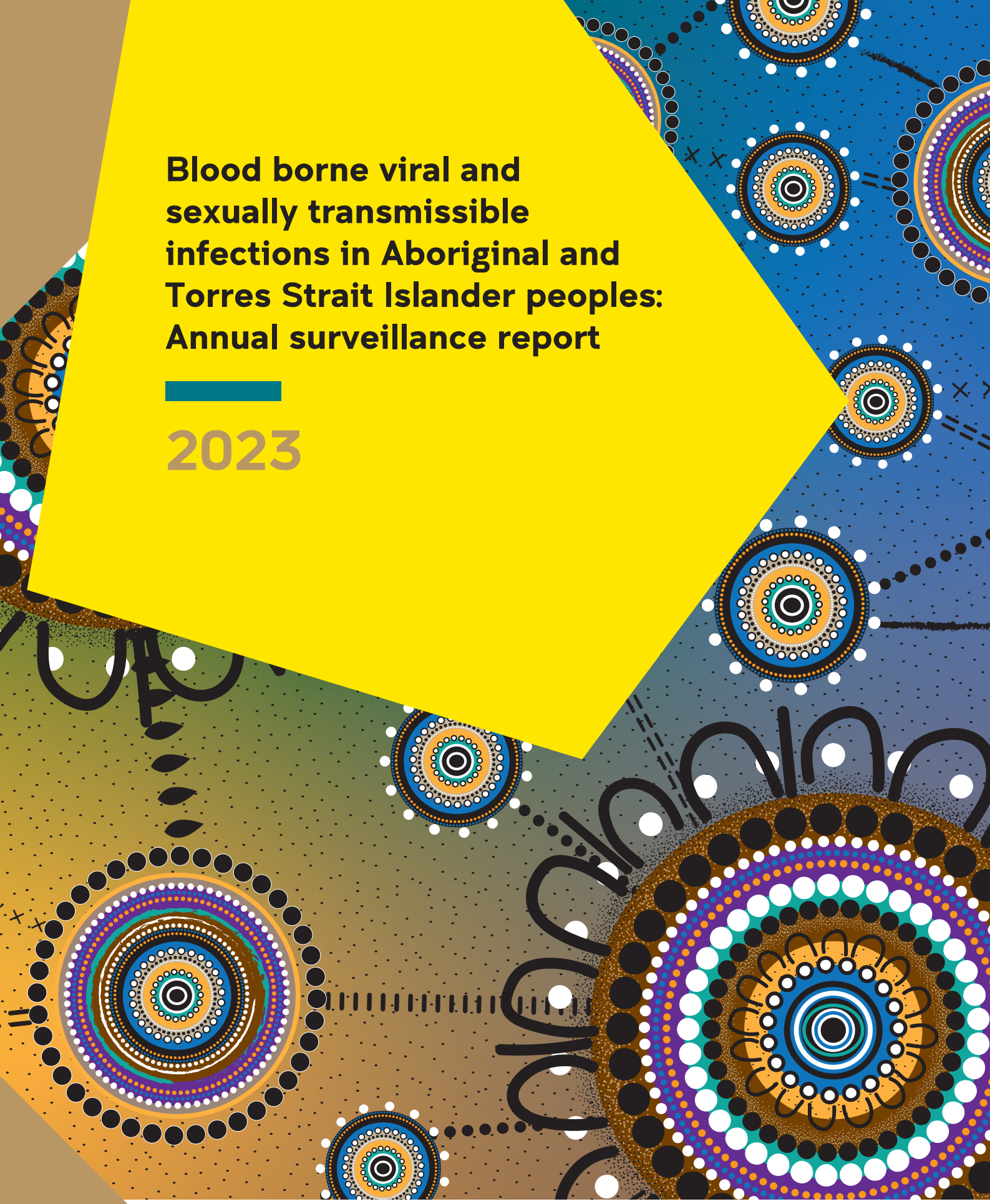
Blood borne viral and sexually transmissible infections in Aboriginal and Torres Strait Islander peoples: Annual surveillance report

2023



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Cover Artwork

The cover artwork was created by Jasmine Sarin. Jasmine is a proud Kamilaroi and Jerrinja woman from NSW. Born and raised in Dharawal Country (Wollongong) as well as Jerrinja and Yuin Country (Nowra) and has family connections in Kamilaroi Country (Coonabarabran). Jasmine is also a Rescue Qualified Firefighter with Fire and Rescue NSW, a lover of good coffee, rugby league and a self-taught Aboriginal artist and graphic designer.

The narrative for this artwork can be found on the inside back cover of this report.

"My artwork predominantly features bright and bold colours. The narratives behind my artworks are often linked to the way we connect, the way we come together, and how we grow as community. These concepts are illustrated in my work as concentric circles, connection lines, floral emblems, and textured patterns symbolic of landscape. All of which reflect the cultural connection of country. We stand in footsteps millennia old, may we acknowledge all traditional owners of this great land… past, present and emerging."

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Blood borne viral and sexually transmissible infections in Aboriginal and Torres Strait Islander peoples:
Annual surveillance report 2023

The Kirby Institute

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Preface

This report provides information on the occurrence of blood borne viruses (BBVs) and sexually transmissible infections (STIs) among Aboriginal and Torres Strait Islander peoples in Australia. The report is published by the Kirby Institute, UNSW Sydney for the purposes of stimulating and supporting discussion on ways to minimise the risk of transmission of these infections as well as the personal and social impacts within Aboriginal and Torres Strait Islander communities.

This report is published annually as an accompanying document to the *HIV, viral hepatitis and sexually transmissible infections in Australia: annual surveillance report* [1] and is overseen by the National Blood Borne Virus and Sexually Transmissible infections Surveillance Sub-Committee (NBBVSTI SSC) and the Annual Surveillance Report Advisory Committee with input provided by the National Aboriginal Community Controlled Health Organisation (NACCHO).

The report is produced for use by a wide range of health service providers and consumers, and particularly Aboriginal and Torres Strait Islander health services and communities. Tables, graphs, and infographics are also available online at the Kirby Institute website.

Unless specifically stated otherwise, all data provided in this report are to the end of 2022. Data in this report are provisional and subject to future revision.

The Kirby Institute acknowledges Traditional Custodians of Country throughout Australia and recognises the continuing connection to lands, waters and communities. We pay our respect to Aboriginal and Torres Strait Islander Elders past and present. We acknowledge the unique position of Aboriginal and Torres Strait Islander peoples' culture, history and as the original inhabitants of the land. We extend our gratitude to the Kirby Institute Aboriginal and Torres Strait Islander Surveillance Reference Group, for providing expert insight, advice, and Aboriginal and Torres Strait Islander perspective, without whose input this report would not be possible. We also acknowledge Jasmine Sarin, a proud Kamilaroi and Jerrinja women who created the beautiful artwork for this report.

Abbreviations

ABS	Australian Bureau of Statistics
ACCESS	Australian Collaboration for Coordinated Enhanced Sentinel Surveillance
ANSPS	Australian Needle Syringe Program Survey
BBV	blood borne virus
HIV	human immunodeficiency virus
HPV	human papillomavirus
STI	sexually transmissible infection

Summary

We recognise the devastating impacts colonisation and the social systems that continue to uphold social inequalities have on the health and wellbeing of Aboriginal and Torres Strait Islander peoples. This report provides high-quality and important data about emerging public health threats and inequities to inform public health responses and to address these issues. We also acknowledge the importance of the cultural determinants for Aboriginal and Torres Strait Islander health, and support principles of empowerment, community ownership, co-design, and partnership.

The years for comparison in this report are from 2018 to 2022 and 2013 to 2022, dependent on data availability, unless focus is given to the impact of the COVID-19 pandemic, where the changes up to 2019, and from 2019 to 2022, are highlighted.

Sexually transmissible infections

Infectious Syphilis

- There were 6 036 infectious syphilis notifications in Australia in 2022, of which 971 (16%) were among Aboriginal and Torres Strait Islander peoples, 4 351 (72%) were among non-Indigenous people, and 714 (12%) were among people whose Aboriginal and Torres Strait Islander status was not reported.
- Infectious syphilis notification rates among Aboriginal and Torres Strait Islander peoples are based on data from all jurisdictions, as Aboriginal and Torres Strait Islander status was at least ≥80% complete in all jurisdictions for infectious syphilis notifications for each of the ten years from between 2013 to 2022.
- The age-standardised infectious syphilis notification rate among Aboriginal and Torres Strait Islander peoples increased more than five-fold in the last 10 years fromduring 2013 to 2022. In 2022, the infectious syphilis notification rate was 108.6 per 100 000 population.
- Infectious syphilis notification rates among both Aboriginal and Torres Strait Islander males and females were three times and nearly 21 times as high as their non-Indigenous gender equivalent, respectively.
- In 2022, the age standardised infectious syphilis notification rate among Aboriginal and Torres Strait Islander peoples was more than three times as high as that among non-Indigenous people in major cities, increasing to more than seven and 35 times as high in regional and remote areas, respectively.
- There were 15 cases of congenital syphilis recorded in 2022, of which eight were among Aboriginal and Torres Strait Islander peoples, five were among non-Indigenous people and two for which Aboriginal and Torres Strait Islander status was missing.

Chlamydia

- Chlamydia is the most frequently diagnosed sexually transmissible infection in Australia. In 2022, there was a total of 93 777 chlamydia notifications in Australia, of which 7 683 (8%) were among Aboriginal and Torres Strait Islander peoples, and 39 886 (43%) were among non-Indigenous people, and Aboriginal and Torres Strait Islander status was not reported for 46 208 (49%) notifications.
- Chlamydia notification rates among Aboriginal and Torres Strait Islander peoples were based on data from six jurisdictions (Australian Capital Territory, the Northern Territory, South Australia, New South Wales, Queensland and Western Australia). Jurisdictions were included where Aboriginal and Torres Strait Islander status was ≥50% complete for all chlamydia notifications for each of the five years from 2018 to 2022.
- In 2022, the age standardised chlamydia notification rate for Aboriginal and Torres Strait Islander peoples (814.1 per 100 000 population) was more than twice as high as that among non-Indigenous people (374.9 per 100 000 population).
- Between 2018 and 2022, the chlamydia age standardised notification rate in Aboriginal and Torres Strait Islander peoples and non-Indigenous people fluctuated with declines between 2019 and 2021 were likely related to the COVID-19 pandemic.

Gonorrhoea

- There were 32 877 gonorrhoea notifications in Australia in 2022. Of these, 4 994 (15%) were among Aboriginal and Torres Strait Islander peoples, 18 661 (57%) were among non-Indigenous people, and 9 222 (28%) were among people for whom Aboriginal and Torres Strait Islander status was not reported.
- Gonorrhoea notification rates among Aboriginal and Torres Strait Islander peoples are based on data from all jurisdictions (except Victoria), as Aboriginal and Torres Strait Islander status was ≥50% complete for gonorrhoea notifications for these jurisdictions for each of the five years from 2018 to 2022.
- In 2022, the age standardised gonorrhoea notification rate in Aboriginal and Torres Strait Islander peoples was more than five times that of non-Indigenous people (547.1 per 100 000 vs. 108.3 per 100 000 population), increasing to 21 times as high in remote areas.

Donovanosis

- Australia is on track to eliminate donovanosis, which was once a frequently diagnosed sexually transmissible infection among remote Aboriginal populations. Since 2013 there has only been one case, notified in 2014.

Human papillomavirus

- In Australia, the national vaccination program for human papillomavirus (HPV) was introduced for girls aged 12 to 13 years in 2007 and was extended to include boys of the same age in 2013. Since 2007 there have been considerable reductions in the proportions diagnosed with genital warts among Aboriginal and Torres Strait Islander males and females aged 21 years or younger attending 53 sexual health clinics included in the Genital Warts Surveillance Network for their first visit.

HIV

- In 2022, there were 25 HIV notifications among Aboriginal and Torres Strait Islander peoples, accounting for 3% of all HIV notifications (555 notifications overall).
- In 2022, the age-standardised HIV notification rate was 3.2 per 100 000 population among Aboriginal and Torres Strait Islander peoples compared with 2.2 per 100 000 population among non-Indigenous people.
- In 2022, among Aboriginal and Torres Strait Islander peoples, the HIV notification rate was 4.0 per 100 000 population for those aged 35 or older and was 2.2 per 100 000 population for those aged under 35 years. Among non-Indigenous people, the HIV notification rate was 2.3 per 100 000 population for those aged 35 and older and was 1.8 per 100 000 population for those aged under 35 years.
- In the five-year period from 2018 to 2022, the proportion of HIV notifications attributed to injection drug use was 11% among Aboriginal and Torres Strait Islander peoples compared with 3% among non-Indigenous people. The proportion of HIV notifications attributed to male-to-male sex was 49% among Aboriginal and Torres Strait Islander peoples, compared with 58% among non-Indigenous people. In the same period, the proportion of HIV notifications attributed to heterosexual sex was 19% among Aboriginal and Torres Strait Islander peoples, compared with 25% among non-Indigenous people.
- Based on mathematical modelling, there were an estimated 590 Aboriginal and Torres Strait Islander people living with HIV in Australia in 2022 which corresponds to an estimated HIV prevalence of 0.10% (range 0.09 % to 0.11%).
- Based on the test for immune function (CD4+ cell count), 27% of HIV notifications among Aboriginal and Torres Strait Islander peoples in 2022 were classified as late diagnoses (CD4+ cell count of less than 350 cells/μL) compared with 45% among non-Indigenous people. These notifications are likely to have been in people who had acquired HIV at least four years prior to diagnosis.
- According to the Australian Needle Syringe Program Survey (ANSPS), a similar proportion of Aboriginal and Torres Strait Islander females and non-Indigenous females reported having tested for HIV in the last 12 months (41% vs 43% in 2022, respectively). Conversely, a higher proportion of Aboriginal and Torres Strait Islander male participants than non-Indigenous male participants reported a HIV test in the past 12 months each year since 2013 (52% vs 41% in 2022).
- In 2022, among participants of ANSPS, 73% of Aboriginal and Torres Strait Islander females reported inconsistent condom use with casual partners compared to 77% of Aboriginal and Torres Strait Islander males This proportion was 76% and 81% for non-indigenous females and males respectively.

Hepatitis C

- In 2022, there were 1 088 hepatitis C notifications among Aboriginal and Torres Strait Islander peoples, accounting for 16% of all hepatitis C notifications (6 728 notifications overall). There were a further 2 419 (36%) notifications among people for whom Aboriginal and Torres Strait Islander status was not reported.
- Hepatitis C notification rates among Aboriginal and Torres Strait Islander peoples were based on data from five jurisdictions (Australian Capital Territory, Northern Territory, Queensland, South Australia, and Western Australia). Jurisdictions were included where Aboriginal and Torres Strait Islander status was ≥50% complete for all hepatitis C notifications for each of the five years from 2018 to 2022.
- In 2022, the age-standardised hepatitis C notification rate for Aboriginal and Torres Strait Islander peoples was more than seven times as high as compared to non-Indigenous people (156.2 vs 21.7 per 100 000 populations). Of hepatitis C antibody negative Aboriginal and Torres Strait Islander males and females who were hepatitis C antibody negative participating in the (ANSPS), the proportion who reported a hepatitis C antibody test in the past 12 months declined over the period from 2013 to 2022 from 55% to 47% among males, and from 57% to 46% among females.
- In 2022, 31% of Aboriginal and Torres Strait Islander respondents to the ANSPS reported receptive syringe sharing in the previous month, a key risk factor for hepatitis C transmission, compared with 15% among non-Indigenous survey respondents.
- Among Aboriginal and Torres Strait Islander respondents to the ANSPS in 2021, two thirds (66%) of those who self-reported having ever lived with chronic hepatitis C had received treatment in their lifetime. This proportion was over six times higher than at the end of 2015 (10%) when PBS-subsidised interferon-free direct-acting antiviral regimens becoming available. In 2022, Aboriginal and Torres Strait Islander respondents had lower uptake of treatment in the last 12 months (27%) compared to non-Indigenous participants (36%).

Hepatitis B

- There were 5 075 notifications of hepatitis B infection in Australia in 2022, of which 108 (2%) were among Aboriginal and Torres Strait Islander people and 2 757 (54%) were among non-Indigenous people. For 2 210 notifications (44%), Aboriginal and Torres Strait Islander status was not reported.
- Hepatitis B notification rates among Aboriginal and Torres Strait Islander peoples were based on data from five jurisdictions (Australian Capital Territory, Northern Territory, Queensland, South Australia, and Western Australia). Jurisdictions were included where Aboriginal and Torres Strait Islander status was ≥50% complete for all hepatitis C notifications for each of the five years 2018–2022.
- The hepatitis B age standardised notification rate among Aboriginal and Torres Strait Islander peoples decreased between 2018 and 2022 (from 24.9 to 19.0 per 100 000 population). In 2022, the age-standardised notification rate of hepatitis B for Aboriginal and Torres Strait Islander peoples was higher compared to non-Indigenous people (19.0 vs. 14.6 per 100 000 population).
- From 2018 to 2022, hepatitis B vaccination coverage rates for Aboriginal and Torres Strait Islander children were consistently at or above 90%. In 2022, the coverage rate was 90% for children aged 12 months and 96% for children aged 24 months.

1 Interpretation

In 2022, the age standardised STI notification rates remained higher among Aboriginal and Torres Strait Islander peoples than among non-Indigenous people: infectious syphilis and gonorrhoea were more than five times as high, and chlamydia was more than two times as high. The increases in infectious syphilis among Aboriginal and Torres Strait Islander peoples in major cities, regional areas, and remote areas, along with a considerable increase in the number of congenital syphilis cases, emphasise the need to enhance culturally appropriate health promotion, testing and treatment strategies in partnership with Aboriginal and Torres Strait Islander stakeholders and communities. In particular, antenatal care needs to be more accessible with enhanced syphilis screening for pregnant women, regardless of the healthcare setting.

There has been some success in controlling a limited number of STIs experienced disparately by Aboriginal and Torres Strait Islander peoples. Donovanosis, once an STI diagnosed among remote Aboriginal populations, is now virtually eliminated. Significant declines in the number of genital warts diagnoses have been observed after previously being recorded as the most common STI managed at sexual health clinics among Aboriginal and Torres Strait Islander peoples. These declines reflect the success of the national vaccination program for HPV, introduced in 2007 for girls and in 2013 for boys. Also, declines in the number of hepatitis B notifications among younger Aboriginal and Torres Strait Islander people reflect the success of the National Immunisation Program which provides free HBV vaccinations for Australian infants, along with better antenatal care.

The age standardised HIV notification rate in Aboriginal and Torres Strait Islander peoples fluctuated between 2013 and 2022. In 2022, the HIV notification rate among Aboriginal and Torres Strait Islander peoples (3.2 per 100 000) was higher than that of non-Indigenous people (2.2 per 100 000). The HIV notification rate among Aboriginal and Torres Strait Islander peoples is based on small numbers of HIV notifications (25 notifications in 2022) so should be interpreted with caution.

In 2022, the hepatitis C notification rate declined among Aboriginal and Torres Strait Islander peoples, including among people aged 15 to 24 years, the age group used a proxy for the incidence of hepatitis C infection. However, despite these declines age-standardised hepatitis C notification rates remain several-fold higher among Aboriginal and Torres Strait Islander peoples compared to non-Indigenous people, suggesting an increase in the at-risk population and less effective implementation of harm reduction. According to the Australian Needle Syringe Program Survey, Aboriginal and Torres Strait Islander peoples reported a lower proportion of hepatitis C treatment uptake than non-Indigenous people. This suggests that there is inequity in the availability of direct acting antiviral therapy as well as resources directed toward harm reduction and linkage to care. This inequity may be limiting the decline in the rate of hepatitis C infections among Aboriginal and Torres Strait Islander peoples.

The declining trend in hepatitis B notifications in Aboriginal and Torres Strait Islander peoples younger than 40 years suggests that immunisation programs for hepatitis B have had a clear benefit and have reduced the gap in hepatitis B notification rates between Aboriginal and Torres Strait Islander peoples and non-Indigenous people. However, hepatitis B notification rates in Aboriginal and Torres Strait Islander peoples in older age groups remained high compared to non-Indigenous people, highlighting the need for a continued focus on hepatitis B testing, immunisation, and engagement in care among Aboriginal and Torres Strait Islander peoples.

Wider determinants of health, such as access to health care, education, unemployment, poverty, discrimination and racism, can also influence risk factors for blood borne viruses and sexually transmissible infections [(2)]. These social determinants must be acknowledged in the development of strategies to address the concerning trends in blood borne viruses and sexually transmissible infection transmission rates and the associated burden of disease.

2 Overview

Aboriginal and Torres Strait Islander status completeness

Incomplete information on Aboriginal and Torres Strait Islander identification has the potential to misrepresent the true extent of blood borne virus and sexually transmissible infections in Aboriginal and Torres Strait Islander peoples. The National Notifiable Diseases Surveillance System uses 'Indigenous status' to indicate Aboriginal and Torres Strait Islander identity. For the purposes of reporting, when discussing data sourced from the National Notifiable Diseases Surveillance System, 'Aboriginal and Torres Strait Islander status' will be used in place of 'Indigenous status'.

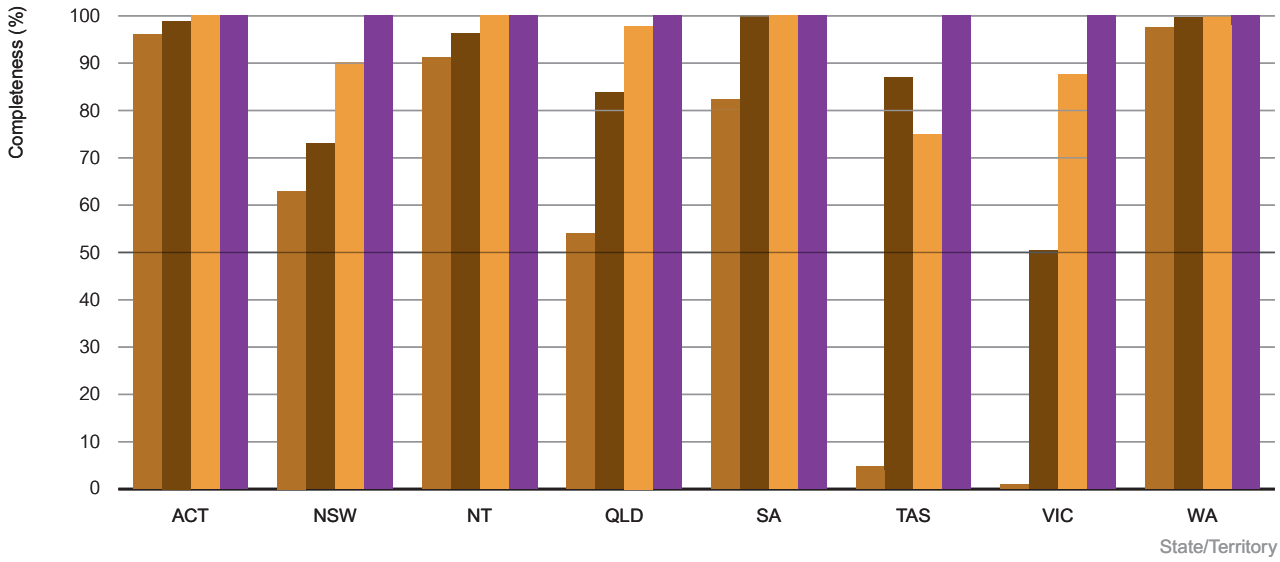
In 2022, all jurisdictions reported the Aboriginal and Torres Strait Islander status for at least 50% of HIV, infectious syphilis and newly acquired hepatitis B notifications (infections acquired within the last two years). However, Aboriginal and Torres Strait Islander status was reported for less than 50% of notifications in the following jurisdictions for the following conditions (Figure 1, Figure 2):

- Chlamydia: Tasmania and Victoria
- Gonorrhoea: Victoria
- Hepatitis B: New South Wales, Tasmania and Victoria
- Hepatitis C: New South Wales, Tasmania and Victoria.

Please note, due to the potential misrepresentation and misinterpretation of Hepatitis B (newly acquired) and Hepatitis C (newly Acquired) notifications data due to low numbers, separate analysis of these infections is not included in this report. Time trends of notification rates for specific infections by jurisdiction were included in this report if information on Aboriginal and Torres Strait Islander status was available for at least 50% of notifications of the infection in every one of the past five years. Jurisdictions which met the 50% threshold in 2022 (Figure 1 and Figure 2) but not in other years were not included in this report, unless otherwise mentioned. Caution should be taken while interpreting the data, as even at least 50% Aboriginal and Torres Strait Islander status reporting is a low threshold.

Multiple enhanced surveillance and health force education activities are being undertaken at the jurisdictional and national level to improve completeness of Aboriginal and Torres Strait Islander status. This includes consideration of the addition of Aboriginal and Torres Strait Islander status to pathology forms. Continuing education of health care providers, and enhanced data review processes to improve the completion rate. Continued focus on this area is essential to improve completion of data relating to Aboriginal and Torres Strait Islander peoples as stated in national strategies [3].

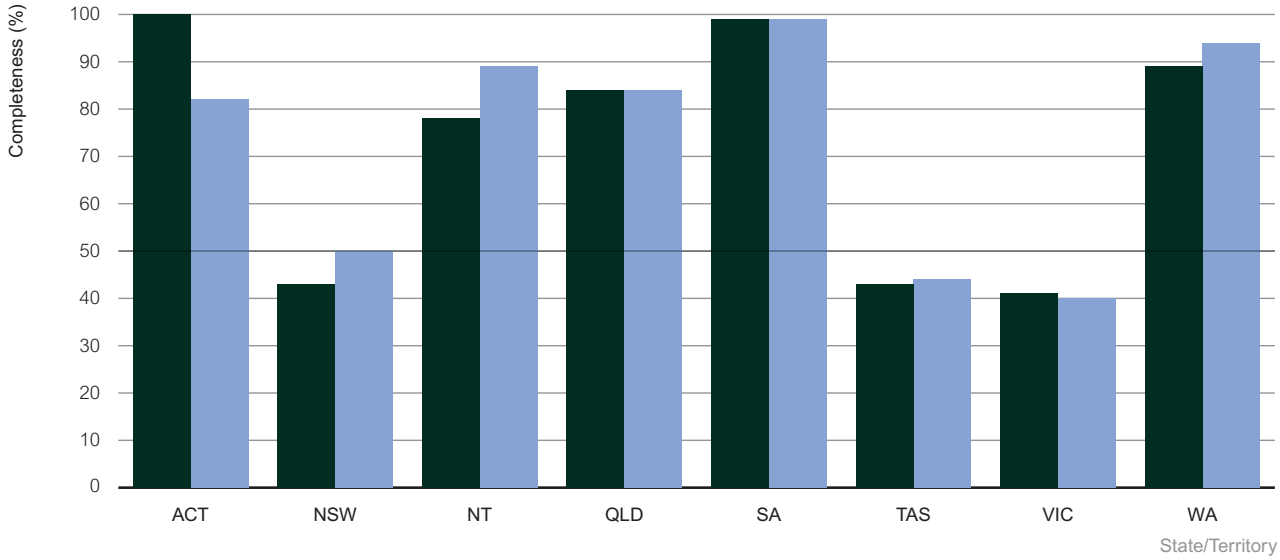
Figure 1 Reporting of Aboriginal and Torres Strait Islander status at notification of chlamydia, gonorrhoea, infectious syphilis and HIV by State/Territory, 2022



	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Chlamydia (%)	96	63	91	54	80	4	1	96
Gonorrhoea (%)	97	73	96	74	99	77	45	99
Infectious syphilis (%)	100	85	100	97	100	74	62	98
HIV (%)	100	100	100	100	100	100	100	100

Source: National Notifiable Diseases Surveillance System; see Methodology for details.

