this *Overview* draws include those related to notifiable diseases, SEWB, AOD, community services, primary health care, potentially preventable hospitalisations, screening programs, health registries and pathology.

The levels of Aboriginal and Torres Strait Islander people's identification in many of these collections vary in their degree of completeness, which questions the quality and accuracy of the various estimates of health status [7].

The ABS, the AIHW and state and territory authorities have worked together to improve the accuracy of Indigenous status identification in various collections, including:

- pathology forms
- primary health care data
- AOD treatment services
- mental health services
- community services data collection [309] (cited in [307]).

COVID-19 highlighted the poor level of identification on pathology forms used for testing [310-312], and work is now being undertaken to improve Indigenous identification on pathology forms used by both public and private laboratories.

Additionally, Australian clinical trials often do not report on Indigenous status or include a representative number of Aboriginal and Torres Strait Islander participants, which raises concerns about the generalisability of findings [313].

Data gaps

There are significant gaps in the national data for important areas of Aboriginal and Torres Strait Islander health, meaning that accurate prevalence estimates for certain conditions are unable to be calculated. Examples include dementia [65, 314], early childhood hearing loss and OM [151] and intergenerational trauma [315].

Limitations of aggregated data

The majority of data referred to in this *Overview* is aggregated at national or state/territory levels. Data about Aboriginal and Torres Strait Islander people which is aggregated at these levels does not align with the boundaries or structures of Indigenous communities [316]. The lack of data disaggregation at the community level can prevent informed decision-making in areas like health, wellbeing, and policy development. It is argued that a more effective approach would involve breaking down data by specific Aboriginal and Torres Strait Islander groups or regions, enabling Indigenous communities to make informed, data-driven decisions about their own needs and priorities [316, 317].

Other limitations

Time periods for which detailed information is available tend to vary substantially; this means that documents like this *Overview* need to draw on information from various time periods in attempting to compile a comprehensive picture.

Additionally, special reports related to Aboriginal and Torres Strait Islander health (see the *Sources of information* section) are often selective rather than comprehensive in their coverage of health topics.

Glossary

Aboriginal and Torres Strait Islander

people who identify themselves as being of Aboriginal and/or Torres Strait Islander origin. See also **Indigenous**

age-specific fertility rate

the number of live births to women in a specified age-group in one year per 1,000 women in the same age-group

age-specific rate

an estimate of the number of people experiencing a particular event in a specified age-group relative to the total number of people 'at risk' of that event in that age-group

age-specific death rate

the number of deaths of persons of a specific age-group in a calendar year per 1,000 persons of the same age-group. For the purposes of this report, the age-specific death rate is calculated per 100,000 persons of the same age-group so the rate can be expressed as a whole number

age-standardisation

a method of removing the influence of age when comparing populations with different age structures. This is necessary because the rates of many diseases increase with age. The age structures of the different populations are converted to the same 'standard' structure; then the disease rates that would have occurred with that structure are calculated and compared. This method is used when making comparisons for different periods of time, different geographic areas and/or different population sub-groups (e.g. between one year and the next, and states and territories). They have been included for users to make comparisons that may not be available in this report

avoidable mortality (deaths)

a death that, theoretically, could have been avoided given an understanding of causation, the adoption of available disease prevention initiatives and the use of available health care

body mass index

a measure calculated by dividing weight in kilograms by height in metres squared, and which categorises a person as ranging from underweight to obese: underweight (BMI: less than 18.5); normal (BMI: 18.5-24.9); overweight (BMI: 25.0-29.9); obese (BMI: 30.0+)

burden of disease

the quantified impact of a disease or injury on a population using the **disability-adjusted life year** measure

cause of death

as entered on the medical certificate of cause of death - refers to all diseases, morbid conditions or injuries that either resulted in or contributed to death

child mortality rate

the number of deaths in a given period among children aged 0–14 years per 100,000 children of the same age. Can also be presented for specific age-groups within this age range, such as for children aged 0–4 years

crude rate

the number of new cases (crude incidence rate) or deaths (crude death rate) due to a disease in the total population that could be affected, without considering age or other factors

disability-adjusted life year

a year of healthy life lost, either through premature death or living with a disability due to illness or injury

expectation of life

predicted number of years of life remaining to a person if the present pattern of mortality does not change. It is a statistical abstraction based on current age-specific death rates

fatal burden

the burden of dying prematurely from a disease or injury as measured by **years of life lost**. It offers a way to compare the impact of different diseases, conditions or injuries on a population. See **non-fatal burden**

fertility rate

see **age-specific fertility rate** and **total fertility rate**

hospital separation

an episode of care for an admitted patient, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending in a change of type of care (for example, from acute care to rehabilitation). Separation also means the process by which an admitted patient completes an episode of care either by being discharged, dying, transferring to another hospital or changing type of care

hospital separation rate

the total number of episodes of care for admitted patients divided by the total number of persons in the population under study. Often presented as a rate per 1,000 or 100,000 members of a population. Rates may be crude or standardised

hospital separations

the total number of episodes of care (also hospitalisations) for admitted patients, which can be total hospital stays (from admission to discharge, transfer or death) or portions of hospital stays beginning or ending in a change of type of care (for example, from acute to rehabilitation) that cease during a reference period

hospitalisation

an episode of admitted patient care, which can be either a patient's total stay in hospital (from admission to discharge, transfer or death), or part of a patient's stay in hospital that results in a change to the type of care (for example, from acute care to rehabilitation)

incidence

the number of instances of illness commencing, or of persons falling ill, during a given period in a specified population

incidence rate

the number of instances of illness commencing, or of persons falling ill, during a given period in a specified population divided by the population at risk