Figure 2 Reporting of Aboriginal and Torres Strait Islander status at notification of viral hepatitis by state/territory, 2022



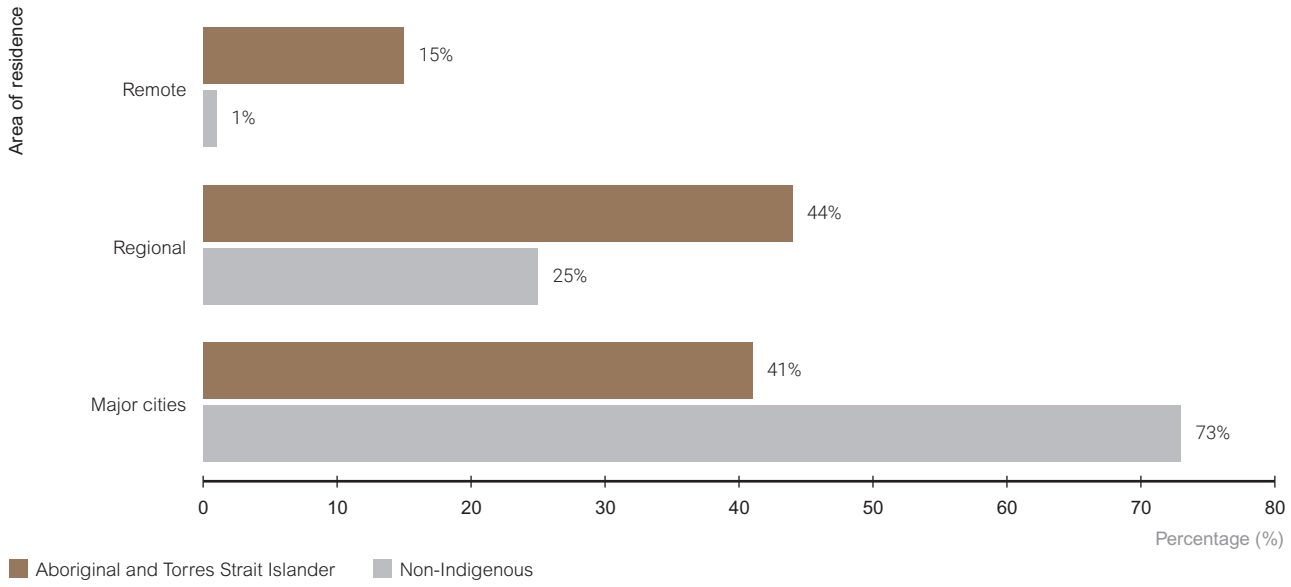
	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Newly diagnosed hepatitis B (%)	100	43	78	84	99	43	41	89
Newly diagnosed hepatitis C (%)	82	50	89	84	99	44	40	94

Source: National Notifiable Diseases Surveillance System; see Methodology for details.

Area of residence

Based on ABS population projections, it is estimated that in 2022, 15% of Aboriginal and Torres Strait Islander peoples lived in remote areas, 44% in regional areas and 41% in major cities, compared with 1%, 25%, and 73% of non-Indigenous people, respectively (Figure 3). See Methodology for further information.

Figure 3 Area of residence by Aboriginal and Torres Strait Islander status, 2022



Source: National Notifiable Diseases Surveillance System; see Methodology for details.

Aboriginal and Torres Strait Islander peoples in Australia

Aboriginal and Torres Strait Islander peoples make up 3.8% of the Australian population, with the greatest proportions living in New South Wales (36%) and Queensland (25%) (Table 1).

Table 1 Number and proportion of Aboriginal and Torres Strait Islander peoples living in each state and territory, 2021

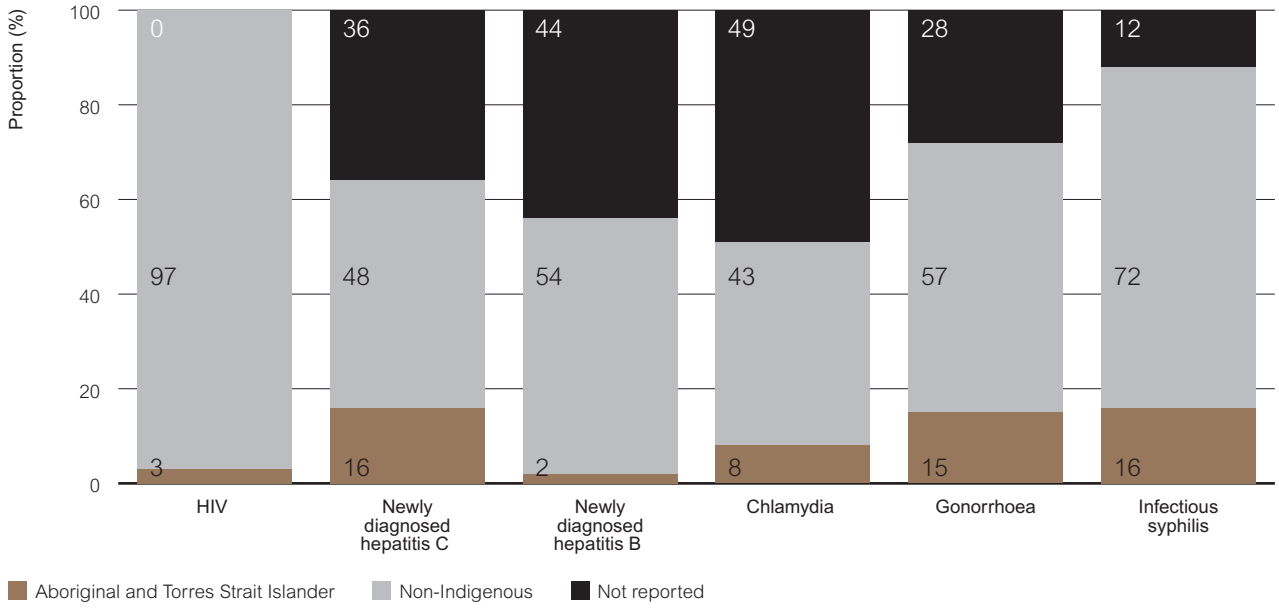
State/Territory	Estimated resident Aboriginal and Torres Strait Islander population	Proportion of total Australian Aboriginal and Torres Strait Islander population
Australian Capital Territory	8 971	1%
New South Wales	326 927	36%
Northern Territory	73 101	8%
Queensland	222 309	25%
South Australia	49 721	6%
Tasmania	31 140	3%
Victoria	74 263	8%
Western Australia	114 995	13%
Total	**901 655**	**100%**

Source: Estimates of Aboriginal and Torres Strait Islander Australians, June 2021, Australian Bureau of Statistics.

Number of notifications and notification rates in Aboriginal and Torres Strait Islander peoples

Aboriginal and Torres Strait Islander peoples make up 3.8% of the Australian population but accounted for a disproportionate level (2% to 16%) of all notifications of STIs and BBVs (except for HIV and newly acquired hepatitis B) in 2022 (Figure 4). For many infections, this proportion may not be truly representative due to the incomplete reporting of Aboriginal and Torres Strait Islander status.

Figure 4 Proportion of all notifications by Aboriginal and Torres Strait Islander status, 2022



Source: National Notifiable Diseases Surveillance System; see Methodology for details.

In 2022, age standardised notification rates of STIs and blood borne viruses in Aboriginal and Torres Strait Islander peoples were up to seven times as high as among non-Indigenous people (Table 2).

Table 2 Number and notification rate of sexually transmissible infections and blood borne viruses in Australia by Aboriginal and Torres Strait Islander status, 2022

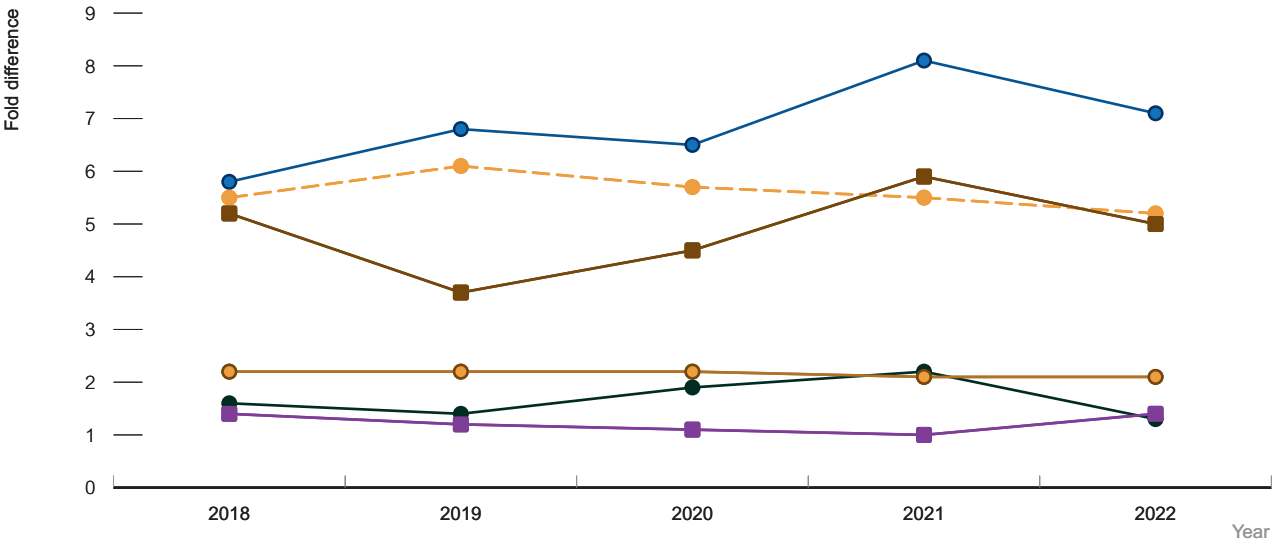
	Aboriginal and Torres Strait Islander		Non-Indigenous		Fold difference	Excluded jurisdictions[c]
Notifications of sexually transmissible infections and viral hepatitis	Number[a]	Rate[b]	Number	Rate[b]		
Chlamydia	7 683	814.1	39 886	374.9	2.2	TAS, VIC
Gonorrhoea	4 994	547.1	18 661	108.3	5.1	VIC
Infectious syphilis	971	108.6	4 351	21.0	5.2	None
HIV	25	3.2	555	2.2	1.5	None
Newly diagnosed hepatitis B (ALL)	108	19.0	2 757	14.6	1.3	TAS, VIC, NSW
Newly diagnosed hepatitis C (ALL)	1 088	156.2	3 221	21.7	7.2	TAS, VIC, NSW

a Jurisdictions in which Aboriginal and Torres Strait Islander status was reported for ≥50% of notifications in each of the past five years.
b Age-standardised rate per 100 000 population.
c Jurisdictions in which Aboriginal and Torres Strait Islander status was reported for less than 50% of notifications.

Source: National Notifiable Diseases Surveillance System; National HIV Registry; see Methodology for details.

Between 2018 and 2022 the difference between the age-standardised notification rates of Aboriginal and Torres Strait Islander peoples and non-Indigenous people, expressed as a ratio, remained stable for chlamydia, gonorrhoea, infectious syphilis, HIV, newly diagnosed hepatitis B, and increased for newly diagnosed hepatitis C (Figure 5) suggesting persisting disparities between the two populations.

Figure 5 Notification rates ratio by Aboriginal and Torres Strait Islander status and disease, 2018–2022



	2018	2019	2020	2021	2022
Chlamydia	2.2	2.2	2.2	2.1	2.1
Gonorrhoea	5.2	3.7	4.5	5.9	5.0
Infectious syphilis	5.5	6.1	5.7	5.5	5.2
HIV	1.4	1.2	1.1	1.0	1.4
Newly diagnosed hepatitis B	1.6	1.4	1.9	2.2	1.3
Newly diagnosed hepatitis C	5.8	6.8	6.5	8.1	7.1

Source: National Notifiable Diseases Surveillance System; see Methodology for details.

3 Sexually transmissible infections

Please see p. 6 for summary.

Syphilis

Infectious syphilis

Syphilis is a sexually transmissible infection caused by the bacterium ***Treponema pallidum.*** An expanded infectious syphilis national case definition was implemented in July 2015 in all jurisdictions except for New South Wales, where it was implemented in July 2016. The new case definition includes a new subcategory of 'probable' infectious syphilis to capture infectious syphilis cases in people without a prior testing history, particularly young people aged 15–19 years. The probable infectious syphilis cases are included in the number of infectious syphilis notifications for the years 2015–2022.

To allow a more appropriate comparison between Aboriginal and Torres Strait Islander peoples and non-Indigenous people, age-standardised notification rates per 100 000 population were calculated, by taking into consideration the differences in the distribution of age within these populations. Aboriginal and Torres Strait Islander status is relatively complete for all jurisdictions, enabling at least 80% of all infectious syphilis notifications in all jurisdictions to be notified by Aboriginal and Torres Strait Islander status for every year from 2013 to 2022. For this reason, infectious syphilis data are presented for the 10-year period 2013 to 2022.

There were 6036 infectious syphilis notifications in Australia in 2022. Of these, 971 (16%) notifications were among Aboriginal and Torres Strait Islander peoples, 4351 (72%) were among non-Indigenous people, and 714 (12%) were among people for whom Aboriginal and Torres Strait Islander status was not reported [(1)]. Details of Aboriginal and Torres Strait Islander infectious syphilis notifications for the 2013-2022 reporting period are provided in Table 3.

The ratio of male to female notifications in Aboriginal and Torres Strait Islander peoples in 2022 was 1:1 compared with 4.5:1 in non-Indigenous people (data not shown). This may indicate greater transmission occurring through heterosexual contact among Aboriginal and Torres Strait Islander peoples than among non-Indigenous people.

Table 3 Infectious syphilis notifications in Aboriginal and Torres Strait peoples, by characteristic, 2013–2022

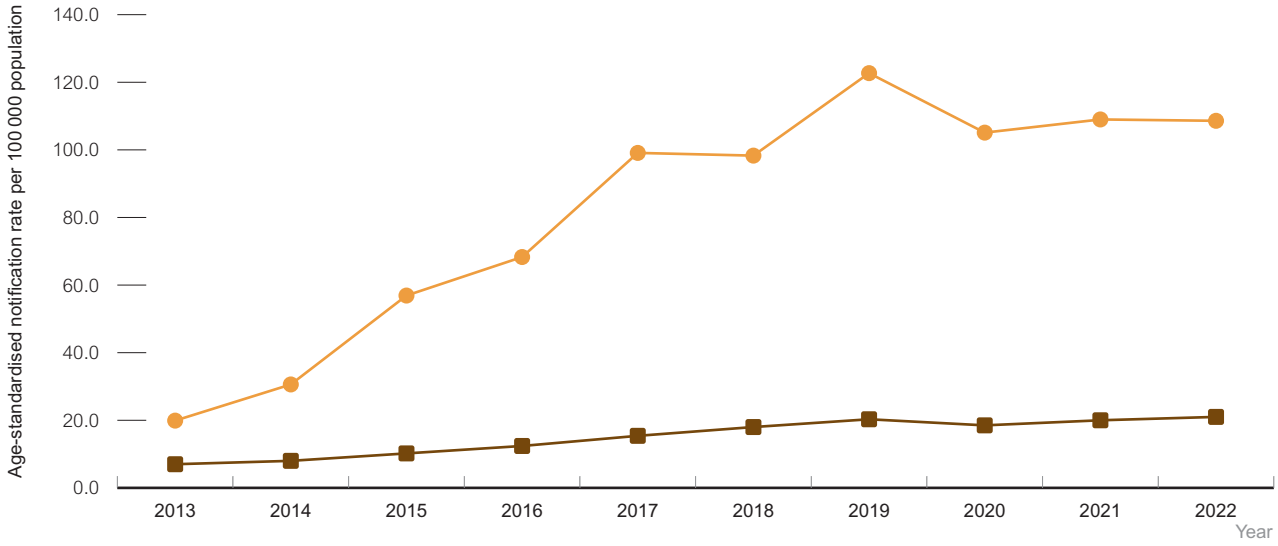
Characteristic	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total cases	161	252	464	550	799	809	1040	909	978	971
Gender[a]										
Male	88	139	266	304	405	418	516	452	473	493
Female	73	113	198	246	394	391	522	457	505	477
Median age in years	24	29	28	22	23	23	23	26	27	27
Age group										
0-14	8	11	16	17	23	7	30	17	12	8
15-19	42	73	111	111	150	138	214	204	195	156
20-24	44	55	121	94	154	173	190	154	222	194
25-29	12	36	70	116	133	150	170	137	155	175
30-39	22	40	87	121	192	185	241	220	222	268
≥40	33	37	59	91	147	156	195	177	172	170
State/Territory										
Australian Capital Territory	0	3	1	0	1	3	4	5	0	1
New South Wales	19	30	23	30	44	46	76	87	96	120
Northern Territory	12	59	184	206	270	289	307	241	203	201
Queensland	109	136	177	221	355	291	325	225	219	246
South Australia	6	3	17	12	28	38	34	34	27	22
Tasmania	1	0	0	0	0	0	0	0	1	0
Victoria	6	8	16	29	30	40	49	24	48	39
Western Australia	8	13	46	52	71	102	245	293	384	342
Congenital syphilis	4	3	2	1	5	4	1	8	9	8

a Excludes 'Not reported'; The National Notifiable Diseases Surveillance System includes the variable 'Sex' to indicate Sex/Gender. For reporting purposes, 'Gender' is used in place of 'Sex'.

Source: National Notifiable Diseases Surveillance System.

In 2022, the age-standardised infectious syphilis notification rate in Aboriginal and Torres Strait Islander peoples was more than five times as high as among non-Indigenous people (108.6 vs. 21 per 100 000). Among Aboriginal and Torres Strait Islander peoples, the infectious syphilis notification rate increased more than six-fold between 2013 and 2019 from 19.9 to 122.7 per 100 000. Between 2019 and 2022, the age standardised infectious syphilis notification rate declined from 122.7 to 108.6 per 100 000, likely due to the impacts of the COVID-19 pandemic (Figure 6). A similar trend over time was seen among Aboriginal and Torres Strait Islander males and females (Figure 7). Infectious syphilis notification rates among both Aboriginal and Torres Strait Islander males and females were three times and over 21 times as high as their non-Indigenous gender equivalent, respectively (Figure 7).

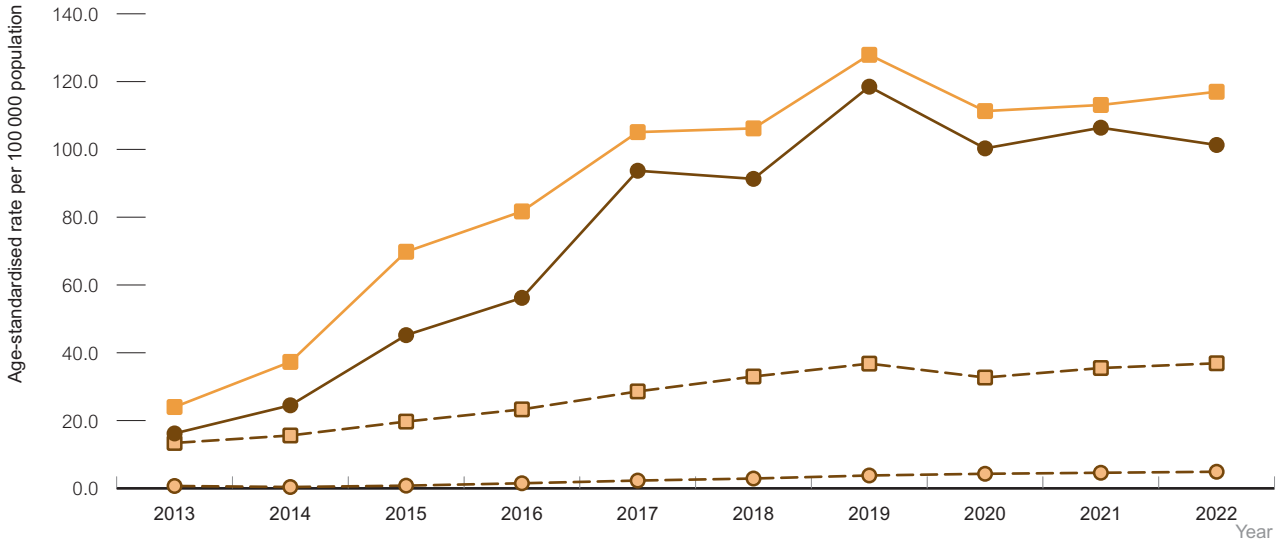
Figure 6 **Age standardised Infectious syphilis notification rate per 100 000 population by Aboriginal and Torres Strait Islander status, 2013-2022**



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander peoples	19.9	30.6	56.9	68.3	99.1	98.3	122.7	105.1	109.0	108.6
Non-Indigenous	7.0	8.0	10.2	12.4	15.4	18.0	20.3	18.5	20.0	21.0

Source: Australian National Notifiable Diseases Surveillance System.

Figure 7 Age standardised Infectious syphilis notification rate per 100 000 population by Aboriginal and Torres Strait Islander status 2013–2022

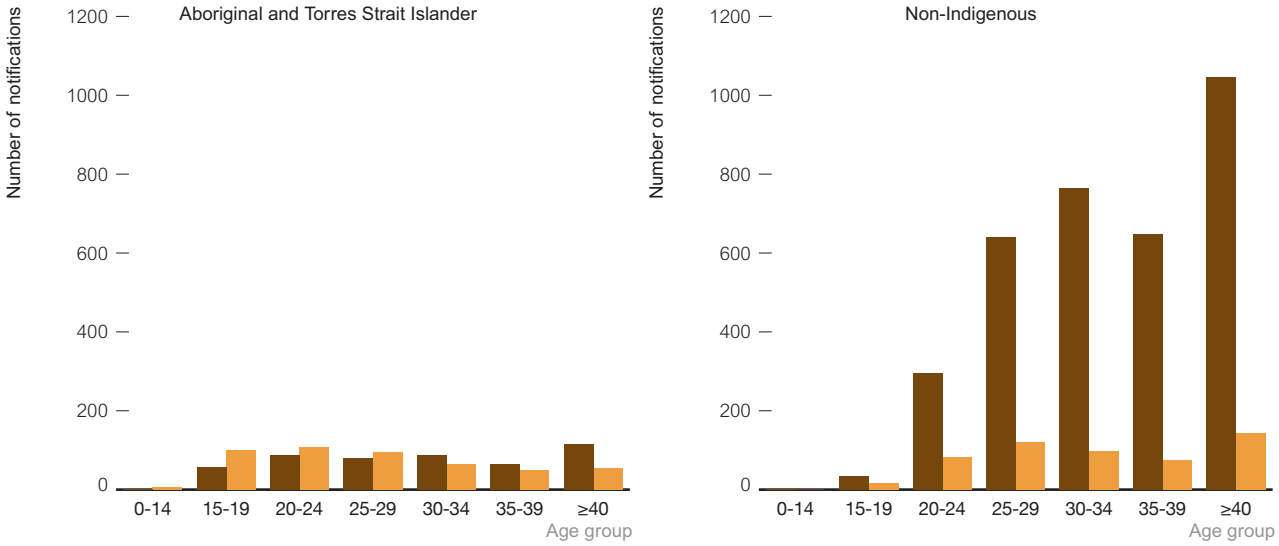


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander female	16.2	24.5	45.2	56.2	93.7	91.3	118.5	100.3	106.4	101.3
Aboriginal and Torres Strait Islander male	24.0	37.3	69.8	81.7	105.1	106.2	127.9	111.3	113.1	117.0
Non-Indigenous female	0.7	0.4	0.8	1.5	2.3	2.9	3.8	4.3	4.6	4.9
Non-Indigenous male	13.4	15.6	19.7	23.3	28.6	33.0	36.8	32.7	35.5	36.9

Source: Australian National Notifiable Diseases Surveillance System.

Differences in age at notification exist between Aboriginal and Torres Strait Islander peoples and non-Indigenous people. In 2022, the greatest proportion of infectious syphilis notifications in Aboriginal and Torres Strait Islander peoples occurred among those aged 20 to 24 years (20%). By comparison the highest proportion of notifications in non-Indigenous people in 2022 occurred among those aged over 40 years (30%) with a much higher proportion of notifications occurring among males than among females (Figure 8).

Figure 8 Number of infectious syphilis notifications by Aboriginal and Torres Strait Islander status, gender, and age group, 2022

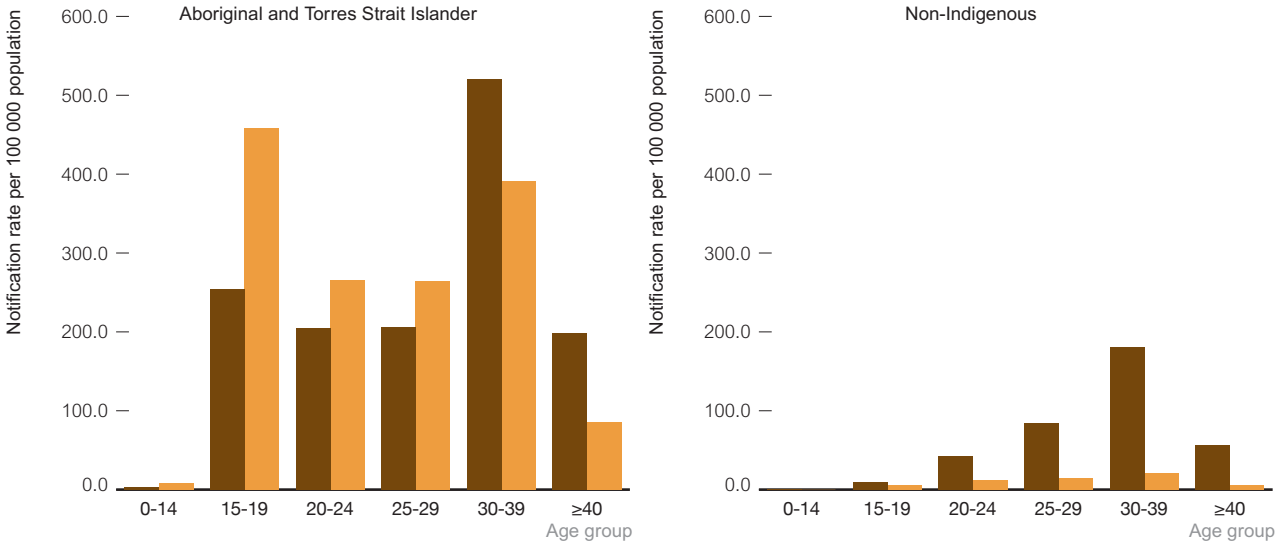


	Aboriginal and Torres Strait Islander							Non-Indigenous						
	0-14	15-19	20-24	25-29	30-34	35-39	≥40	0-14	15-19	20-24	25-29	30-34	35-39	≥40
Male	2	57	87	79	88	65	115	1	34	295	640	764	649	1046
Female	6	99	107	96	64	50	55	0	17	82	120	98	75	144

Source: Australian National Notifiable Diseases Surveillance System.

In 2022, the infectious syphilis notification rate in males was highest in those aged 30 to 39 years for both Aboriginal and Torres Strait Islander and non-Indigenous males (520.5 per 100 000 and 180.4 per 100 000 respectively). Similarly for non-Indigenous females the notification rate was highest for those aged 30 to 39 years old (20.4 per 100,000). However, for Aboriginal and Torres Strait Islander females, the infectious syphilis notification rate was highest for those aged 15 to 19 years (458.9 per 100 000) (Figure 9).

Figure 9 Infectious syphilis notification rate per 100 000 population by Aboriginal and Torres Strait Islander status and age group, 2022

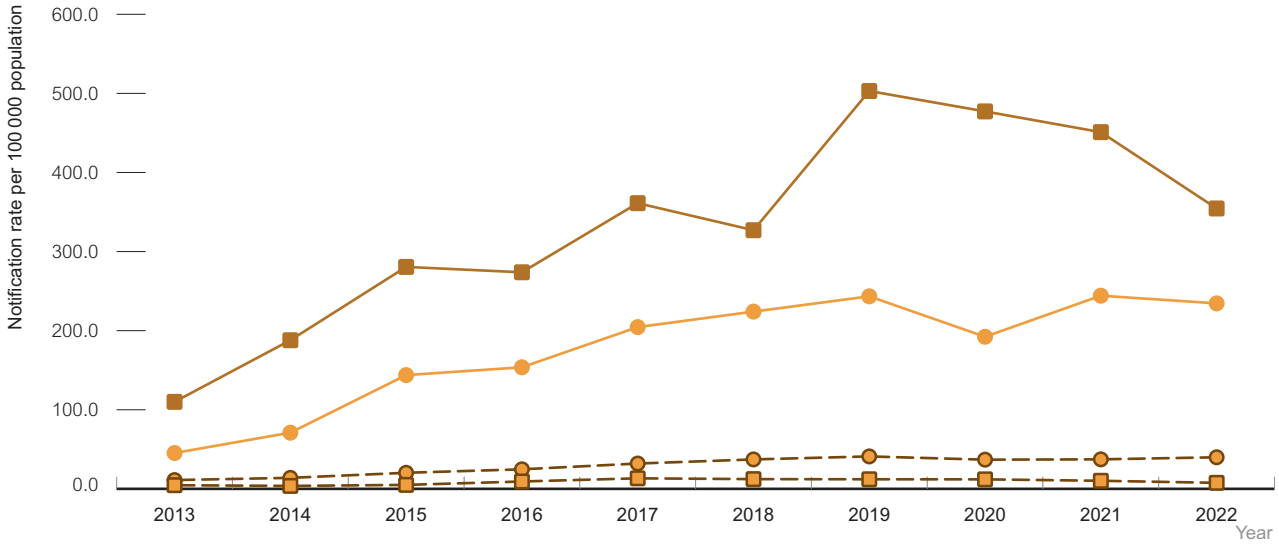


	Aboriginal and Torres Strait Islander						Non-Indigenous					
	0-14	15-19	20-24	25-29	30-39	≥40	0-14	15-19	20-24	25-29	30-39	≥40
Male	2.7	254.0	205.4	206.3	520.5	198.1	0.1	9.7	42.7	84.6	180.4	56.7
Female	8.6	458.9	265.0	264.2	391.5	85.0	0.0	5.1	11.8	14.6	20.4	5.2

Source: Australian National Notifiable Diseases Surveillance System.

Between 2013 and 2019, infectious syphilis notification rates increased sharply in Aboriginal and Torres Strait Islander peoples aged 15 to 19 years and 20 to 29 years from 110.0 to 503.0 per 100 000 and from 45.3 to 243.4 per 100 000, respectively (Figure 10). Infectious syphilis notification rates fluctuated between 2019 and 2022 and in 2022 were 354.5 per 100 000 among those aged 15 to 19 years and 234.5 per 100 000 among those aged 20 to 29 years. In all years and among both age groups, the infectious syphilis notification rate was higher in Aboriginal and Torres Strait Islander peoples than in non-Indigenous people.

Figure 10 Infectious syphilis notification rate per 100 000 population in Aboriginal and Torres Strait Islander peoples by age group, 2013–2022

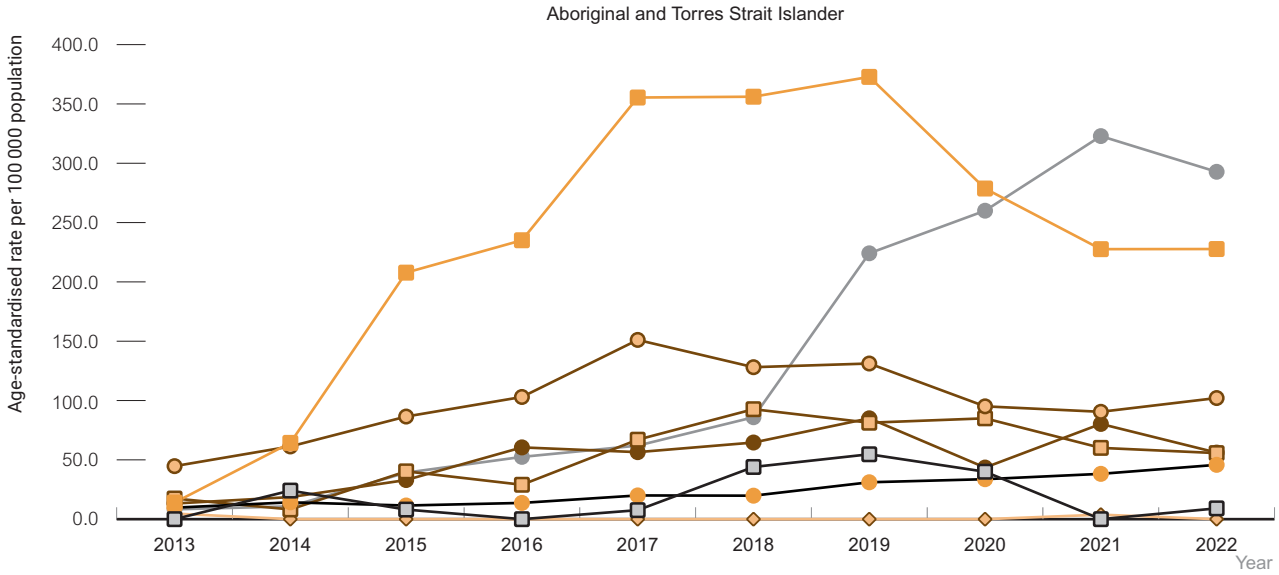


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander aged 15-19 years	110.0	187.9	280.6	273.8	361.2	327.0	503.0	477.2	451.0	354.5
Aboriginal and Torres Strait Islander aged 20-29 years	45.3	71.0	143.8	153.7	204.5	224.1	243.4	192.3	244.2	234.5
Non-Indigenous aged 15-19 years	4.6	3.7	5.0	9.3	13.3	12.3	12.1	12.0	10.2	7.6
Non-Indigenous aged 20-29 years	11.1	13.9	20.3	24.7	32.0	37.2	41.0	36.9	37.3	39.9

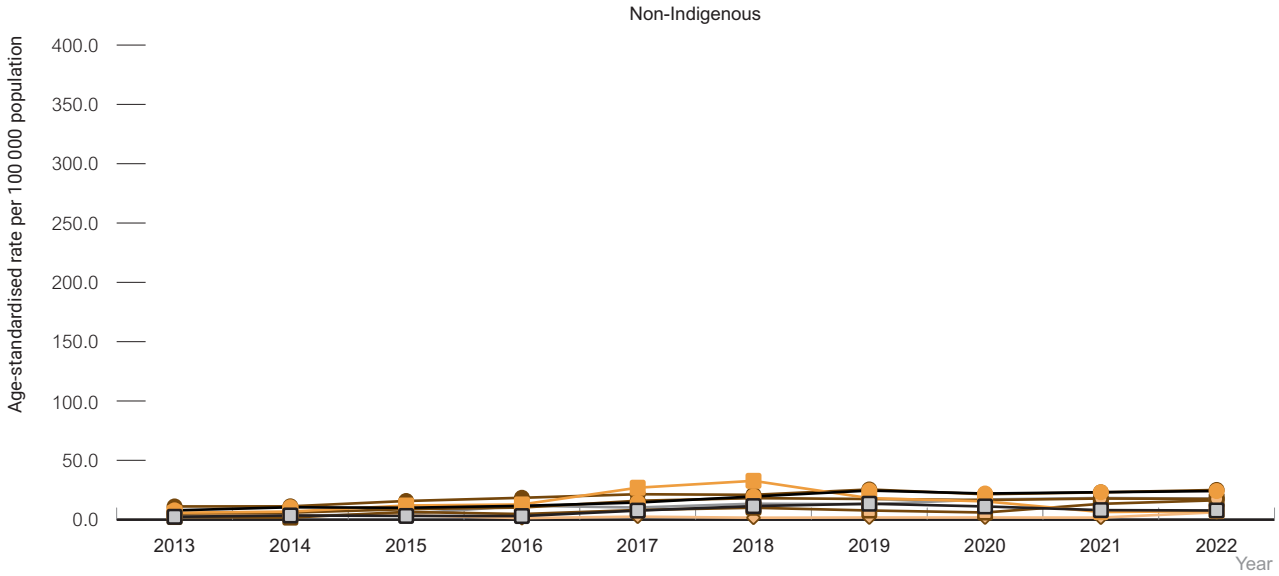
Source: Australian National Notifiable Diseases Surveillance System.

In 2022, infectious syphilis notification rates among Aboriginal and Torres Strait Islander peoples were highest in Western Australia (292.8 per 100 000), followed by the Northern Territory (227.7 per 100 000), and Queensland (102.1 per 100 000). There were fluctuations in infectious syphilis notification rates by state and territory between 2019 and 2021 due to the COVID-19 pandemic. Between 2013 and 2021, infectious syphilis notification rates among Aboriginal and Torres Strait Islander peoples increased considerably in every state and territory apart from the Australian Capital Territory and Tasmania. In 2022, notification rates were at least twice as high among Aboriginal and Torres Strait Islander peoples compared with non-Indigenous peoples in every state and territory apart from the Australian Capital Territory, Tasmania, and New South Wales (Figure 11).

Figure 11 Infectious Syphilis notification rate per 100 000 population by Aboriginal and Torres Strait Islander status by jurisdiction, 2013–2022



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
ACT	0.0	24.1	8.1	0.0	7.6	44.0	54.7	40.0	0.0	9.1
NSW	9.7	14.2	11.5	13.7	20.0	19.8	31.1	33.7	38.2	45.8
NT	14.0	64.3	207.8	235.1	355.4	356.1	372.8	278.7	227.6	227.7
QLD	44.7	61.3	86.5	103.0	151.1	128.1	131.2	95.1	90.5	102.1
SA	17.4	8.2	40.3	29.0	67.0	92.7	81.3	85.0	60.1	55.7
TAS	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0
VIC	13.2	18.6	33.0	60.5	56.5	64.6	85.0	43.5	80.3	56.1
WA	8.3	10.8	39.2	52.5	62.0	85.9	224.1	260.0	322.9	292.8

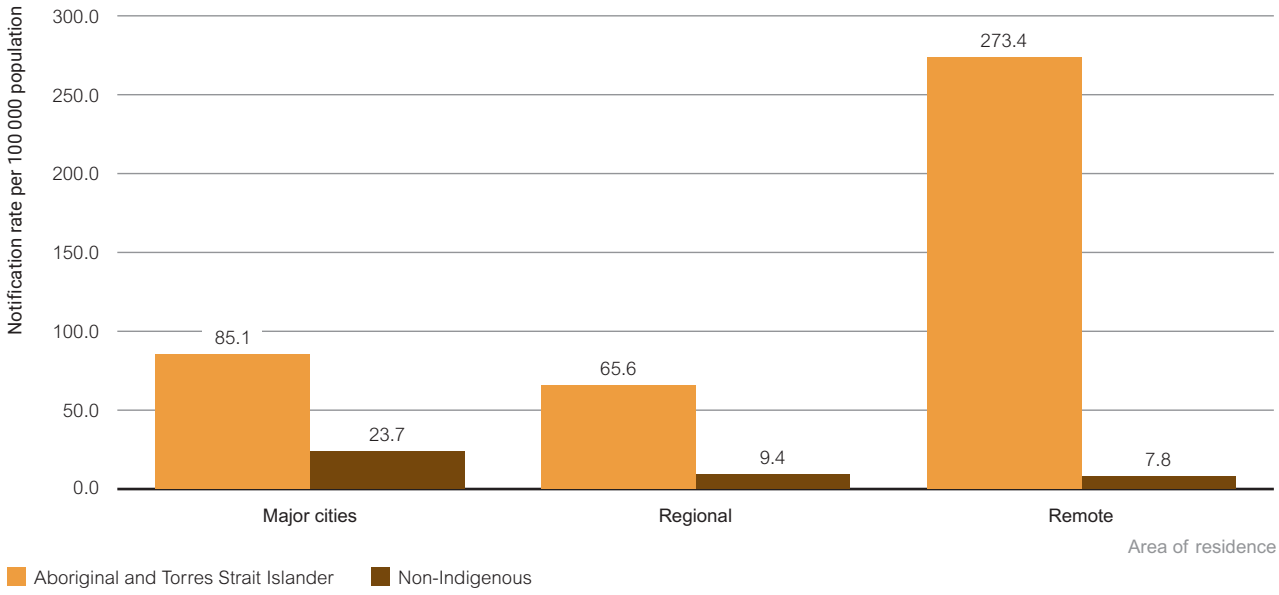


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
ACT	2.4	3.5	3.1	3.0	7.6	11.4	13.4	11.1	8.0	7.7
NSW	7.8	10.4	10.0	11.6	14.4	19.5	24.5	22.0	23.1	24.1
NT	5.8	6.8	11.9	12.8	26.9	32.7	18.1	15.4	6.4	7.2
QLD	5.2	5.9	8.8	10.2	15.9	18.1	17.4	16.5	17.8	17.4
SA	2.2	1.7	6.5	4.7	8.1	10.0	7.7	6.0	13.3	16.3
TAS	4.6	3.3	3.7	1.3	2.5	1.6	1.8	1.8	1.7	6.2
VIC	11.1	11.2	15.7	18.4	21.4	20.9	25.4	21.4	23.0	25.0
WA	3.2	3.3	4.7	11.7	10.2	13.4	13.0	17.0	18.2	17.7

Source: Australian National Notifiable Diseases Surveillance System.

In 2022, the infectious syphilis notification rate among Aboriginal and Torres Strait Islander peoples in major cities was nearly four times as high as among non-Indigenous people (85.1 vs. 23.7 per 100 000), increasing to seven times in regional areas (65.6 vs. 9.4 per 100 000), and 35 times in remote areas (273.4 vs. 7.8 per 100 000) (Figure 12).

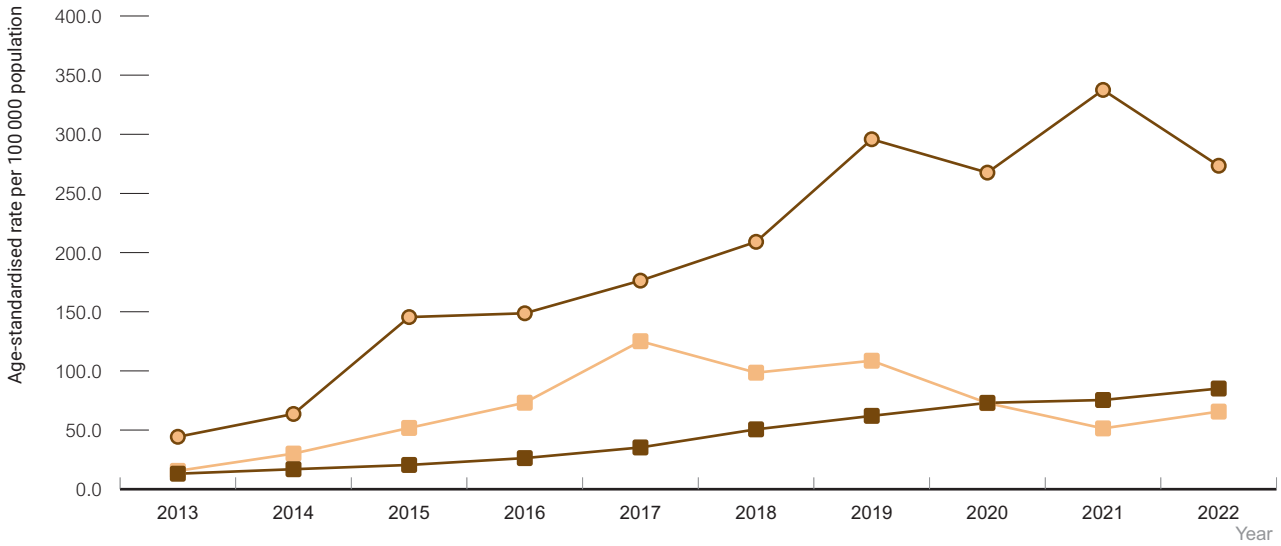
Figure 12 Infectious syphilis notification rate per 100 000 population by Aboriginal and Torres Strait Islander status and area of residence, 2022



Source: Australian National Notifiable Diseases Surveillance System.

Between 2013 and 2022, age standardised infectious syphilis notification rates among Aboriginal and Torres Strait Islander peoples living in major cities and remote areas increased by 550% and 517%, respectively. In regional areas rates increased by nearly 710% between 2013 and 2017, then decreased by 48% to 2022(Figure 13).

Figure 13 Infectious syphilis notification rate per 100 000 population by area of residence, 2013–2022



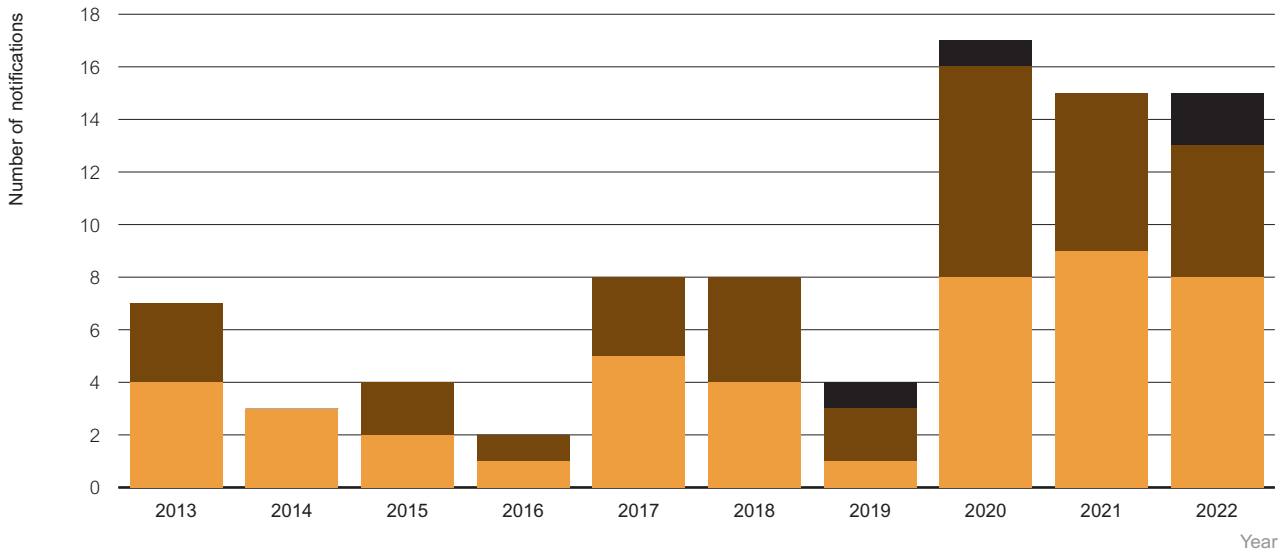
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Major cities	13.1	16.9	20.5	26.3	35.3	50.6	62.0	73.0	75.4	85.1
Regional	15.5	30.1	51.8	73.1	125.1	98.5	108.6	72.8	51.4	65.6
Remote	44.3	63.6	145.5	148.7	176.3	209.1	295.8	267.6	337.5	273.4

Source: Australian National Notifiable Diseases Surveillance System.

Congenital syphilis

Congenital syphilis occurs when syphilis is passed from birth parent to child during foetal development or at birth. Between 2013 and 2022, over half (45) of the 83 congenital syphilis notifications were among Aboriginal and Torres Strait Islander infants, with 8 notifications in 2022 (Figure 14). The congenital syphilis notification rate among Aboriginal and Torres Strait Islander infants was 34 per 100 000 live births in 2022 in comparison with 2.4 per 100 000 in non-Indigenous people (Figure 15). Caution should be taken when interpreting trends in notification rates due to the small number of congenital syphilis notifications each year.

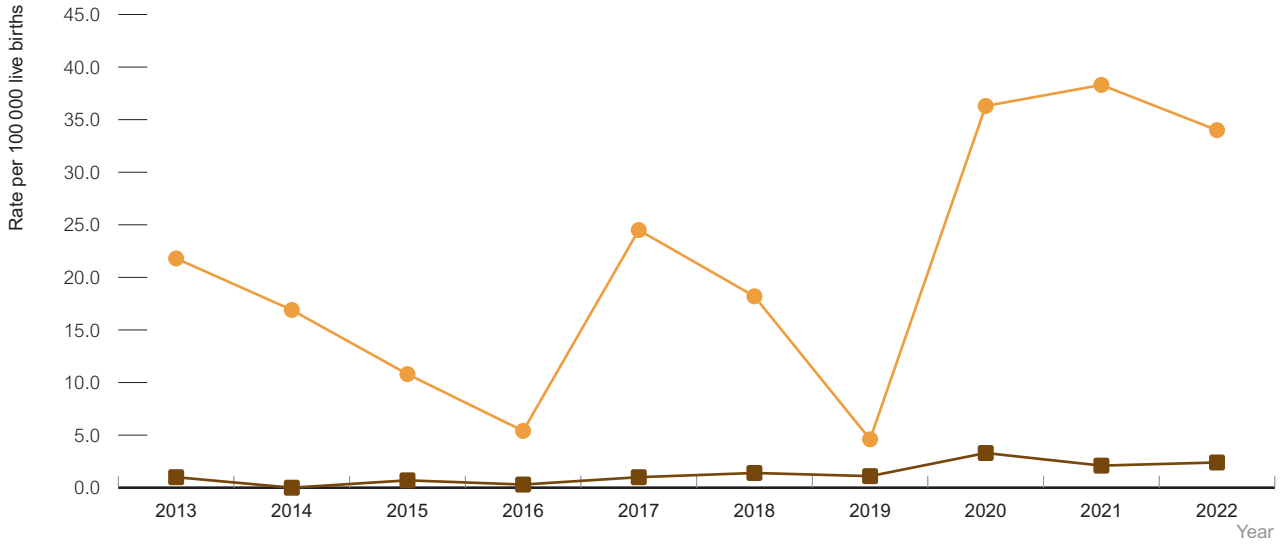
Figure 14 Number of congenital syphilis cases by Aboriginal and Torres Strait Islander status, 2013–2022



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Not reported	0	0	0	0	0	0	1	1	0	2
Non-Indigenous	3	0	2	1	3	4	2	8	6	5
Aboriginal and Torres Strait Islander	4	3	2	1	5	4	1	8	9	8

Source: Australian National Notifiable Diseases Surveillance System.