Indigenous

term used to refer collectively to the two Indigenous sub-populations within Australia – Australian Aboriginal and Torres Strait Islander people

infant mortality

the death of a live-born child who dies before reaching his/her first birthday

infant mortality rate

the number of deaths of children under one year of age in a specified period per 1,000 live births in the same period

International Classification of Diseases

WHO's internationally accepted classification of death and disease

life expectancy

see **expectation of life**

maternal mortality

pregnancy-related deaths occurring to women during pregnancy or up to 42 days after delivery

maternal mortality ratio

number of maternal deaths divided by the number of confinements (expressed in 100,000s)

median age at death

the age above and below which 50% of deaths occurred

morbidity

state of being diseased or otherwise unwell

mortality

number of deaths in a population during a given time period

non-fatal burden

the burden from living with ill health, as measured by **years lived with disability**

non-Indigenous

a person who does not identify as Aboriginal and/or Torres Strait Islander

potentially preventable hospitalisations

hospital separations from a specified range of conditions where hospitalisation is considered to be largely preventable if timely and adequate care had been provided through population health services, primary care and outpatient services

prevalence

the number of instances of a given disease or other condition in a given population at a designated time

protective factors

health determinants that can influence health risks and/or outcomes in positive ways

rate

one number (the numerator) divided by another number (the denominator). The numerator is commonly the number of events in a specified time. The denominator is the population at risk of the event. Rates (crude, age-specific and age-standardised) are generally multiplied by a number such as 100,000 to create whole numbers

risk factor

an attribute or exposure that is associated with an increased probability of a specified outcome, such as the occurrence of a disease. A risk factor is not necessarily a causal factor

self-reported data

data based on how an individual perceives their own health. It relies on survey participants being aware, and accurately reporting, their health status and health conditions, which is not as accurate as data based on clinical records or measured data

standardised rate

the number of new cases (standardised incidence rate) or deaths (standardised death rate) due to a disease for a particular population after adjustment has been made for differences in the age structures of this population and a reference population. See **age-standardisation**

total fertility rate

the number of live births a woman would have if, throughout her reproductive years, she had children at the rates prevailing in the reference calendar year. It is the sum of the **age-specific fertility** rates for that calendar year

years lived with disability

measures the years of what could have been a healthy life that were instead spent in states of less than full health. Years lived with disability represent **non-fatal burden**

years of life lost

measures years of life lost due to premature death, defined as dying before the ideal lifespan (based on the lowest observed death rates from multiple countries). Years of life lost represent **fatal burden**

Abbreviations/acronyms

ABS - Australian Bureau of Statistics

ACT - Australian Capital Territory

AHMAC - Australian Health Ministers Advisory Council

AIHW - Australian Institute of Health and Welfare

AIR - Australian Immunisation Register

ANZDATA - Australia and New Zealand Dialysis and Transplant Registry

AOD - Alcohol and other drugs

ARF - Acute rheumatic fever

ASSAD - Australian Secondary Students' Alcohol and Drug Survey

BMI - Body mass index

CKD - Chronic kidney disease

COPD - Chronic obstructive pulmonary disease

COVID-19 - Coronavirus disease

CSEWB - Cultural, social and emotional wellbeing

CSOM - Chronic suppurative otitis media

CTG - Closing the Gap

CVD - Cardiovascular disease

DAA - Direct-acting antiviral

DALY - Disability-adjusted life year

DR - Diabetic retinopathy

ERP - Estimated resident population

ESKD - End-stage kidney disease

ESRD - End-stage renal disease

GAS - Group A streptococci

GDM - Gestational diabetes mellitus

GP - General practitioner

HBV - Hepatitis B virus

HCV - Hepatitis C virus

HD - Haemodialysis

Hib - *Haemophilus influenzae* type b

HIV - Human immunodeficiency virus

HPV - Human papillomavirus

ICD - International Classification of Diseases

IHD - Ischaemic heart disease

IMD - Invasive meningococcal disease

IMR - Infant mortality rate

IPD - Invasive pneumococcal disease

LAF - Low aromatic fuel

LBW - Low birthweight

MMR - Maternal mortality ratio

MMR - Measles, mumps and rubella

NAPLAN - National Assessment Program – Literacy and Numeracy

NATSIHS - National Aboriginal and Torres Strait Islander Health Survey

NCOHS - National Child Oral Health Study

NDSHS - National Drug Strategy Household Survey

NEHS - National Eye Health Survey

NILS - National Indigenous Languages Survey

NIP - National Immunisation Program

NSAOH - National Study of Adult Oral Health

NSP - Needle Syringe Program

NSW - New South Wales

NT - Northern Territory

OM - Otitis media

PD - Peritoneal dialysis

Qld - Queensland

RHD - Rheumatic heart disease

SA - South Australia

SCRGSP - Steering Committee for the Review of Government Service Provision

SDAC - Survey of Disability, Ageing and Carers

SEWB - Social and emotional wellbeing

SIDS - Sudden infant death syndrome

STI - Sexually transmissible infection

Tas - Tasmania

TB - Tuberculosis

TIS - Tackling Indigenous Smoking

VI - Vision impairment

Vic - Victoria

VSU - Volatile substance use

WA - Western Australia

WC - Waist circumference

WHO - World Health Organization

WHR - Waist-hip ratio

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