Figure 15 Congenital syphilis rate per 100 000 live births[a] by Aboriginal and Torres Strait Islander status, 2013–2022



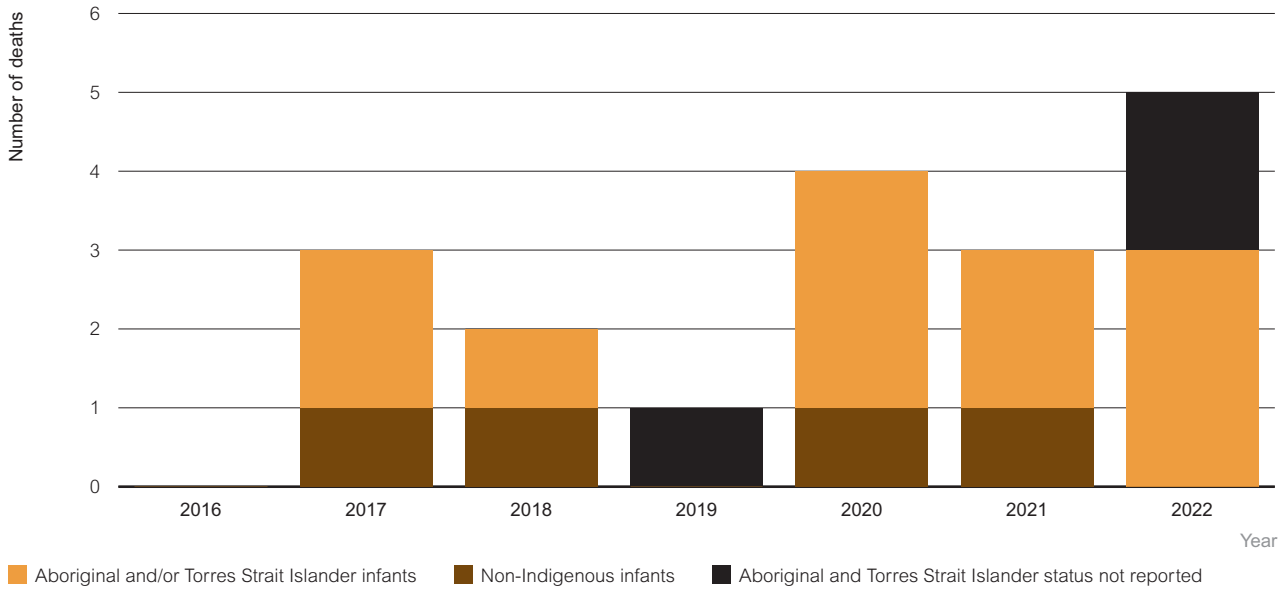
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander births	21.8	16.9	10.8	5.4	24.5	18.2	4.6	36.3	38.3	34.0
Non-Indigenous births	1.0	0.0	0.7	0.3	1.0	1.4	1.1	3.3	2.1	2.4

a Includes notifications where Aboriginal and Torres Strait Islander status was not reported.

Source: Australian National Notifiable Diseases Surveillance System.

Of the 69 congenital cases notified between 2016 and 2022, 18 cases resulted in the death of the infant (including stillbirth). Of these, 11 deaths occurred among Aboriginal and Torres Strait Islander infants, and five occurred among non-Indigenous infant and indigenous status of remaining two infants that have died was unknown (Figure 16).

Figure 16 Deaths attributed to congenital syphilis by Aboriginal and Torres Strait Islander status, 2016–2022



Source: Australian Department of Health and Aged Care.

Chlamydia

Chlamydia is a sexually transmissible infection caused by a specific strain of bacteria known as Chlamydia trachomatis. Chlamydia was the most frequently notified sexually transmissible infection in Australia in 2022, with a total of 93 777 notifications, of which 7683 (8%) were among Aboriginal and Torres Strait Islander peoples, 39 886 (43%) were among non-Indigenous people, and 46 208 (49%) were for people for whom Aboriginal and Torres Strait Islander status was not reported [(1)]. Details of Aboriginal and Torres Strait Islander chlamydia notifications for the 2018-2022 reporting period are provided in Table 4.

Table 4 Chlamydia notifications in Aboriginal and Torres Strait peoples, by characteristic, 2018–2022

Characteristic	2018	2019	2020	2021	2022
Total cases	8407	8483	7796	7570	7683
Gender[a]					
Male	3000	2927	2714	2675	2775
Female	5406	5555	5080	4893	4905
Median age in years	20	21	21	21	21
Age groups					
0-14	268	265	205	174	155
15-19	2809	2659	2422	2397	2391
20-24	2603	2541	2353	2325	2309
25-29	1358	1482	1324	1305	1266
30-39	996	1116	1068	1038	1137
≥40	373	420	424	331	425
State/Territory[b]					
Australian Capital Territory	73	67	61	48	48
New South Wales	1392	1467	1292	1363	1440
Northern Territory	1623	1858	1697	1544	1570
Queensland	3212	3068	2863	2719	2595
South Australia	461	384	395	425	376
Western Australia	1642	1585	1484	1467	1639

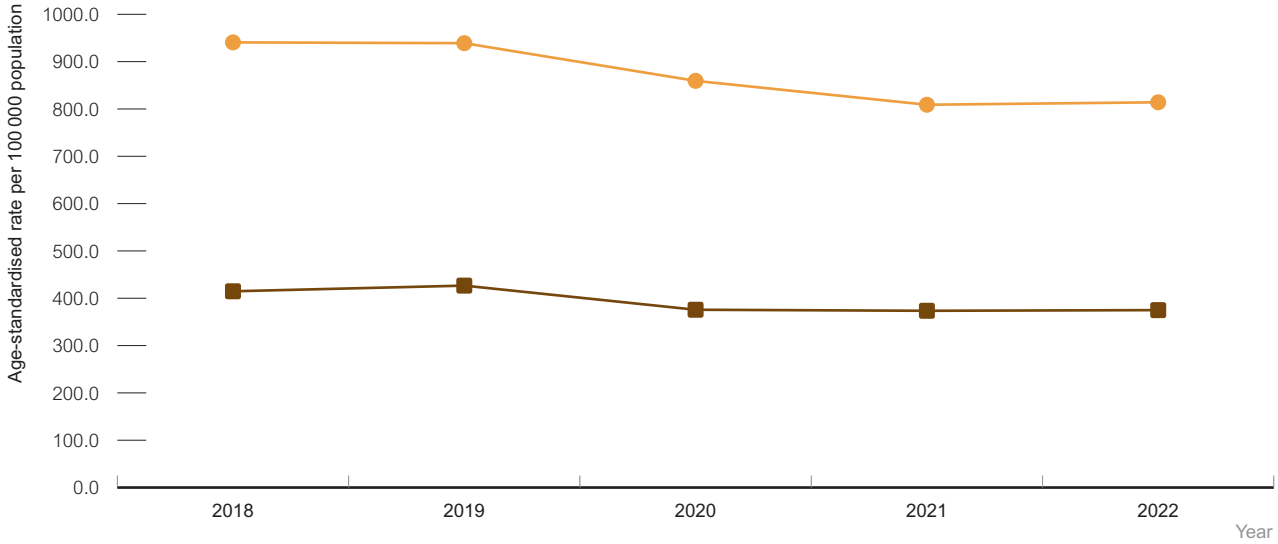
a Excludes 'Not reported'; The National Notifiable Diseases Surveillance System includes the variable 'Sex' to indicate Sex/Gender. For reporting purposes, 'Gender' is used in place of 'Sex'.
b Numbers of notifications in some jurisdictions may be strongly influenced by completeness of Aboriginal and Torres Strait Islander status.

Source: National Notifiable Diseases Surveillance System.

Notification rates are based on data from six jurisdictions (Australian Capital Territory, Northern Territory, South Australia, Western Australia, New South Wales, Queensland), where Aboriginal and Torres Strait Islander status was at least 50% complete for chlamydia notifications for each of the five years (2018–2022).

The chlamydia notification age standardised rate for Aboriginal and Torres Strait Islander peoples in 2022 of 814.1 per 100 000 population was more than twice that of non-Indigenous peoples at 374.9 per 100 000 population (Figure 17).

Figure 17 Chlamydia notification rate per 100 000 population by Aboriginal and Torres Strait Islander status, 2018–2022



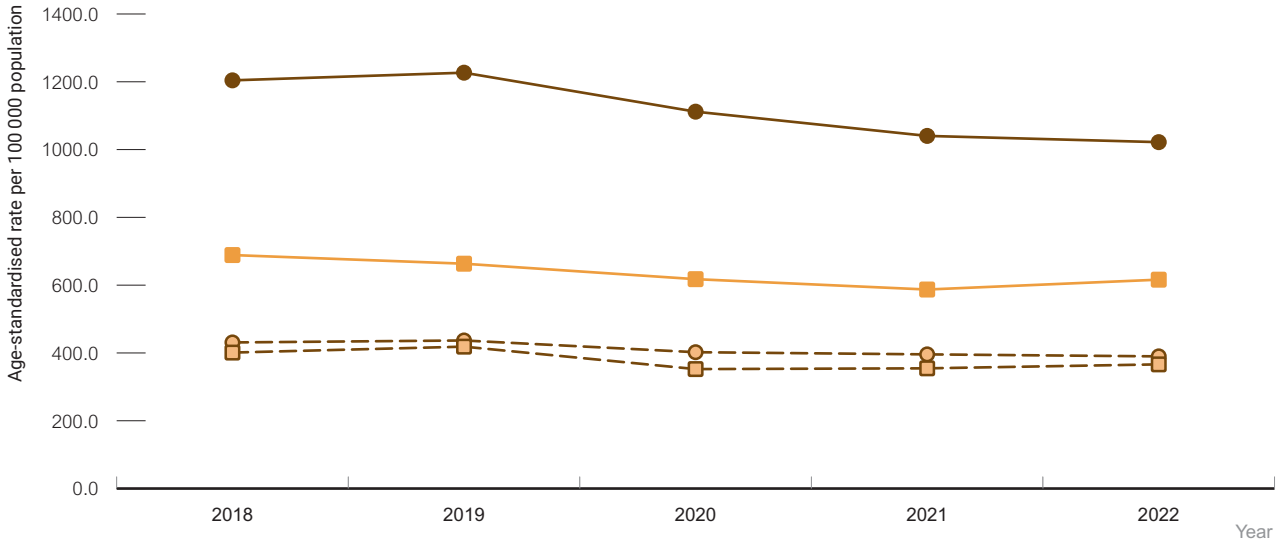
	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander peoples	940.7	939.0	859.4	808.9	814.1
Non-Indigenous	414.7	426.7	375.7	373.5	374.9

Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Aboriginal and Torres Strait Islander status was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, South Australia Western Australia, New South Wales, Queensland).

Between 2018 and 2022, chlamydia notification rates among Aboriginal and Torres Strait Islander males and females decreased by 11% (688.8 to 616.2 per 100 000) and by 15% (1204.2 to 1021.9 per 100 000) respectively.

In 2022, the age standardised chlamydia notification rate was more than two and a half times as high in Aboriginal and Torres Strait Islander females as in non-Indigenous females (1021.9 per 100 000 vs 389.9 per 100 000) and more than one and a half times as high in Aboriginal and Torres Strait Islander males as in non-Indigenous males (616.2 per 100 000 vs 366.3 per 100 000) (Figure 18).

Figure 18 Chlamydia notification rate per 100 000 population by Aboriginal and Torres Strait Islander status, 2018–2022

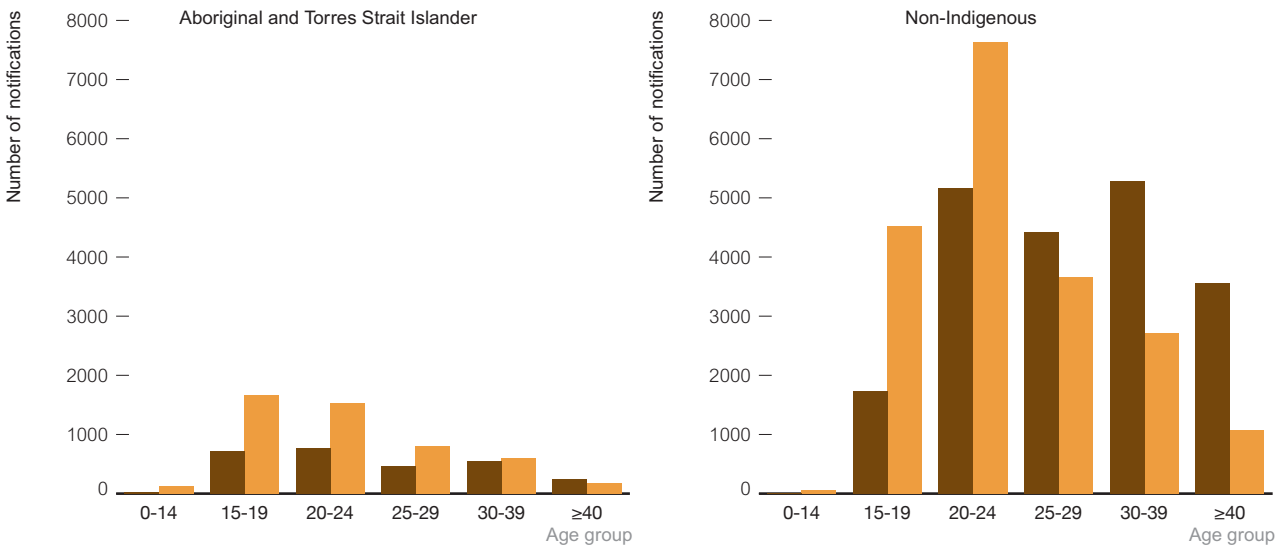


	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander females	1204.2	1226.8	1111.8	1040.3	1021.9
Aboriginal and Torres Strait Islander males	688.8	663.3	617.7	587.1	616.2
Non-Indigenous females	431.0	436.8	402.2	395.8	389.9
Non-Indigenous males	401.1	418.6	352.4	354.6	366.3

Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Non-Indigenous people was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, South Australia, Western Australia, Queensland, New South Wales).

Chlamydia is notified predominantly among young people. In 2022, 78% of chlamydia notifications were in the 15–29 age group in Aboriginal and Torres Strait Islander peoples, with 68% among non-Indigenous people. In 2022, of the chlamydia notifications in Aboriginal and Torres Strait Islander peoples, 2775 were among males and 4905 among females, providing a male-to-female ratio of 0.57:1 compared to 1:1 among non-Indigenous people (Figure 19). This may reflect differences in health seeking behaviour and suggests an under-identification of cases of chlamydia among men compared to women.

Figure 19 Number of chlamydia notifications by Aboriginal and Torres Strait Islander status, gender, and age group, 2022

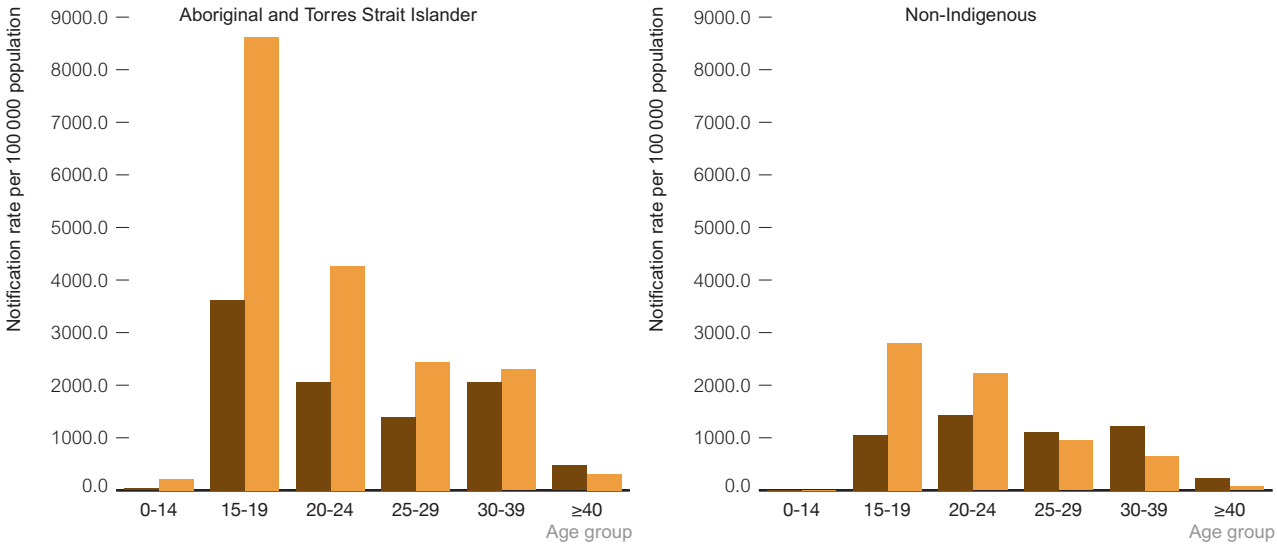


	Aboriginal and Torres Strait Islander						Non-Indigenous					
	0-14	15-19	20-24	25-29	30-39	≥40	0-14	15-19	20-24	25-29	30-39	≥40
Male	22	724	773	471	541	244	12	1732	5167	4421	5288	3557
Female	133	1666	1534	795	596	181	62	4523	7641	3666	2711	1076

Source: National Notifiable Diseases Surveillance System; numbers include data from every state and territory, regardless of Aboriginal and Torres Strait Islander status completeness.

By age group and gender, the chlamydia notification rate for males aged 15 to 19 years was more than three times as high among Aboriginal and Torres Strait Islander males than among non-Indigenous males (3618.1 per 100 000 vs 1056.5 per 100 000) (Figure 20). The chlamydia notification rate for Aboriginal and Torres Strait Islander females aged 15 to 19 was more than three times as high as the rate among non-Indigenous females in the same age group (8618.7 vs. 2804.3 per 100 000). Among Aboriginal and Torres Strait Islander females aged 20 to 24 years old the rate was nearly twice as high as the rate among non-Indigenous females in the same age group (4264.8 vs. 2221.6 per 100 000) (Figure 20). In 2022, notification rates were highest in Aboriginal and Torres Strait Islander females, aged 15 to 19 years (8618.7 per 100 000 population) followed by those aged 20 to 24 years (4264.8 per 100 000). However, please note, in the absence of availability of the testing data, it is uncertain to conclude the high rates in this age group are attributed increased infections or due to increased testing.

Figure 20 Chlamydia notification rate per 100 000 population by Aboriginal and Torres Strait Islander population, by age group, 2022

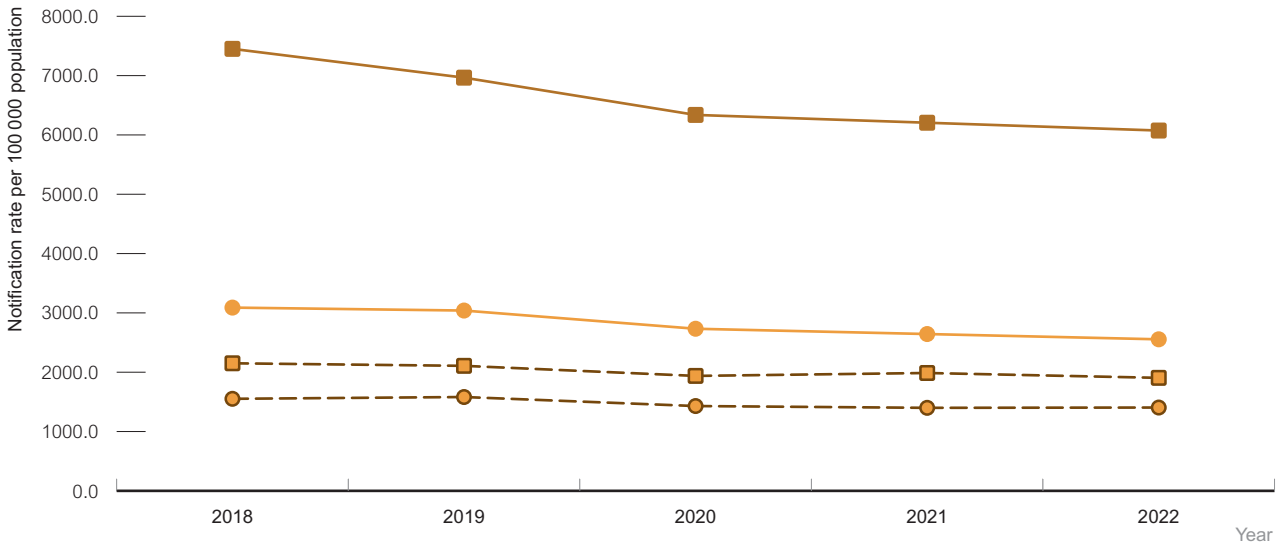


	Aboriginal and Torres Strait Islander						Non-Indigenous					
	0-14	15-19	20-24	25-29	30-39	≥40	0-14	15-19	20-24	25-29	30-39	≥40
Male	33.4	3618.1	2054.5	1390.5	2056.7	471.1	3.1	1056.5	1437.9	1107.5	1220.2	240.0
Female	212.7	8618.7	4264.8	2445.8	2301.1	312.2	12.9	2804.3	2221.6	949.2	654.5	75.5

Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Aboriginal and Torres Strait Islander status was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, South Australia, Western Australia, New South Wales and Queensland).

The chlamydia notification rate among Aboriginal and Torres Strait Islander peoples aged 15 to 19 years declined by 18% from 7451.0 per 100 000 in 2018 to 6074.0 per 100 000 in 2022. Similarly, among Aboriginal and Torres Strait Islander peoples aged 20 to 29 years, notification rates decreased by 17% from 3089.2 per 100 000 in 2018 to 2554.5 per 100 000 in 2022 (Figure 21). Rates also declined by 11% in non-Indigenous people aged 15 to 19 years, from 2150.4 per 100 000 in 2018 to 1904.9 per 100 000 in 2022. The chlamydia notification rate among non-Indigenous people aged 20 to 29 years remained steady and was 1404.4 per 100 000 in 2022.

Figure 21 Chlamydia notification rate per 100 000 population among Aboriginal and Torres Strait Islander people by age group, 2018-2022

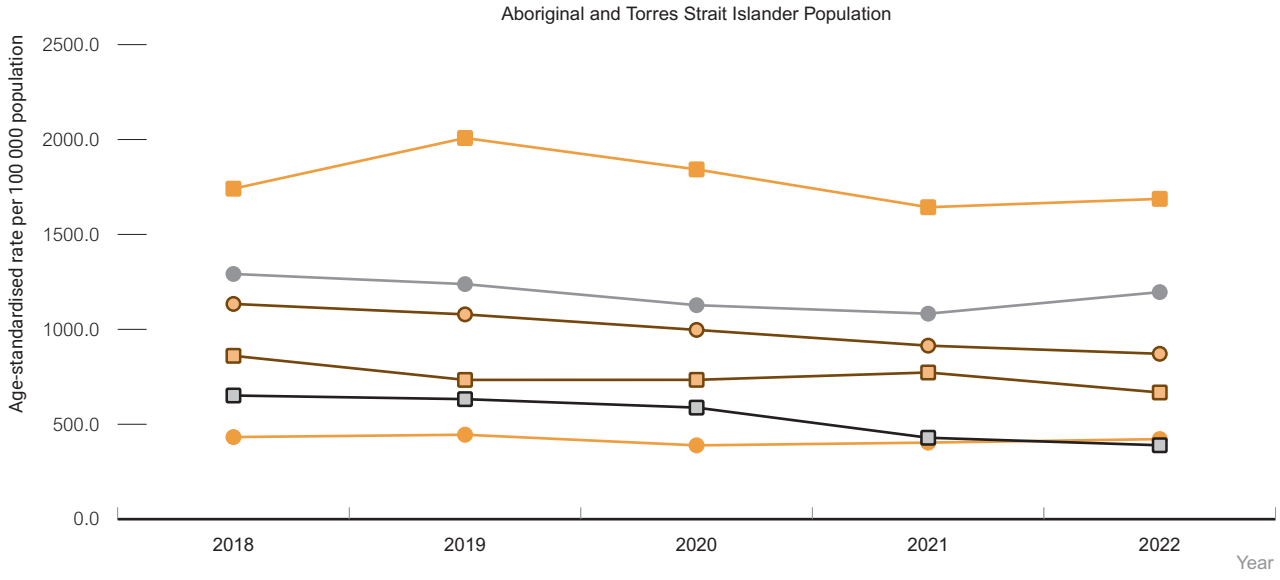


	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander people aged 15-19 years	7451.0	6965.6	6337.4	6205.7	6074.0
Aboriginal and Torres Strait Islander aged 20-29 years	3089.2	3039.5	2732.6	2643.5	2554.5
Non-Indigenous people aged 15-19 years	2150.4	2107.3	1937.6	1986.8	1904.9
Non-Indigenous people aged 20-29 years	1551.6	1581.7	1429.6	1399.5	1404.4

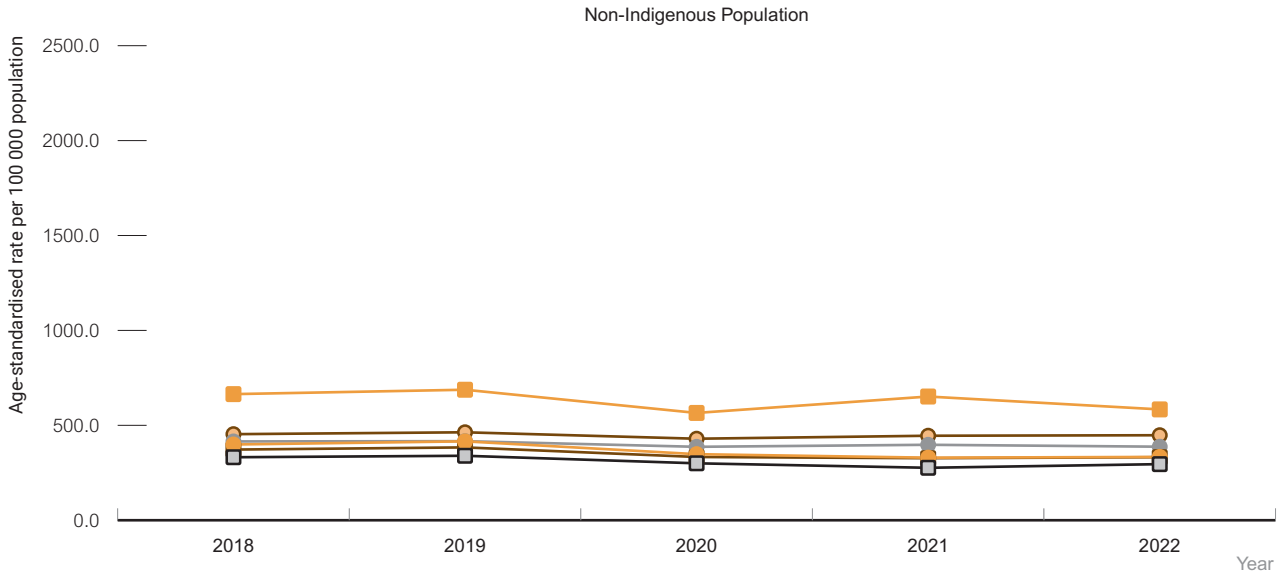
Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Aboriginal and Torres Strait Islander status was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, South Australia, Western Australia, Queensland and New South Wales).

In 2022, chlamydia notification rates among Aboriginal and Torres Strait Islander peoples were highest in the Northern Territory (1687.4 per 100 000), followed by Western Australia (1196.2 per 100 000), and Queensland (871.2 per 100 000). In every reported state and territory, chlamydia notification rates among Aboriginal and Torres Strait Islander peoples fluctuated between 2018 and 2022 with declines between 2019 and 2021 likely related to the COVID-19 pandemic. In 2022, notification rates were higher among Aboriginal and Torres Strait Islander peoples compared with non-Indigenous peoples in every reported state and territory (Figure 22).

Figure 22 Chlamydia notification rate per 100 000 population by Aboriginal and Torres Strait Islander status and state/territory, 2018–2022



	2018	2019	2020	2021	2022
ACT	651.5	632.3	587.7	429.0	389.3
NSW	432.5	444.9	388.8	403.4	421.8
NT	1741.1	2007.9	1842.6	1643.4	1687.4
SA	860.6	733.7	734.0	772.7	667.4
WA	1291.8	1238.4	1127.3	1082.5	1196.2
QLD	1133.9	1078.8	997.1	914.1	871.2

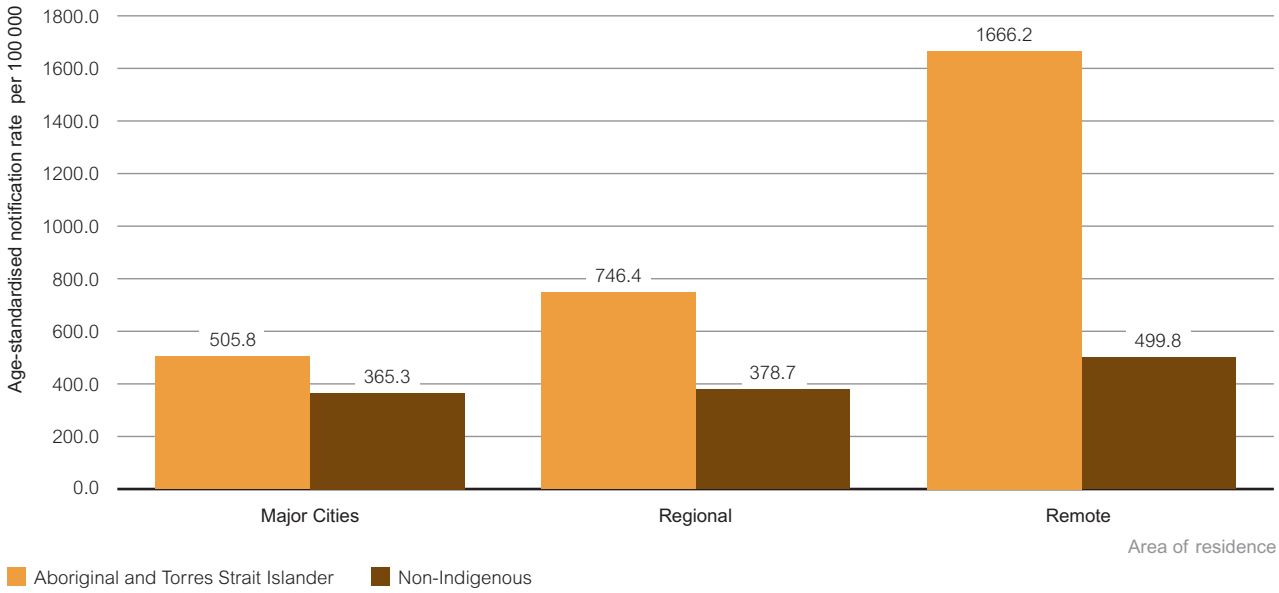


	2018	2019	2020	2021	2022
ACT	331.9	339.6	299.9	276.3	295.5
NSW	399.0	415.6	348.0	329.6	333.5
NT	664.4	687.5	565.3	651.7	583.9
SA	372.2	383.7	333.2	326.8	332.1
WA	415.1	416.6	386.8	397.5	387.4
QLD	453.4	463.3	429.4	445.1	447.8

Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Aboriginal and Torres Strait Islander status was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, South Australia, Western Australia, Queensland and New South Wales).

In 2022, the chlamydia notification rate in Aboriginal and Torres Strait Islander peoples compared to non-Indigenous people was higher in all areas of residence. In regional areas the chlamydia notification rates were nearly two times as high increasing to three times as high in remote areas (Figure 23).

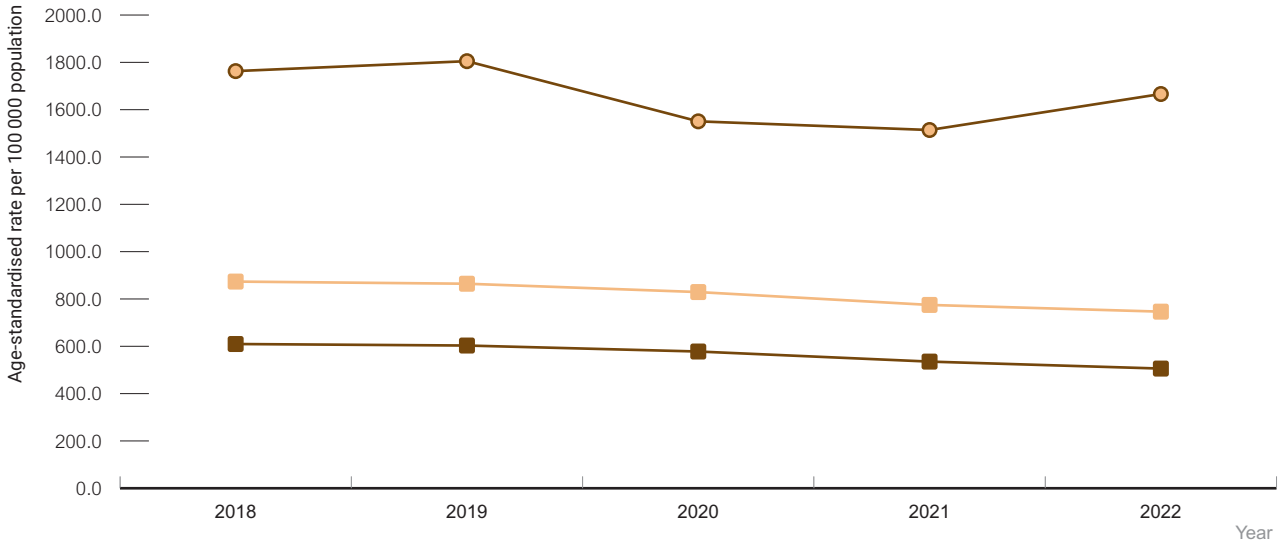
Figure 23 Chlamydia notification rate per 100 000 population by Aboriginal and Torres Strait Islander status and area of residence, 2022



Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Non-Indigenous people was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, South Australia, Western Australia, Queensland, New South Wales).

Between 2018 and 2022, age standardised chlamydia notification rates in Aboriginal and Torres Strait Islander peoples living in major cities decreased by 17% from 609.6 per 100 000 to 505.8 per 100 000. Similarly, notification rates in Aboriginal and Torres Strait Islander peoples living in regional areas decreased by nearly 15% from 873.5 per 100 000 in 2018 to 746.4 per 100 000 in 2022. Among Aboriginal and Torres Strait Islander peoples living in remote areas notification rates fluctuated in last 5 years and increased by 7.4% since 2020 from 1,550.7.0 per 100 000 to 1666.2 per 100 000, with fluctuations throughout this period (Figure 24).

Figure 24 Chlamydia notification rate in Aboriginal and Torres Strait Islander peoples per 100 000 population by area of residence, 2018–2022



	2018	2019	2020	2021	2022
Major cities	609.6	603.2	577.9	535.3	505.8
Regional	873.5	864.4	829.2	774.8	746.4
Remote	1763.0	1805.0	1550.7	1514.1	1666.2

Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Non-Indigenous people was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, South Australia, Western Australia, Queensland and New South Wales).

Gonorrhoea

Gonorrhoea is a sexually transmissible infection caused by the bacterium ***Neisseria gonorrhoeae.*** There were 32 877 gonorrhoea notifications in Australia in 2022. Of these, 4 994 (15%) were among Aboriginal and Torres Strait Islander peoples, 18 661 (57%) were in non-Indigenous people, and 9 222 (28%) were in people for whom Aboriginal and Torres Strait Islander status was not reported. Details of Aboriginal and Torres Strait Islander notifications for the 2018-2022 reporting period are provided in Table 5.

The ratio of male to female notifications in Aboriginal and Torres Strait Islander peoples in 2022 was 0.9:1 compared with 3.0:1 in non-Indigenous people (data not shown). This may indicate greater transmission occurring through heterosexual contact among Aboriginal and Torres Strait Islander peoples than among non-Indigenous people.

Table 5 Gonorrhoea notifications in Aboriginal and Torres Strait peoples, by characteristic, 2018–2022

Characteristic	2018	2019	2020	2021	2022
Total cases	4760	4170	4427	4690	4994
Gender[a]					
Male	2178	1918	2048	2209	2312
Female	2579	2249	2378	2480	2681
Median age in years	22	22	22	22	22
Age group					
0-14	166	149	126	137	89
15-19	1210	1023	1075	1093	1120
20-24	1142	1020	1026	1111	1253
25-29	887	793	880	876	882
30-39	965	843	950	1084	1160
≥40	390	342	370	389	490
State/Territory[b]					
Australian Capital Territory	14	12	12	21	28
New South Wales	308	397	402	371	441
Northern Territory	1882	1190	1169	1486	1770
Queensland	982	1040	1022	1123	1072
South Australia	347	419	370	486	407
Tasmania	4	4	21	18	17
Victoria	86	118	78	74	81
Western Australia	1137	990	1353	1111	1178

a Excludes 'Not reported'; The National Notifiable Diseases Surveillance System includes the variable 'Sex' to indicate Sex/Gender. For reporting purposes, 'Gender' is used in place of 'Sex'.

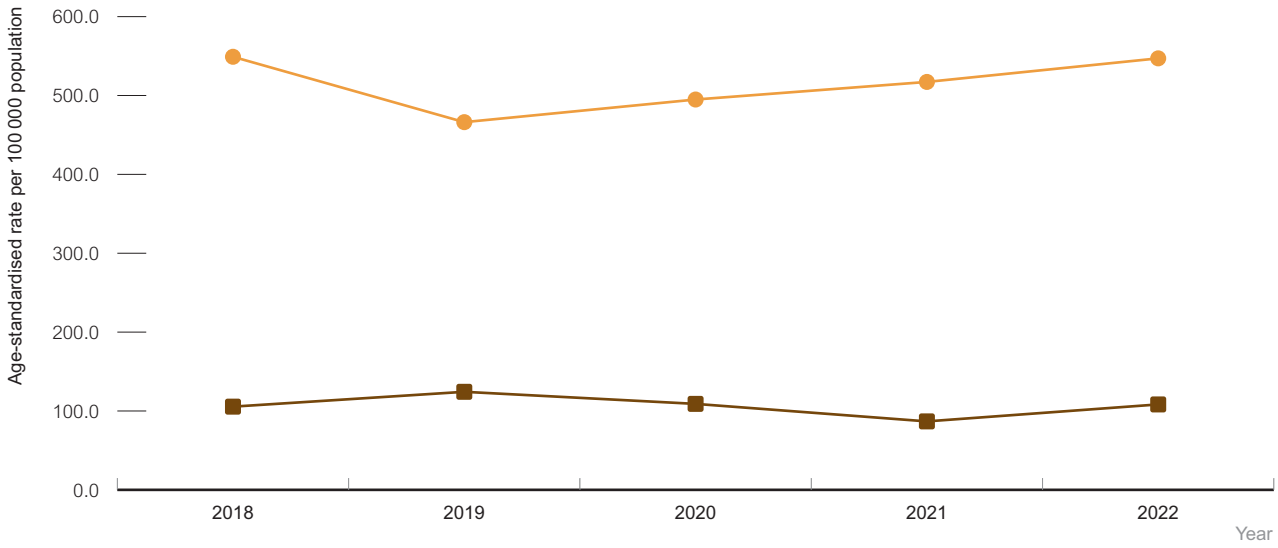
b Numbers of notifications in some jurisdictions may be strongly influenced by completeness of Aboriginal and Torres Strait Islander status.

Source: National Notifiable Diseases Surveillance System.

In the period 2018–2022, Aboriginal and Torres Strait Islander status was at least 50% complete in each year in seven state and territory (all except for Victoria). Therefore, this section includes notification data from all other jurisdictions.

The gonorrhoea age-standardised notification rate for Aboriginal and Torres Strait Islander peoples in 2022 was more than five times that of non-Indigenous people (547.1 and 108.3 per 100 000 population, respectively). Between 2018 and 2022, the gonorrhoea notification rate in Aboriginal and Torres Strait Islander peoples declined between 2018 to 2019 and then gradually increased from 466.2 per 100 000 in 2019 to 547.1 per 100 000 in 2022 (Figure 25). The increases in gonorrhoea rates each year from 2019 and 2022 are in the context of declines in other STIs and BBVs during the COVID-19 pandemic.

Figure 25 Gonorrhoea notification rate per 100 000 population by Aboriginal and Torres Strait Islander status, 2018–2022

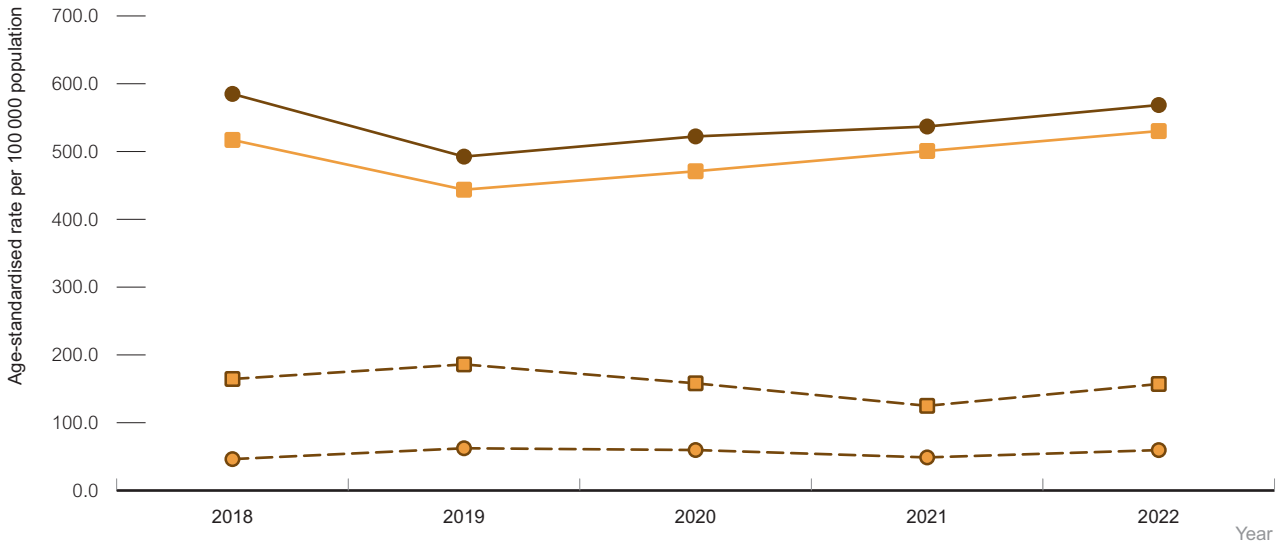


	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander peoples	549.1	466.2	494.9	517.2	547.1
Non-Indigenous	105.5	124.3	109.0	86.8	108.3

Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Non-Indigenous people was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, South Australia, Western Australia, Queensland, Tasmania and New South Wales).

The age standardised gonorrhoea notification rate for Aboriginal and Torres Strait Islander females in 2022 was nearly ten times that of non-Indigenous females (568.6 and 59.6 per 100 000, respectively) (Figure 26). The gonorrhoea notification rate for Aboriginal and Torres Strait Islander males in 2022 was more than three times that of non-Indigenous males (530.2 and 157.1 per 100 000, respectively). The gonorrhoea notification rates among Aboriginal and Torres Strait Islander males and females declined between 2018 and 2019, and then increased between 2019 and 2022 (Figure 26).

Figure 26 Gonorrhoea notification rate per 100 000 population by Aboriginal and Torres Strait Islander status and gender, 2018–2022

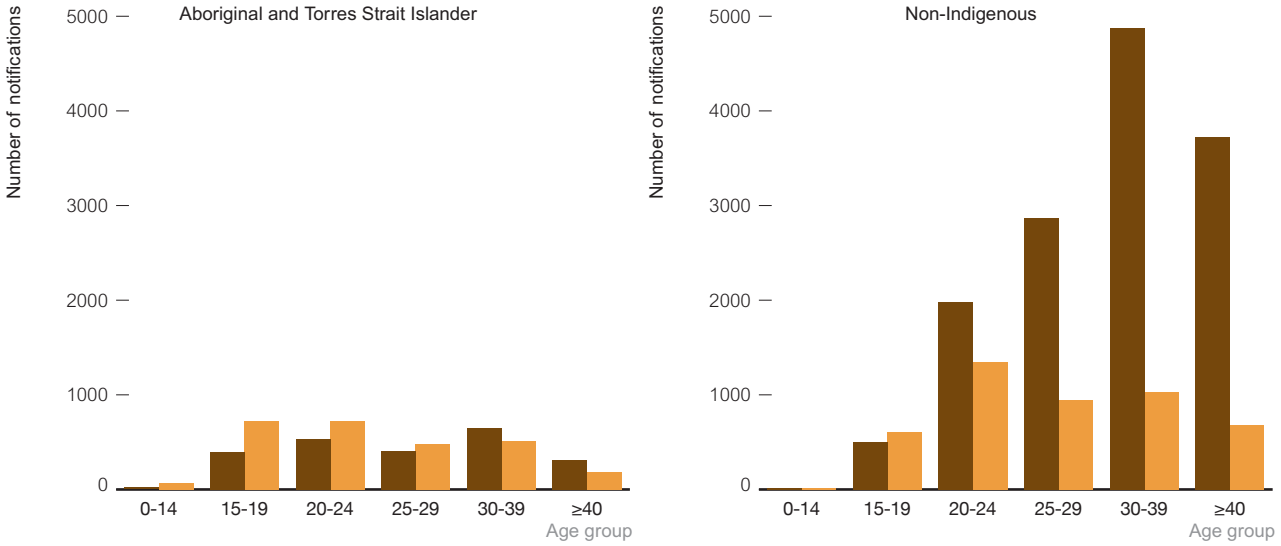


	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander female	585.0	492.5	522.3	536.9	568.6
Aboriginal and Torres Strait Islander male	517.1	443.7	470.9	500.8	530.2
Non-Indigenous female	46.3	62.3	59.7	48.8	59.6
Non-Indigenous male	164.5	186.0	158.1	124.9	157.1

Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Non-Indigenous people was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, South Australia, Western Australia, Queensland, Tasmania and New South Wales).

Differences in age at notification exist between Aboriginal and Torres Strait Islander peoples and non-Indigenous people In 2022, the greatest proportion of gonorrhoea notifications in the Aboriginal and Torres Strait Islander peoples occurred among those aged 20 to 24 years (25%). By comparison the highest proportion of notifications in non-Indigenous people in 2021 occurred among those aged 30 to 39 years (32%) (Figure 27).

Figure 27 Number of gonorrhoea notifications by Aboriginal and Torres Strait Islander status, gender, and age group, 2022

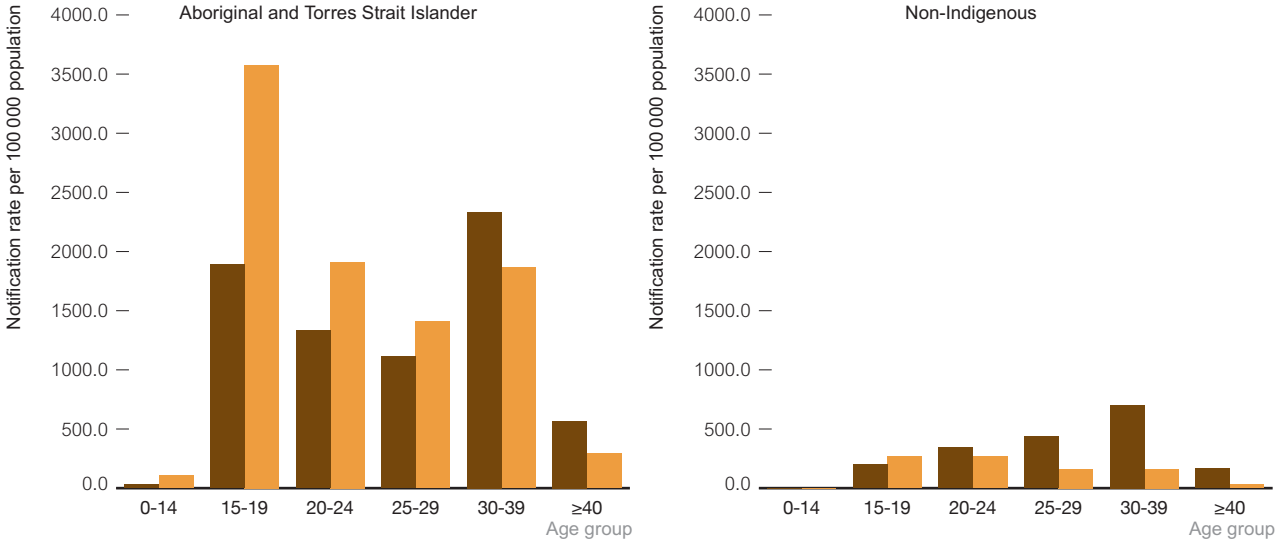


	Aboriginal and Torres Strait Islander						Non-Indigenous					
	0-14	15-19	20-24	25-29	30-39	≥40	0-14	15-19	20-24	25-29	30-39	≥40
Male	21	398	529	402	650	310	11	501	1982	2873	4881	3721
Female	68	722	722	480	509	180	16	612	1347	942	1027	682

Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Non-Indigenous people was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, South Australia, Western Australia, Queensland, Tasmania and New South Wales).

Notification rates in Aboriginal and Torres Strait Islander peoples were significantly higher than in non-Indigenous people across all age groups for both males and females (Figure 28). Notification rates were more than 13 times as high among Aboriginal and Torres Strait Islander females aged 15 to 19 years than among non-Indigenous females in the same age group (3577.0 and 266.4 per 100 000, respectively). In the same age group, the gonorrhoea notification rate was nearly 10 times as high among Aboriginal and Torres Strait Islander males as compared to non-Indigenous males (1893.4 and 197.5 per 100 000, respectively).

Figure 28 Gonorrhoea notification rate per 100 000 population by Aboriginal and Torres Strait Islander status, gender, and age group, 2022

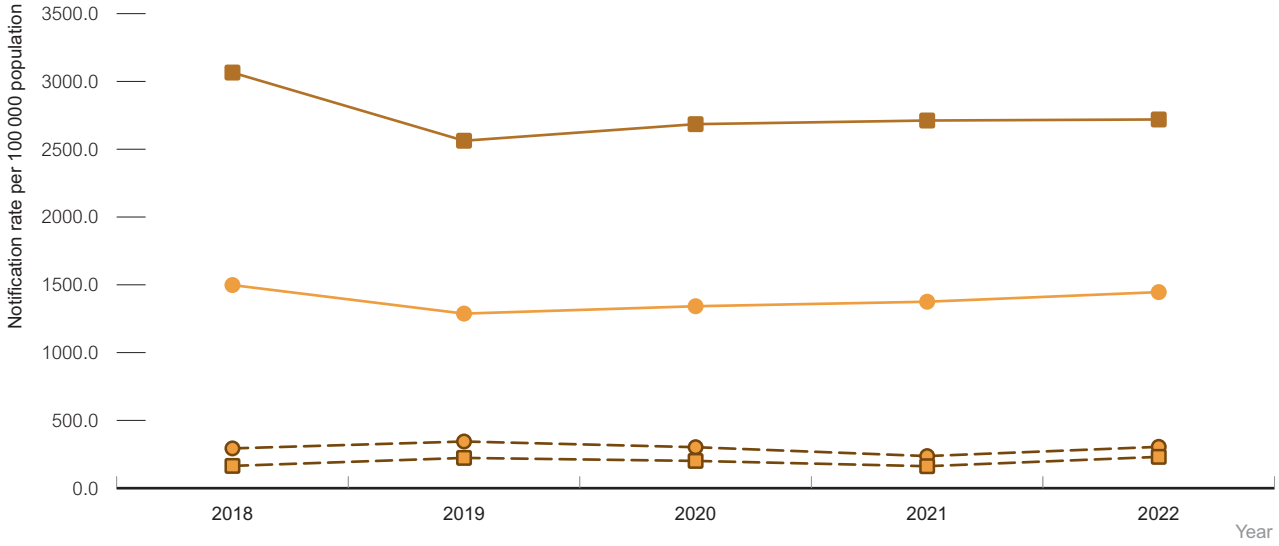


	Aboriginal and Torres Strait Islander						Non-Indigenous					
	0-14	15-19	20-24	25-29	30-39	≥40	0-14	15-19	20-24	25-29	30-39	≥40
Male	30.7	1893.4	1334.8	1112.2	2333.9	568.5	1.6	197.5	345.2	439.3	701.9	167.4
Female	104.8	3577.0	1912.1	1407.5	1864.6	292.9	2.5	266.4	265.9	162.6	161.5	30.7

Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Non-Indigenous people was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, South Australia, Western Australia, Queensland, Tasmania and New South Wales).

The gonorrhoea notification rate among Aboriginal and Torres Strait Islander peoples aged 15 to 19 years declined by 11% from 3065.5 per 100 000 in 2018 to 2719.4 per 100 00 in 2022. Among Aboriginal and Torres Strait Islander peoples aged 20 to 29 years, there was little change in the gonorrhoea notification rate between 2018 and 2022 and was 1446.1 per 100 000 in 2022 (Figure 29). In 2022, among those aged 15 to 19 years, the gonorrhoea notification rate among Aboriginal and Torres Strait Islander peoples was nearly 12 times as high as compared to non-Indigenous people. Also in 2022, among those aged 20 to 29 years, the gonorrhoea notification rate among Aboriginal and Torres Strait Islander peoples was nearly five times as high as compared to non-Indigenous people (Figure 29).

Figure 29 Gonorrhoea notification rate per 100 000 population by Aboriginal and Torres Strait Islander in age groups, 2018–2022

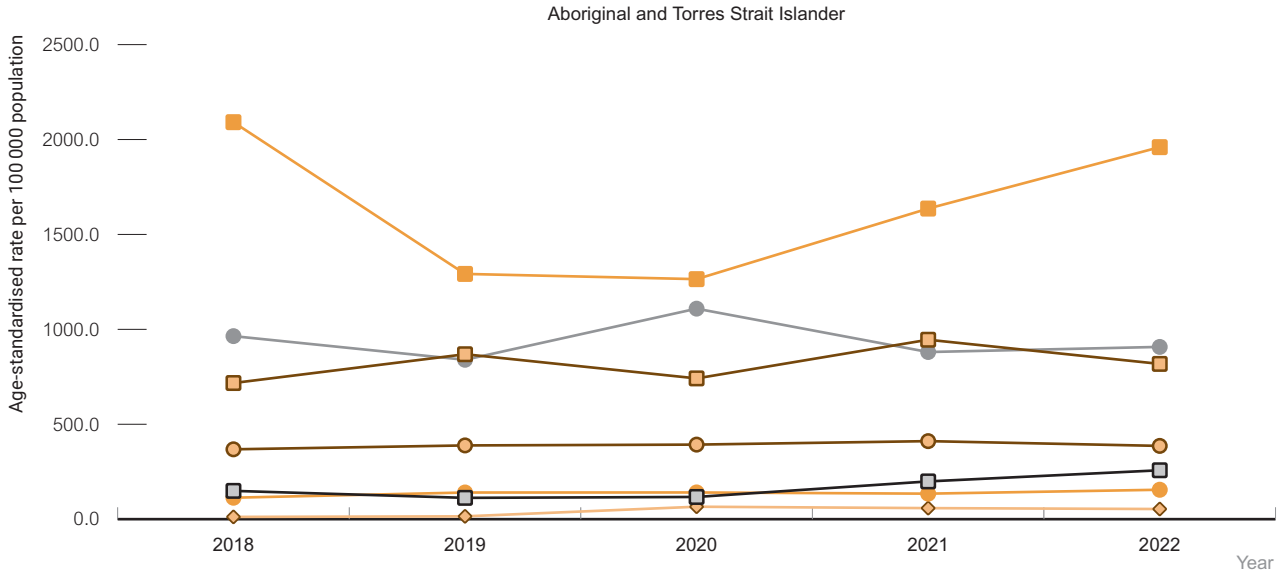


	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander people aged 15-19 years	3065.5	2562.6	2684.9	2711.7	2719.4
Aboriginal and Torres Strait Islander people aged 20-29 years	1498.2	1287.6	1342.0	1375.3	1446.1
Non-Indigenous people aged 15-19 years	164.4	223.4	201.2	162.1	231.1
Non-Indigenous people aged 20-29 years	293.4	344.4	302.4	236.8	305.0

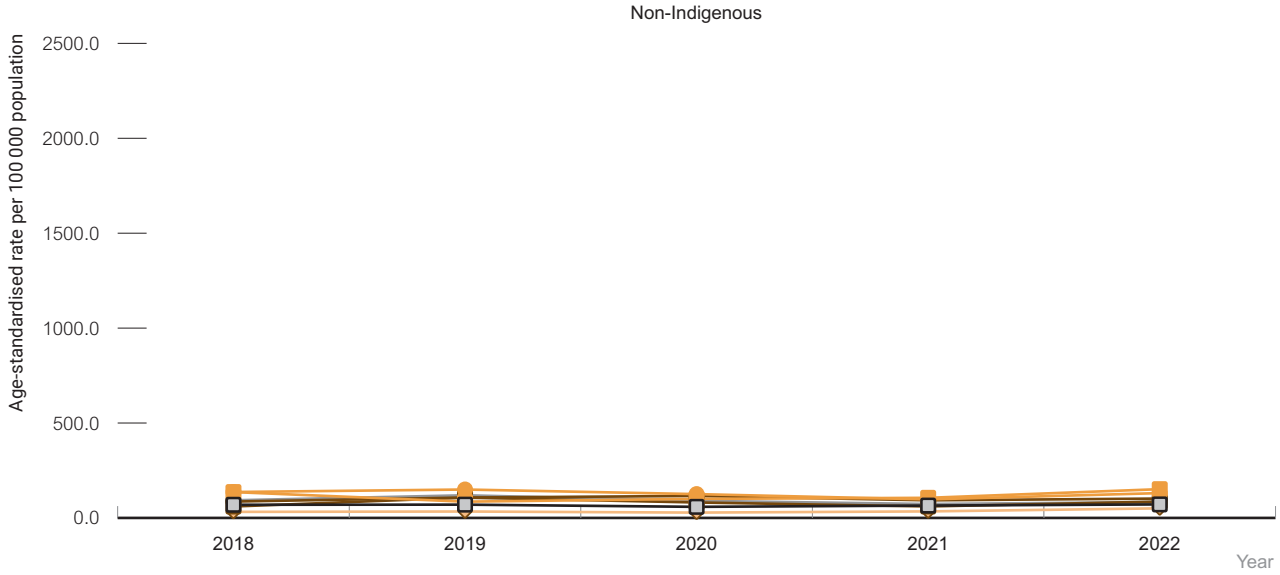
Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Non-Indigenous people was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, South Australia, Western Australia, Queensland, Tasmania and New South Wales).

In 2022, the age standardised gonorrhoea notification rates among Aboriginal and Torres Strait Islander peoples were highest in the Northern Territory (1959.9 per 100 000), followed by Western Australia (907.5 per 100 000), and South Australia (818.0 per 100 000). Despite declines in testing due to the COVID-19 pandemic, gonorrhoea notification rates among Aboriginal and Torres Strait Islander peoples increased in the Australian Capital Territory, New South Wales, South Australia and Tasmania between 2018 and 2022. In comparison, notification rates in the Northern Territory, Queensland and Western Australia notification rates fluctuated. In 2022, notification rates were more than twice as high among Aboriginal and Torres Strait Islander peoples compared with non-Indigenous peoples in the Australian Capital Territory, the Northern Territory, Queensland, South Australia, and Western Australia (Figure 30).

Figure 30 Gonorrhoea notification rate per 100 000 population by Aboriginal and Torres Strait Islander Status and state/territory, 2018–2022



	2018	2019	2020	2021	2022
ACT	149.1	112.3	117.0	198.9	257.6
NSW	113.1	140.4	140.7	134.4	155.0
NT	2091.4	1292.0	1264.5	1636.3	1959.9
QLD	368.0	388.5	392.8	411.1	386.0
SA	717.2	868.9	741.6	945.3	818.0
TAS	11.9	14.9	65.6	58.2	53.5
WA	964.3	839.6	1109.0	880.5	907.5

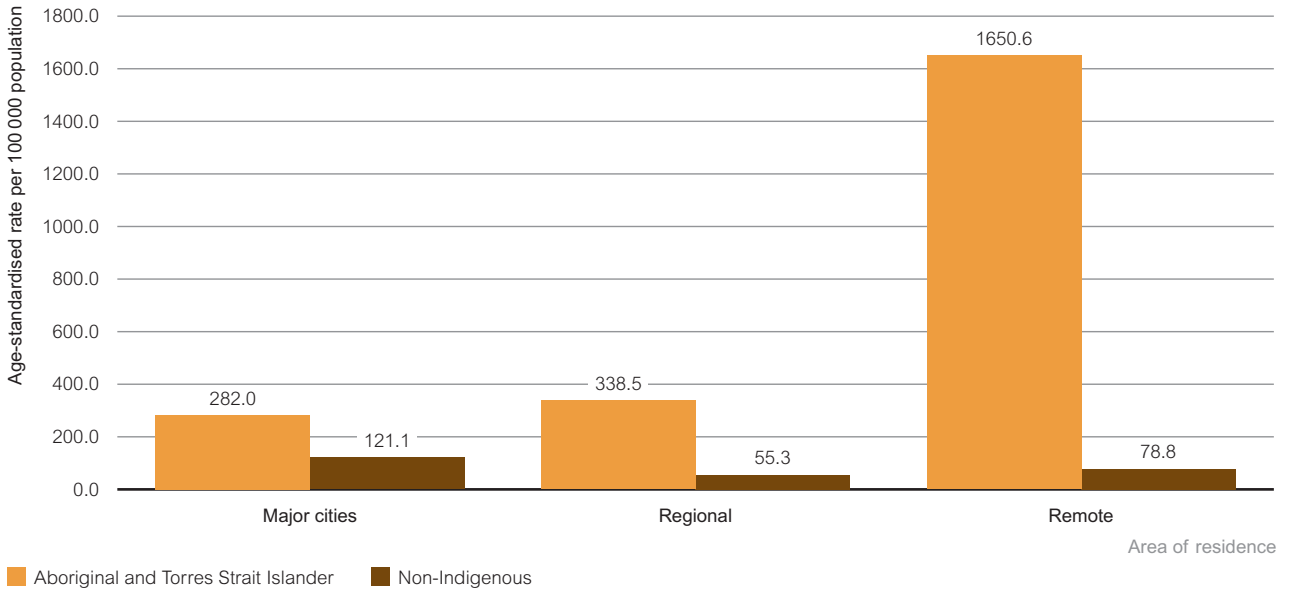


	2018	2019	2020	2021	2022
ACT	69.4	70.0	58.4	65.1	71.2
NSW	136.5	149.7	125.5	97.6	130.8
NT	136.2	85.7	100.4	105.9	151.5
QLD	86.2	107.3	115.8	92.8	102.0
SA	60.3	106.9	81.5	60.5	86.3
TAS	31.9	33.8	28.1	34.4	50.5
WA	92.9	119.3	90.1	73.3	83.6

Source: Australian National Notifiable Diseases Surveillance System. Includes all jurisdictions except Victoria, as Aboriginal and Torres Strait Islander status was reported for ≥50% of notifications for each year.

In 2022, the age standardised gonorrhoea notification rate among Aboriginal and Torres Strait Islander peoples living in major cities, was more than twice as high compared to non-Indigenous people (282.0 vs 121.1 per 100 000), more than six times as high in regional areas (338.5 vs. 55.3 per 100 000), and almost 21 times as high in remote areas (1650.6 vs. 78.8 per 100 000) (Figure 31).

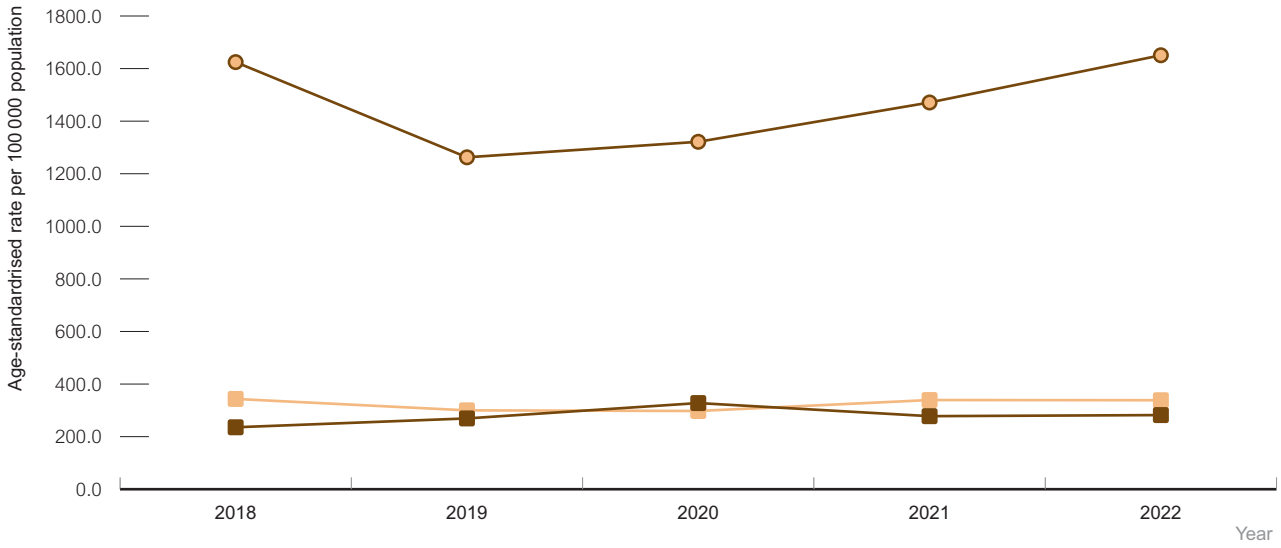
Figure 31 Gonorrhoea notification rate per 100 000 population by Aboriginal and Torres Strait Islander status and area of residence, 2022



Source: Australian National Notifiable Diseases Surveillance System. Includes all jurisdictions except Victoria, as Aboriginal and Torres Strait Islander status was reported for ≥50% of notifications for each year.

Between 2018 and 2022, notification rates among Aboriginal and Torres Strait Islander peoples fluctuated for people living in major cities and regional areas. Amongst Aboriginal and Torres Strait Islander people living in remote areas rates decreased between 2018 and 2019, and then increased year on year between 2019 and 2022 (Figure 32).

Figure 32 Gonorrhoea notification rate in Aboriginal and Torres Strait Islander peoples per 100 000 population by area of residence, 2018–2022



	2018	2019	2020	2021	2022
Major cities	235.6	269.3	327.7	277.9	282.0
Regional	343.4	300.0	297.6	339.2	338.5
Remote	1624.6	1262.5	1321.5	1471.0	1650.6

Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Non-Indigenous people was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, South Australia, Western Australia, Queensland, Tasmania and New South Wales).

Donovanosis

The National Donovanosis Eradication (Elimination) Project was implemented in 2001–2004, following the introduction of improved methods of diagnosis and treatment of donovanosis. The project employed strategies such as targeted surveillance, high-quality education, and support of primary healthcare workers in their management of genital ulcerative disease, intermittent or short-course oral medication and new laboratory techniques.

Australia is on track to eliminate donovanosis, which was once a frequently diagnosed STI among remote Aboriginal populations. Since 2013 there has only been one case notified in 2014.

Human papillomavirus

Human papillomavirus (HPV) types 16 and 18 cause 70% to 80% of cervical cancer and about half of high-grade cervical intraepithelial neoplasia (CIN grade 2 or 3) lesions, and genotypes 6 and 11 cause most cases of genital warts. In Australia, the nonavalent HPV vaccine (types 6, 11, 16, 18, 31, 33, 45, 52 and 58) is provided free in school to all students aged 12-13 years under the National HPV Vaccination Program, in a single dose schedule. The vaccine type and schedule has changed over time, however the program began in 2007 for females aged 12-13 years and was extended in 2013 to include males the same age.

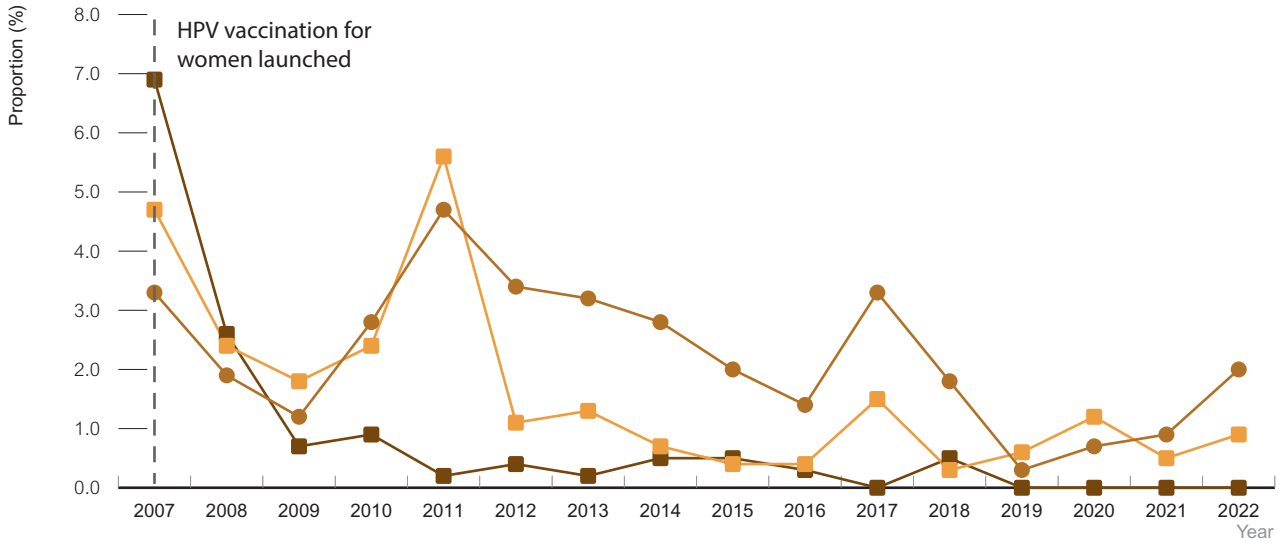
Catch-up programs through schools, general practices and community immunisation services were run from 2007 to 2009 for females aged 14–26 years, and from 2013 to 2015 for males aged 14–15 years [7]. Data on HPV vaccination coverage is currently not available by Aboriginal and Torres Strait Islander status but will be available in the future. The Genital Warts Surveillance Network is a sentinel surveillance system that includes over 50 sexual health clinics across Australia and provides evaluation of the population-level effects of the National HPV Vaccination Program. The network monitors epidemiological trends of genital wart diagnoses by collecting routinely collected de-identified electronic medical record data on demographics, sexual behaviours, and genital wart clinical diagnoses from the clinics.

Following the introduction of vaccination against HPV in 2007, a decline has been seen in the number of diagnoses of genital warts at first visit at sexual health clinics (see the HIV, viral hepatitis and sexually transmissible infections in Australia: annual surveillance report 2022 for further detail). Information available from sexual health clinics participating in the Genital Warts Surveillance Network indicates a considerable reduction in the proportion of both Aboriginal and Torres Strait Islander males and females under 30 notified with genital warts at their first visit since 2007.

Among Aboriginal and Torres Strait Islander females aged under 21 years, the proportion diagnosed with genital warts at first visit declined from 6.9% in 2007 to 0.0% in 2022. Among women aged 21 to 29 years, the proportion diagnosed with genital warts reduced from 4.7 % in 2006 to 0.9% in 2022. The proportion of Aboriginal and Torres Strait Islander women aged 30 years or older diagnosed with genital warts diagnoses declined from 3.3 % in 2006 to 2.0% in 2022 (Figure 33).

Among Aboriginal and Torres Strait Islander males aged under 21 years, the proportion diagnosed with genital warts at declined from 3.9% in 2007 to 0.0% in 2022. Among men aged 21 to 29 years the proportion diagnosed with genital warts reduced from 12.2% in 2007 to1.7% in 2022. The proportion of Aboriginal and Torres Strait Islander men aged 30 years or older diagnosed with genital warts diagnoses declined from 4.7% in 2007 to 1.5% in 2022 (Figure 34).

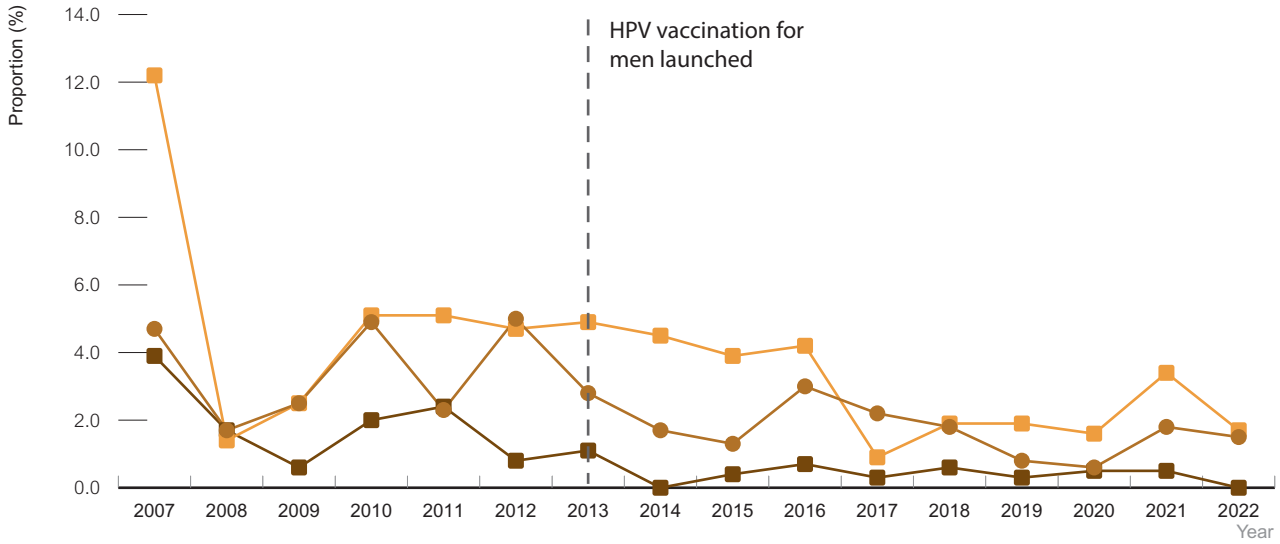
Figure 33 Proportion of Aboriginal and Torres Strait Islander females notified with genital warts at first visit at sexual health clinics by age group, 2007–2022



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<21 years (%)	6.9	2.6	0.7	0.9	0.2	0.4	0.2	0.5	0.5	0.3	0.0	0.5	0.0	0.0	0.0	0.0
21-29 years (%)	4.7	2.4	1.8	2.4	5.6	1.1	1.3	0.7	0.4	0.4	1.5	0.3	0.6	1.2	0.5	0.9
≥30 years (%)	3.3	1.9	1.2	2.8	4.7	3.4	3.2	2.8	2.0	1.4	3.3	1.8	0.3	0.7	0.9	2.0

Source: ACCESS (Australian Collaboration for Coordinated Enhanced Sentinel Surveillance); Genital Wart Surveillance Network.

Figure 34 Proportion of Aboriginal and Torres Strait Islander males notified with genital warts at first visit at sexual health clinics, by age group 2007–2022



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<21 years (%)	3.9	1.7	0.6	2.0	2.4	0.8	1.1	0.0	0.4	0.7	0.3	0.6	0.3	0.5	0.5	0.0
21-29 years (%)	12.2	1.4	2.5	5.1	5.1	4.7	4.9	4.5	3.9	4.2	0.9	1.9	1.9	1.6	3.4	1.7
≥30 years (%)	4.7	1.7	2.5	4.9	2.3	5.0	2.8	1.7	1.3	3.0	2.2	1.8	0.8	0.6	1.8	1.5

Source: ACCESS (Australian Collaboration for Coordinated Enhanced Sentinel Surveillance); Genital Wart Surveillance Network.

4 HIV

Please see p. 8 for summary.

HIV notifications

All jurisdictions have high completeness rates (>95%) for the reporting of Aboriginal and Torres Strait Islander status in HIV notifications over the ten years of reporting (2013–2022) and thus data from all jurisdictions are included.

There were 555 new HIV notifications in Australia in 2022, of which 25 (3%) were among Aboriginal and Torres Strait Islander peoples [1]. Of these 25 notifications 22 were reported as male and 3 female, the median age at diagnosis was 34 years (Table 6).

Between 2013 and 2016, the number of HIV notifications in Aboriginal and Torres Strait Islander peoples increased steadily, from 27 notifications in 2013 to 47 notifications in 2016 followed by a reduction between 2016 and 2019. Between 2019 and 2022 the number of notifications have fluctuated, with 25 notifications in 2022. Overall trends in HIV notifications from 2020 to 2021 were likely influenced by COVID-19, including changes to sexual behaviour, healthcare access and testing practices and travel. A similar trend was seen among males and females with more notifications among males than females for every year from 2013 to 2022.

Table 6 HIV notifications in Aboriginal and Torres Strait peoples, by characteristic, 2013–2022

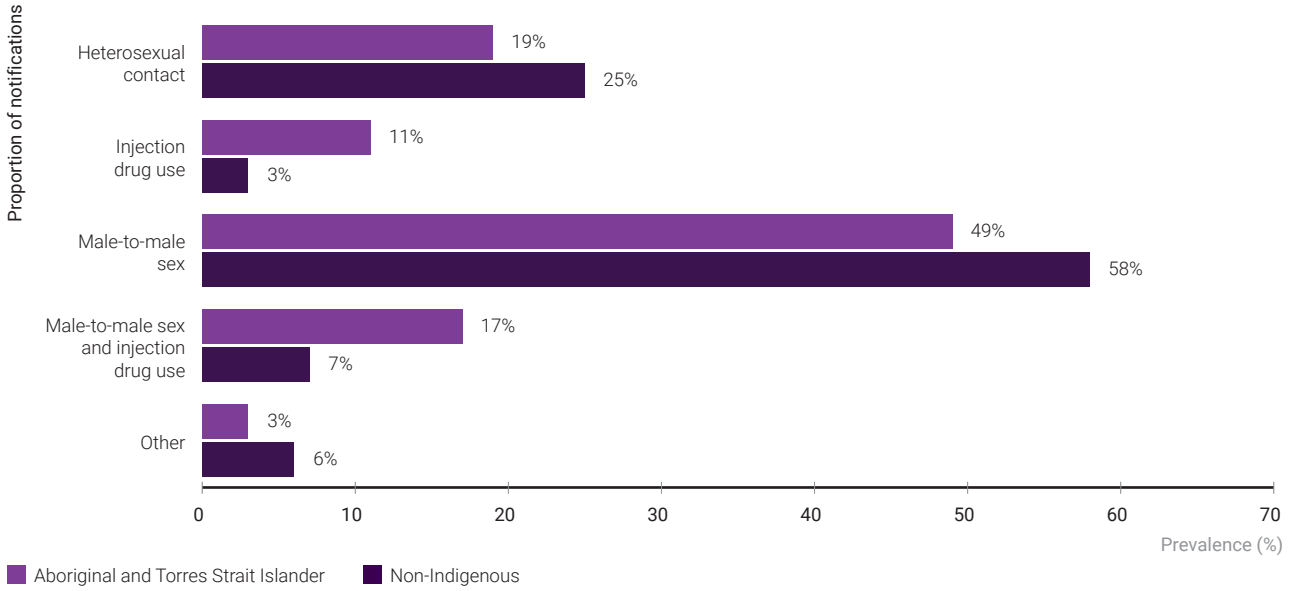
Characteristic	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total cases[a]	27	34	40	47	31	33	25	16	17	25
Gender[b]										
Male	23	25	36	41	23	30	20	14	17	22
Female	4	8	4	5	7	3	5	1	0	3
Newly acquired HIV infections[c]	9	8	13	14	10	9	10	7	3	9
(%)	33%	24%	33%	30%	32%	27%	40%	44%	18%	36%
Median age	36.0	33.5	35.5	31.0	34.0	28.0	31.0	34.5	38.0	34.0
Late and advanced HIV infection status at HIV diagnosis (%)[d]										
Late diagnosis	40%	32%	30%	25%	25%	25%	23%	7%	47%	27%
Advanced diagnosis	25%	19%	16%	14%	7%	21%	9%	0%	20%	14%
State/Territory										
Australian Capital Territory	0	1	0	0	0	1	0	0	0	0
New South Wales	8	7	7	10	8	11	7	4	1	6
Northern Territory	1	1	1	5	1	1	0	0	1	0
Queensland	9	14	13	20	11	13	9	7	6	5
South Australia	2	0	2	2	5	1	2	2	0	0
Tasmania	2	2	2	0	1	0	1	0	1	0
Victoria	5	6	8	8	2	4	4	1	3	5
Western Australia	0	3	7	7	3	2	2	2	5	9
Exposure category										
Male-to-male sex[e]	30%	35%	55%	57%	39%	55%	48%	50%	53%	40%
Male-to-male sex and injection drug use	19%	9%	10%	13%	6%	12%	20%	31%	12%	16%
Heterosexual contact	30%	18%	18%	21%	26%	24%	16%	13%	18%	20%
Injection drug use	22%	26%	15%	4%	23%	3%	16%	0%	18%	20%
MTCT	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%
Other	0%	12%	3%	4%	6%	6%	0%	6%	0%	0%

a Total includes Transgender. Not adjusted for multiple reporting.
b Doesn't include 'Other/not reported'.
c Newly acquired HIV was defined as a new HIV diagnosis with a negative or indeterminate HIV antibody test result or a diagnosis of primary HIV within one year before HIV diagnosis.
d Late HIV diagnosis was defined as newly notified HIV with a CD4+ cell count of less than 350 cells/μL, and advanced HIV as newly notified infection with a CD4+ cell count of less than 200 cells/μL. Newly acquired HIV was not categorised as a late or advanced diagnosis irrespective of CD4+ cell count.
e Includes males who had sex with both males and females.

Source: State and Territory health authorities; includes all jurisdiction.

Between 2018 and 2022, by exposure classification, the proportion of notifications attributed to heterosexual contact was 19% in Aboriginal and Torres Strait Islander peoples, compared with 25% among non-Indigenous. The proportion of notifications attributed to injection drug use was 11% among Aboriginal and Torres Strait Islander peoples compared with 3% among non-Indigenous people. The proportion of HIV notifications attributed to male-to-male sex was 49% among Aboriginal and Torres Strait Islander peoples, compared with 58% among non-Indigenous people. The proportion of HIV notifications attributed to male-to-male sex and injecting drug use was 17% among Aboriginal and Torres Strait Islander peoples and 7% among non-Indigenous peoples (Figure 35).

Figure 35 HIV notification exposure category by Aboriginal and Torres Strait Islander status, 2018–2022



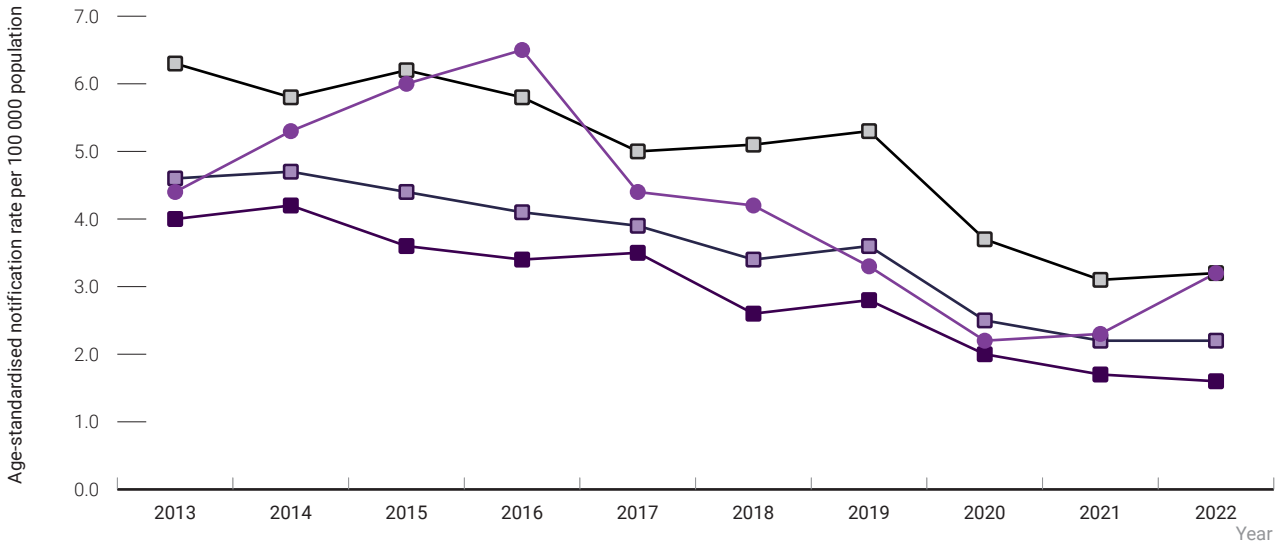
Source: State and territory health authorities; see Methodology for detail.

Notification rates

To allow a more appropriate comparison between Aboriginal and Torres Strait Islander peoples and non-Indigenous people, age-standardised notification rates per 100 000 population were calculated, by taking into consideration the differences in the distribution of age within these populations.

Between 2013 and 2016, the age standardised HIV notification rate among Aboriginal and Torres Strait Islander peoples increased from 4.4 to 6.5 per 100 000 population and then declined to 3.3 per 100 000 population in 2019. Rates declined further during 2020 and 2021 (2.2 per 100 000 and 2.3 per 100 000). In 2022, the HIV notification rate increased again to 3.2 per 100 000 among Aboriginal and Torres Strait Islander peoples, compared to 2.2 per 100 000 among all non-Indigenous people. HIV notification rates for Aboriginal and Torres Strait Islander peoples and non-Indigenous people were similar between 2017 and 2022. Trends in HIV notification rates in the Aboriginal and Torres Strait Islander population are based on small numbers and may reflect localised occurrences rather than national patterns (Figure 36).

Figure 36 HIV notification rate by Aboriginal and Torres Strait Islander status per 100 000 population, 2013–2022



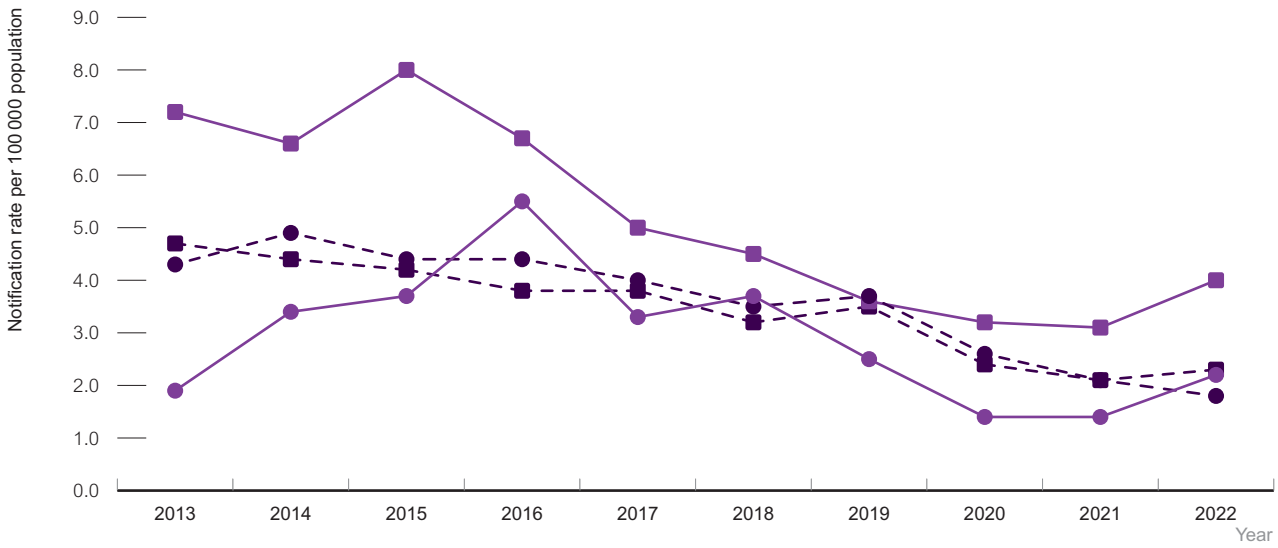
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander peoples	4.4	5.3	6.0	6.5	4.4	4.2	3.3	2.2	2.3	3.2
Australian-born non-Indigenous people	4.0	4.2	3.6	3.4	3.5	2.6	2.8	2.0	1.7	1.6
All non-Indigenous people	4.6	4.7	4.4	4.1	3.9	3.4	3.6	2.5	2.2	2.2
Overseas-born	6.3	5.8	6.2	5.8	5.0	5.1	5.3	3.7	3.1	3.2

Source: State and territory health authorities; see Methodology for detail.

By age group, HIV notification rates fluctuated between 2013 and 2022 among Aboriginal and Torres Strait Islander peoples aged 34 years and younger, and were 1.9 per 100 000 and 2.2 per 100 000 respectively. Among Aboriginal and Torres Strait Islander peoples aged 35 years or older, HIV notification rates declined from 7.2 per 100 000 in 2013 to 4.5 per 100 000 in 2018. Rates fluctuated between 2018 and 2022, sitting at 4.0 per 100 000 in 2022 (Figure 37).

Amongst non-Indigenous people aged both 34 years and younger and 35 years or older, rates declined between 2013 and 2022. In 2022, HIV notification rates were 1.8 per 100 000 among those aged 34 years or younger, and 2.3 per 100 000 among those aged 35 years or older. Due to small numbers of notifications by age group among Aboriginal and Torres Strait Islander peoples, trends over time should be interpreted with caution.

Figure 37 HIV notification rate per 100 000 population by Aboriginal and Torres Strait Islander status, and age group, 2013–2022



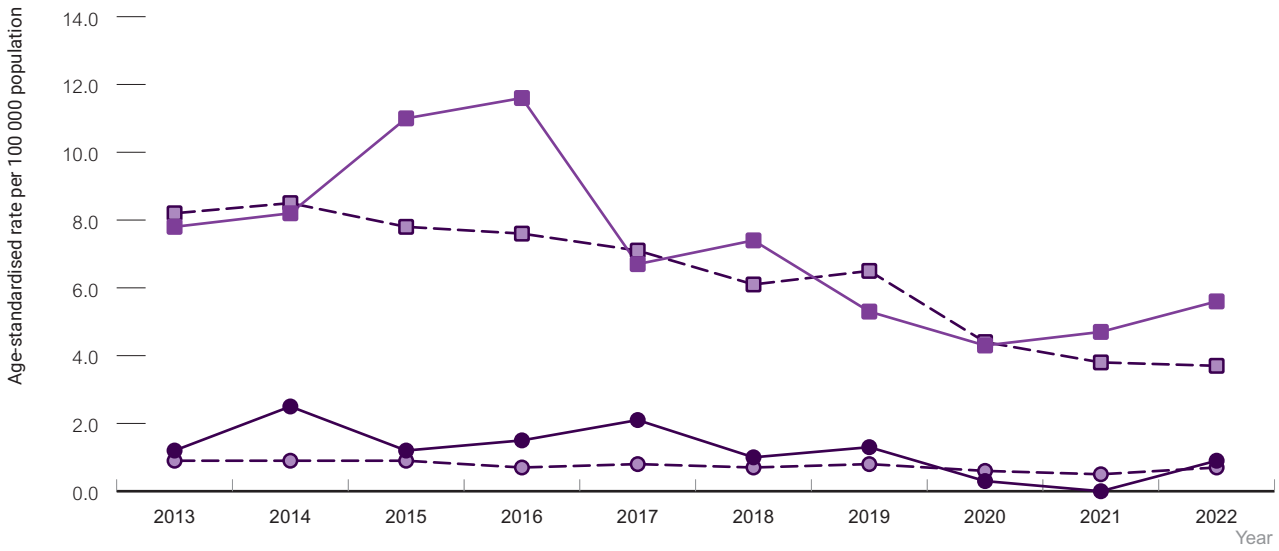
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander <35 years	1.9	3.4	3.7	5.5	3.3	3.7	2.5	1.4	1.4	2.2
Non-Indigenous <35 years	4.3	4.9	4.4	4.4	4.0	3.5	3.7	2.6	2.1	1.8
Aboriginal and Torres Strait Islander ≥35 years	7.2	6.6	8.0	6.7	5.0	4.5	3.6	3.2	3.1	4.0
Non-Indigenous ≥35 years	4.7	4.4	4.2	3.8	3.8	3.2	3.5	2.4	2.1	2.3

Source: State and territory health authorities; see Methodology for detail.

Age standardised HIV notification rates among Aboriginal and Torres Strait Islander males steadily increased from 7.8 per 100 000 in 2013 to 11.6 per 100 000 in 2016 and then declined by 54% to 5.3 per 100 000 in 2019. The rate fluctuated between 2019 and 2022 and was 5.6 per 100 000 in 2022. Over this period HIV notification rates among non-Indigenous males decreased by 55% (Figure 38).

Age standardised notification rates among Aboriginal and Torres Strait Islander females and non-Indigenous females remained below the rates of males in both populations for every year between 2013 and 2022. The HIV notification rate among Aboriginal and Torres Strait Islander females remained low during this period and was 0.9 per 100 000 in 2022 (Figure 38).

Figure 38 HIV notification rate per population by Aboriginal and Torres Strait Islander status and gender, 2013–2022

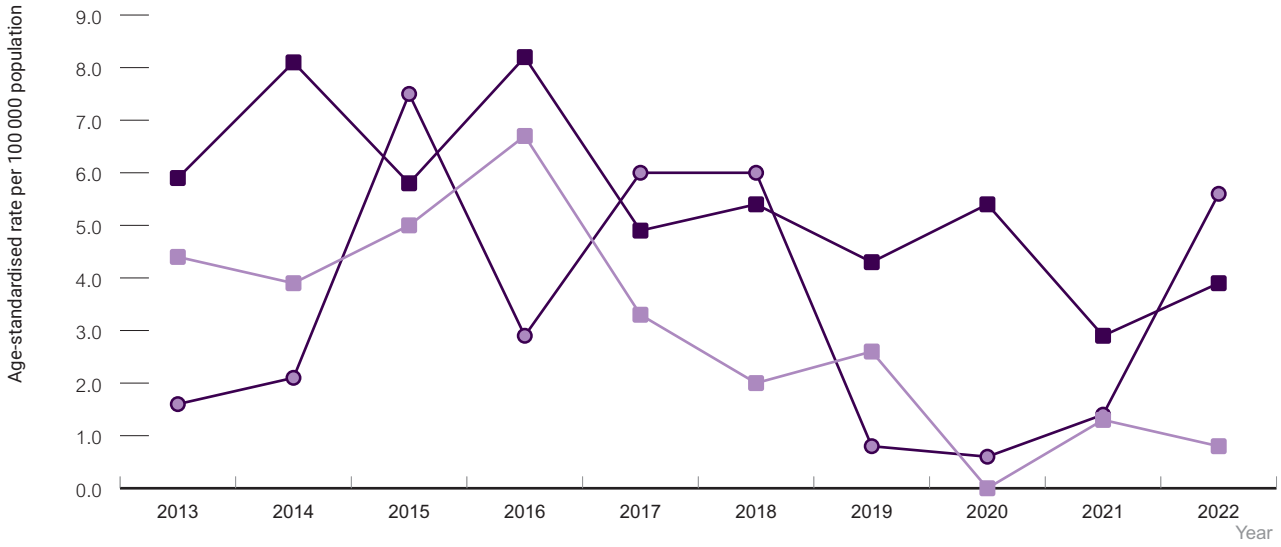


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander males	7.8	8.2	11.0	11.6	6.7	7.4	5.3	4.3	4.7	5.6
Non-Indigenous males	8.2	8.5	7.8	7.6	7.1	6.1	6.5	4.4	3.8	3.7
Aboriginal and Torres Strait Islander females	1.2	2.5	1.2	1.5	2.1	1.0	1.3	0.3	0.0	0.9
Non-Indigenous females	0.9	0.9	0.9	0.7	0.8	0.7	0.8	0.6	0.5	0.7

Source: State and territory health authorities; see Methodology for detail.

HIV notification rates among Aboriginal and Torres Strait Islander peoples residing in regional areas increased by 52% between 2013 and 2016 from 4.4 to 6.7 per 100 000, and then declined by 88% between 2016 and 2022 to 0.8 per 100 000. Similarly, in major cities the HIV notification rate increased by 39% from 5.9 per 100 000 in 2013 to 8.2 per 100 000 in 2016, and then declined by 52% to 3.9 in 2022 with fluctuations in the interim. Due to the small number of HIV notifications, the HIV notification rate in remote areas fluctuated between 2013 and 2022 and was 5.6 per 100 000 in 2022 (Figure 39). Caution should be taken in interpretation of these trends due to small numbers of notifications.

Figure 39 HIV notification rate among Aboriginal and Torres Strait Islander population by area of residence, 2013–2022



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Major cities	5.9	8.1	5.8	8.2	4.9	5.4	4.3	5.4	2.9	3.9
Regional	4.4	3.9	5.0	6.7	3.3	2.0	2.6	0.0	1.3	0.8
Remote	1.6	2.1	7.5	2.9	6.0	6.0	0.8	0.6	1.4	5.6

Source: State and territory health authorities; see Methodology for detail.

Prevalence

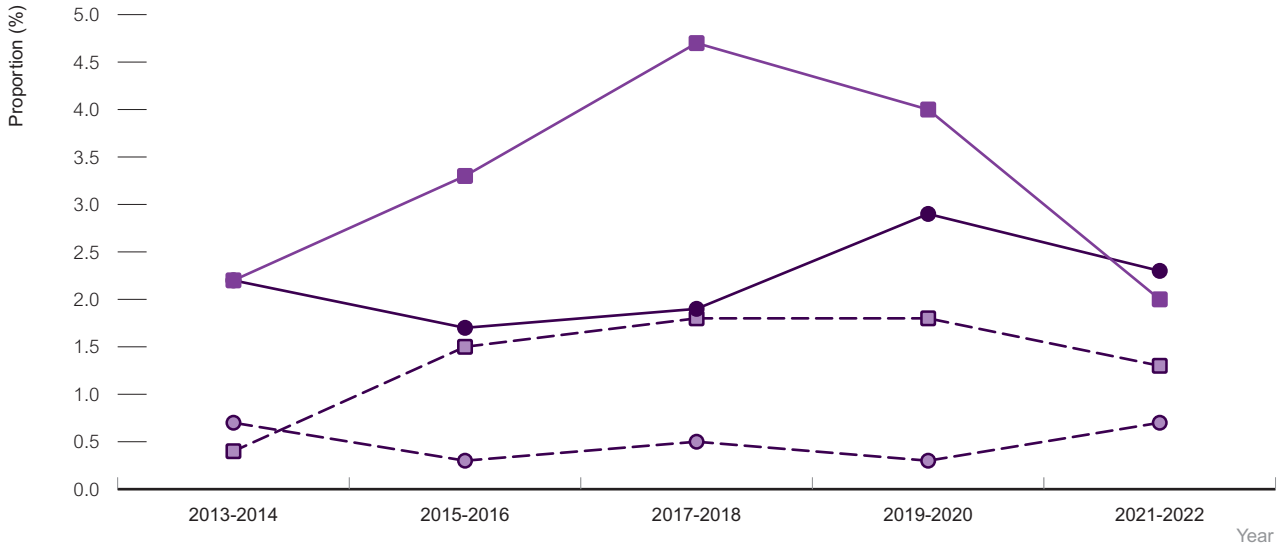
HIV prevalence is the proportion of people who are living with HIV in a given year. At the end of 2022, an estimated 590 Aboriginal and Torres Strait Islander peoples were living with HIV in Australia. The estimated HIV prevalence among Aboriginal and Torres Strait Islander peoples 0.10% (0.09 %-0.11%) in 2022 [1].

Periodic surveys have also measured HIV prevalence among subpopulations of Aboriginal and Torres Strait Islander peoples, specifically those who engage with needle and syringe programs. These data may not be representative of all Aboriginal and Torres Strait Islander peoples who inject drugs.

Data collected annually from the ANSPS [4] provide insight into the demographics, risk behaviours, and blood borne virus prevalence among people who inject drugs who attend needle and syringe programs. In the periods from 2013–2014 to 2021–2022, the proportion of participants in the ANSPS identifying as Aboriginal and Torres Strait Islander increased from 19% in 2018 to 25% in 2022.

The overall HIV prevalence among Aboriginal and Torres Strait Islander respondents in the ANSPS was 2.3% (data not shown). As reported in the survey, between 2013–2014 and 2021–2022, HIV prevalence fluctuated and was 2.2% and 2.0% respectively among Aboriginal and Torres Strait Islander men, and from 0.4% to 1.3% among Aboriginal and Torres Strait Islander women. For the years 2021–2022, the HIV prevalence among non-Indigenous men and women fluctuated and was 2.3% and 0.7% respectively (Figure 40).

Figure 40 HIV prevalence in needle and syringe program participants by Aboriginal and Torres Strait Islander status and gender, 2013–2022



	2013-2014	2015-2016	2017-2018	2019-2020	2021-2022
Aboriginal and Torres Strait Islander men (%)	2.2	3.3	4.7	4.0	2.0
Non-Indigenous men (%)	2.2	1.7	1.9	2.9	2.3
Aboriginal and Torres Strait Islander women (%)	0.4	1.5	1.8	1.8	1.3
Non-Indigenous women (%)	0.7	0.3	0.5	0.3	0.7

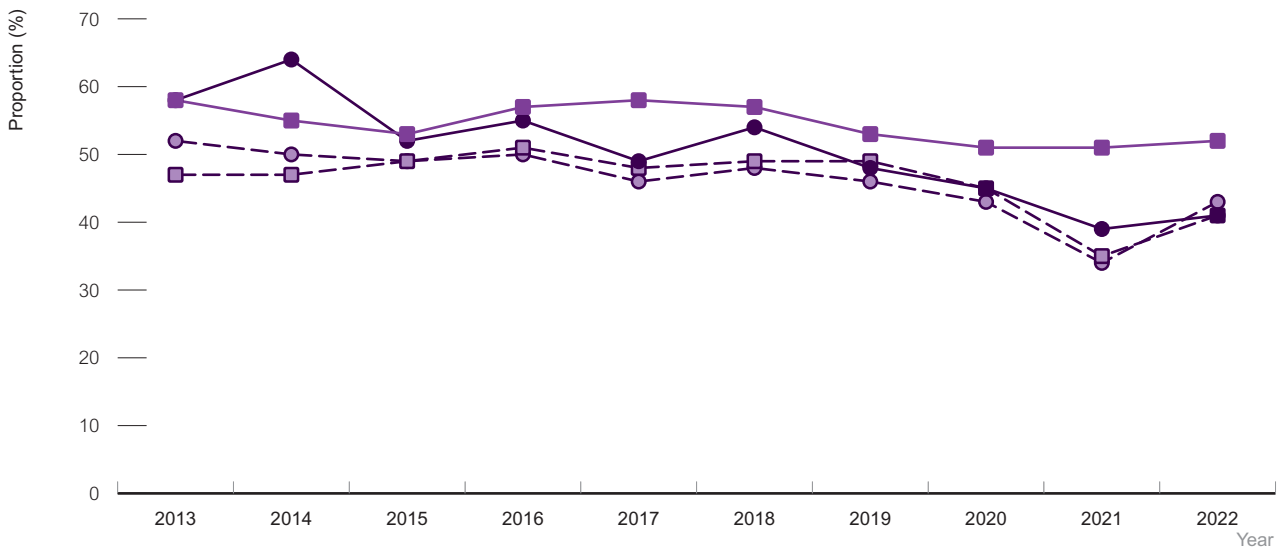
Note: Data is grouped due to low numbers.
Source: Australian Needle Syringe Program Survey.

Testing

National testing guidelines recommend HIV testing in multiple contexts, including after HIV risk exposure, during antenatal care, and for particular priority populations. The *Fifth National Aboriginal and Torres Strait Islander blood borne viruses and sexually transmissible infections strategy 2018–2022* prioritises annual testing for STIs, including HIV.

Among participants of the ANSPS, a higher proportion of Aboriginal and Torres Strait Islander women than non-Indigenous women reported having had an HIV test in the past 12 months for each year between 2013 and 2022, with the exception of 2022 (41% vs 43% in 2022). Similarly, a higher proportion of Aboriginal and Torres Strait Islander men than non-Indigenous men reported a HIV test in the past 12 months each year between 2013 and 2022 (52% vs 41% in 2022) (Figure 41). These data may not be representative of all Aboriginal and Torres Strait Islander peoples who inject drugs.

Figure 41 Proportion of people who inject drugs seen at needle and syringe programs who reported an HIV antibody test in the past 12 months by Aboriginal and Torres Strait Islander status and gender, 2013–2022



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander women (%)	58	64	52	55	49	54	48	45	39	41
Non-Indigenous women (%)	52	50	49	50	46	48	46	43	34	43
Aboriginal and Torres Strait Islander men (%)	58	55	53	57	58	57	53	51	51	52
Non-Indigenous men (%)	47	47	49	51	48	49	49	45	35	41

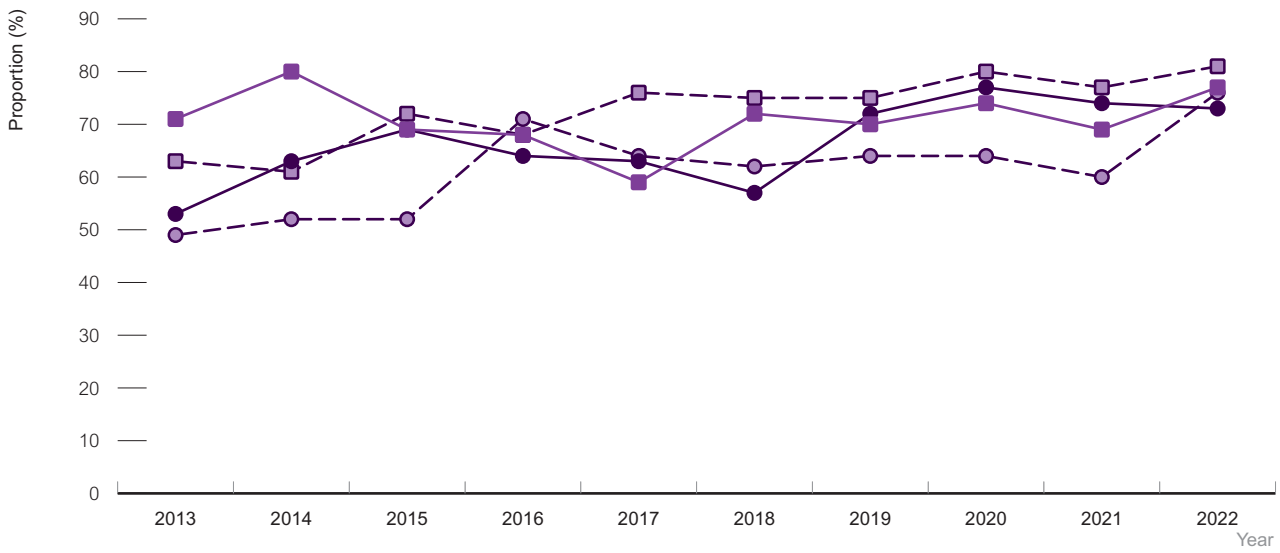
Source: Australian Needle Syringe Program Survey; see Methodology for detail.

Condom use

According to the ANSPS, more than half of Aboriginal and Torres Strait Islander respondents (who used injecting drugs) reported inconsistent condom use with casual partners in all years 2013–2022. This proportion fluctuated among men (range 59-80%) but increased among women from 53% in 2013 to 73% in 2022. Among non-Indigenous people, inconsistent condom use increased among women (49% in 2013 to 76% in 2022) and men (63% in 2013 to 81% in 2022). In 2022, inconsistent condom use with casual partners was lower among Aboriginal and Torres Strait Islander women than among non-Indigenous women (73% and 76%, respectively), and lower among Aboriginal and Torres Strait Islander men than among non-Indigenous men (77% and 81%, respectively). (Figure 42).

As above, these data may not be representative of all Aboriginal and Torres Strait Islander peoples who inject drugs.

Figure 42 Prevalence of inconsistent condom use with casual partners in the last month among people who inject drugs attending needle and syringe programs by Aboriginal and Torres Strait Islander status and gender, 2013–2022



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander women (%)	53	63	69	64	63	57	72	77	74	73
Non-Indigenous women (%)	49	52	52	71	64	62	64	64	60	76
Aboriginal and Torres Strait Islander men (%)	71	80	69	68	59	72	70	74	69	77
Non-Indigenous men (%)	63	61	72	68	76	75	75	80	77	81

a Denominator is those who had sex with one or more casual partners in the last month.
Source: Australian Needle Syringe Program Survey; see Methodology for detail.

5 Hepatitis C

Please see p. 9 for summary. Due to data quality, data describing newly acquired hepatitis C are not presented in this report. Future reporting may include data describing newly acquired hepatitis C.

Hepatitis C notifications

This section focuses on notified cases of hepatitis C infection, which means that a person previously not known to have the infection has since been tested and now found to have hepatitis C, or in a person who has been cured, and subsequent testing has identified reinfection.

A total of 6728 hepatitis C notifications were reported in 2022 in Australia; 1088 (16%) occurred among Aboriginal and Torres Strait Islander peoples, 3221 (48%) were among non-Indigenous people, and there were a further 2419 (36%) notifications among people for whom Aboriginal and Torres Strait Islander status was not reported [(1)]. Details of Aboriginal and Torres Strait Islander notifications for the 2018-2022 reporting period are provided in Table 7.

Table 7 Hepatitis C notifications in Aboriginal and Torres Strait peoples, by characteristic, 2018–2022

Characteristic	2018	2019	2020	2021	2022
Total cases	1393	1459	1226	1311	1088
Sex[a]					
Male	985	1035	834	923	768
Female	408	424	392	387	320
Age group					
0-14	10	8	15	10	6
15-24	338	391	317	265	237
25-39	635	718	560	648	493
≥40	410	342	334	388	352
State/Territory[b]					
Australian Capital Territory	23	23	21	14	8
New South Wales	464	401	339	279	294
Northern Territory	30	32	25	28	22
Queensland	436	579	506	574	391
South Australia	60	55	42	41	33
Tasmania	20	15	6	9	5
Victoria	105	61	17	48	54
Western Australia	255	293	270	318	281

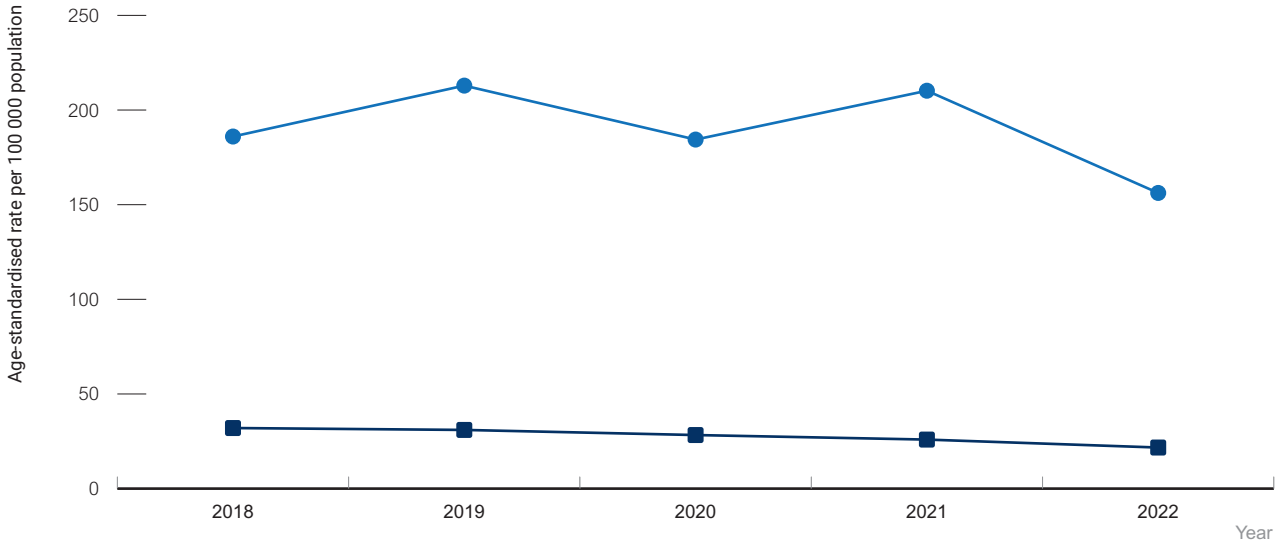
a Excludes 'Not reported'; The National Notifiable Diseases Surveillance System includes the variable 'Sex' to indicate Sex/Gender. For reporting purposes, 'Sex' is used as 'Gender' was not reported historically.
b Numbers of notifications in some jurisdictions may be strongly influenced by completeness of Aboriginal and Torres Strait Islander status.

Source: National Notifiable Diseases Surveillance System.

Aboriginal and Torres Strait Islander hepatitis C notification rates are based on data from five jurisdictions (Australian Capital Territory, the Northern Territory, Queensland, South Australia, and Western Australia) where Aboriginal and Torres Strait Islander status was ≥50% complete for all hepatitis C notifications for each of the five years 2018–2022. Incomplete reporting of Aboriginal and Torres Strait Islander status can result in a misrepresentation of the true extent of the notifications in Aboriginal and Torres Strait Islander peoples and may not reflect national trends.

The age-standardised notification rate of hepatitis C in Aboriginal and Torres Strait Islander peoples decreased by 16% from 186.0 per 100 000 in 2018 to 156.2 per 100 000 in 2022, with fluctuations during this period. By comparison, among non-Indigenous people, the hepatitis C notification rate steadily decreased by 32% from 32.0 per 100 000 in 2018 to 21.7 per 100 000 in 2022 (Figure 43). In 2022, the age-standardised hepatitis C notification rate for Aboriginal and Torres Strait Islander peoples was more than seven times as high as compared to non-Indigenous people (156.2 per 100 000 vs 21.7 per 100 000).

Figure 43 Age standardised hepatitis C notification rate per 100 000 population by Aboriginal and Torres Strait Islander status, 2018–2022

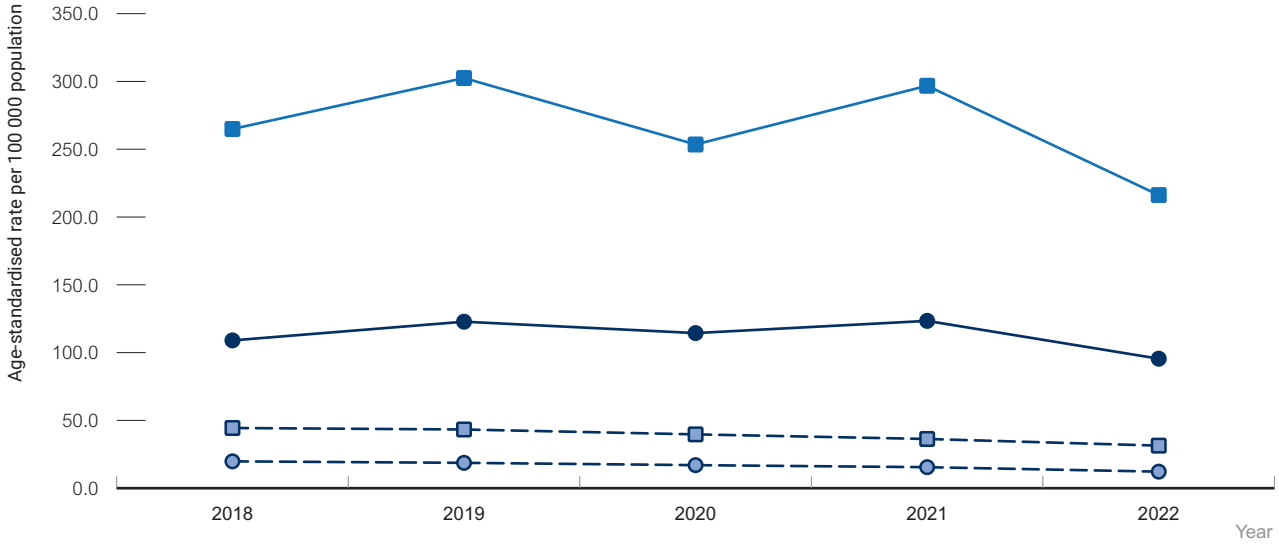


	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander peoples	186.0	212.9	184.4	210.2	156.2
Non-Indigenous	32.0	31.0	28.3	25.9	21.7

Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Aboriginal and Torres Strait Islander status was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, Queensland, South Australia, and Western Australia).

In all years from 2018 to 2022, the age standardised hepatitis C notification rate was higher in male and female Aboriginal and Torres Strait Islander peoples than in gender equivalent non-Indigenous people (Figure 44). Rates among Aboriginal and Torres Strait Islander males were 2.2 times higher than their females' counterparts. Among Aboriginal and Torres Strait Islander males, the hepatitis C notification rate decreased by 18% from 264.9 per 100 000 in 2018 to 216.2 per 100 000 in 2022, with fluctuations during this period. Similarly, among Aboriginal and Torres Strait Island female, the hepatitis C notification rate decreased by 12% from 109.0 per 100 000 in 2018 to 95.5 per 100 000 in 2022, with fluctuations during this period (Figure 44).

Figure 44 Hepatitis C notification rates per 100 000 population by Aboriginal and Torres Strait Islander status and gender, 2018–2022

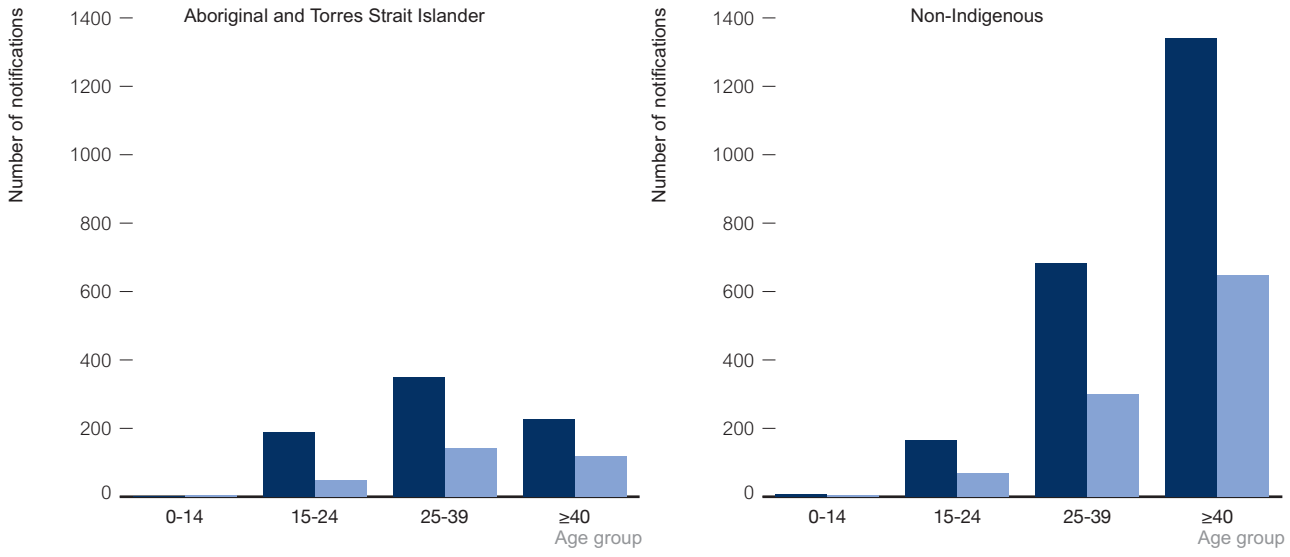


	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander female	109.0	122.8	114.4	123.4	95.5
Aboriginal and Torres Strait Islander male	264.9	302.5	253.5	296.8	216.2
Non-Indigenous female	19.8	18.7	17.0	15.5	12.2
Non-Indigenous male	44.4	43.3	39.7	36.3	31.4

Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Aboriginal and Torres Strait Islander status was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, Queensland, South Australia, and Western Australia).

In 2022, 46% of hepatitis C notifications in Aboriginal and Torres Strait Islander peoples occurred in people aged between 25 to 39 years. By comparison, among non-Indigenous people,61% of hepatitis C notifications occurred in people aged 40 years and older. Similar trends in proportions were seen among males and females (Figure 45).

Figure 45 Number of hepatitis C notifications by Aboriginal and Torres Strait Islander status, age, and gender, 2022

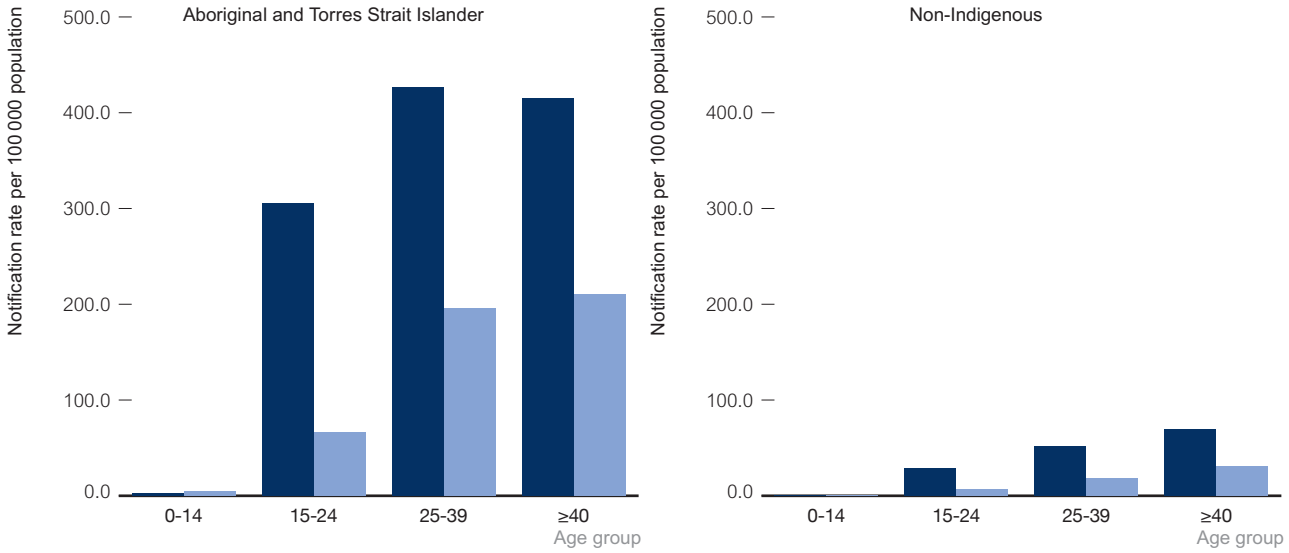


	Aboriginal and Torres Strait Islander				Non-Indigenous			
	0-14	15-24	25-39	≥40	0-14	15-24	25-39	≥40
Male	2	188	350	228	6	166	684	1340
Female	4	49	143	119	5	68	300	648

Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Aboriginal and Torres Strait Islander status was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, Queensland, South Australia, and Western Australia).

In 2022, the highest notification rates among Aboriginal and Torres Strait Islander males were among those aged 25 to 39 years (426.9 per 100 000). By comparison among non-Indigenous males highest rates were among those aged 40 years and older (69.9 per 100,000). For both Aboriginal and Torres Strait Islander males and non-Indigenous females highest rates were among those aged 40 years and older (210.0 per 100 000 and 30.8 per 100 000 respectively). By gender, hepatitis C notification rates for Aboriginal and Torres Strait Islander males and females were higher than notification rates for non-Indigenous males and females for every age group in 2022 (Figure 46).

Figure 46 Hepatitis C notification rate per 100 000 population by Aboriginal and Torres Strait Islander status, gender and age group, 2022



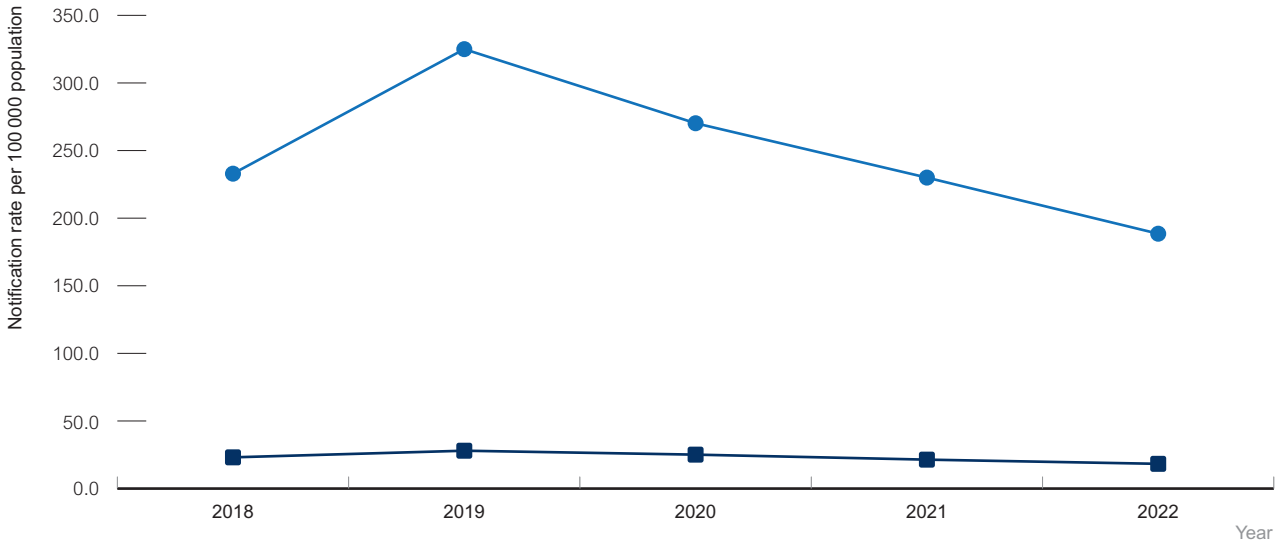
	Aboriginal and Torres Strait Islander				Non-Indigenous			
	0-14	15-24	25-39	≥40	0-14	15-24	25-39	≥40
Male	2.5	305.3	426.9	415.0	0.6	28.9	52.0	69.9
Female	5.2	66.4	195.5	210.0	0.2	7.1	18.1	30.8

Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Aboriginal and Torres Strait Islander status was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, Queensland, South Australia, and Western Australia).

Compared with older age-groups, most hepatitis C infections among those aged 15 to 24 years are recently acquired [4]. Therefore, trends in the rate of notifications among those aged 15 to 24 years are used here as a proxy for the incidence of hepatitis C infection.

The hepatitis C notification rate in Aboriginal and Torres Strait Islander peoples aged 15 to 24 years declined by 19% from 232.9 per 100 000 in 2018 to 188.5 per 100 000 in 2022. Similarly, the hepatitis C notification rate among non-Indigenous people aged 15 to 24 years declined by 21% from 23.1 per 100 000 in 2018 to 18.3 per 100 000 in 2022 (Figure 47). A breakdown of hepatitis C notification rates by age-group and Aboriginal and Torres Strait Islander status can be found on the Kirby Institute data site.

Figure 47 Hepatitis C notification rate per 100 000 in people aged 15-24 years and younger by Aboriginal and Torres Strait Islander status, 2018–2022

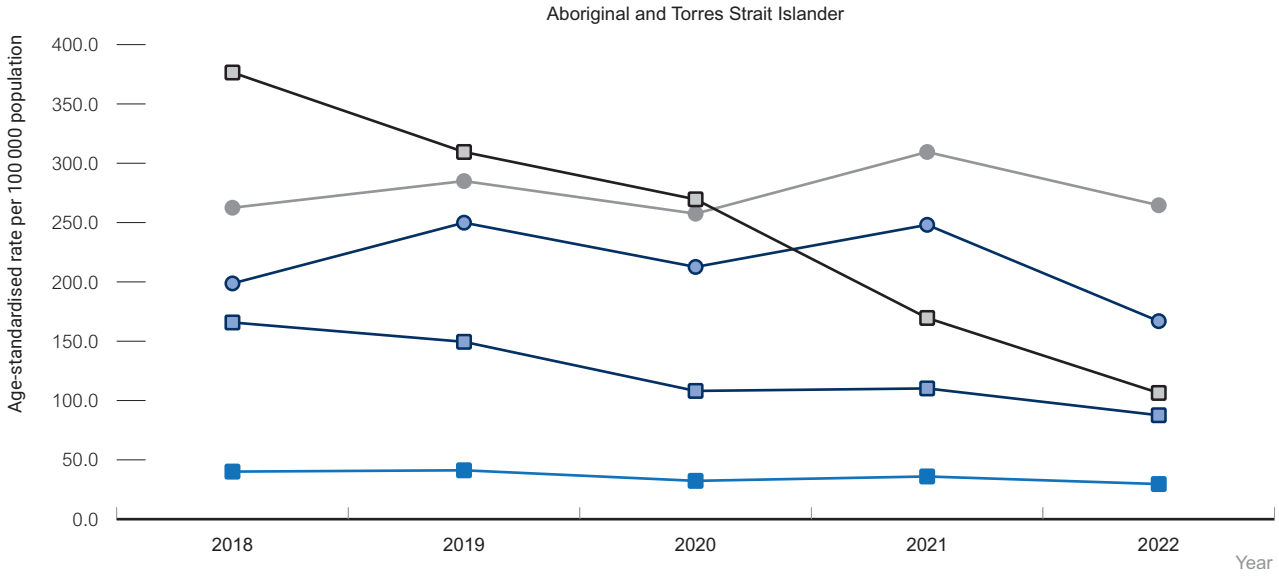


	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander peoples	232.9	325.0	270.2	230.0	188.5
Non-Indigenous	23.1	28.0	25.1	21.4	18.3

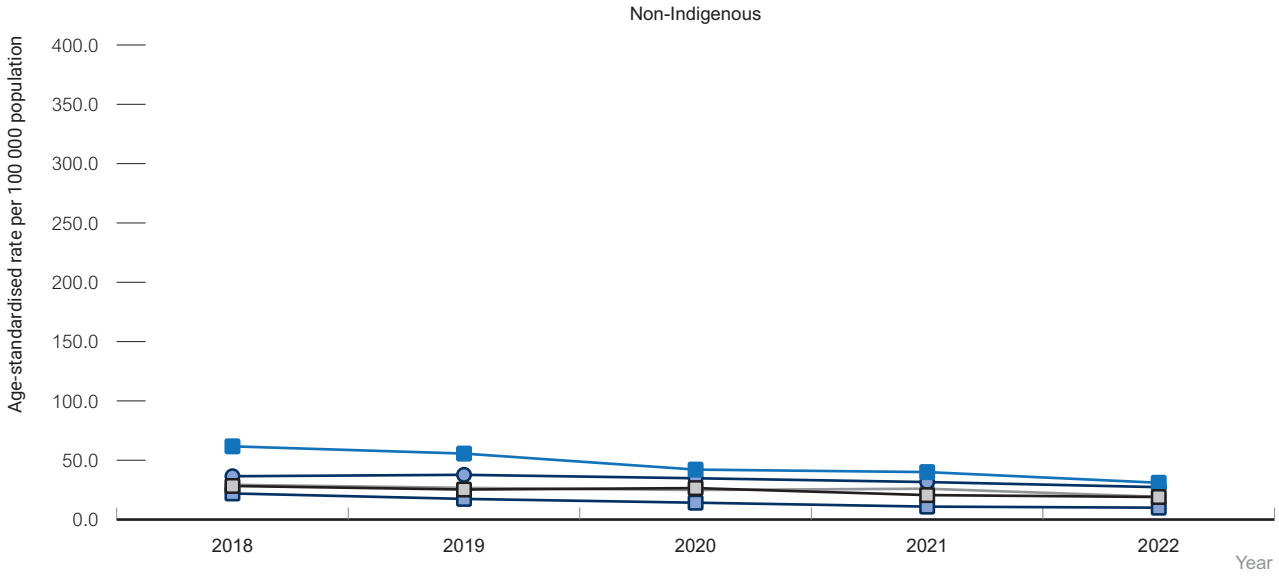
Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Aboriginal and Torres Strait Islander status was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, Queensland, South Australia, and Western Australia).

In 2022, hepatitis C notification rates among Aboriginal and Torres Strait Islander peoples were highest in Western Australia (264.6 per 100 000), followed by Queensland (166.9 per 100 000), the Australian Capital Territory (106.4 per 100 000), and South Australia (87.6 per 100 000). For all reported states and territories the hepatitis C notification rate fluctuated between 2018 and 2022, with the exception of ACT which saw rates decline (Figure 48).

Figure 48 Hepatitis C notification rate per 100 000 population by Aboriginal and Torres Strait Islander status and state/territory, 2018–2022



	2018	2019	2020	2021	2022
ACT	376.5	309.5	269.6	169.6	106.4
NT	40.1	41.2	32.3	36.0	29.6
QLD	198.7	249.9	212.6	248.1	166.9
SA	165.8	149.5	108.1	110.2	87.6
WA	262.5	285.0	257.5	309.5	264.6

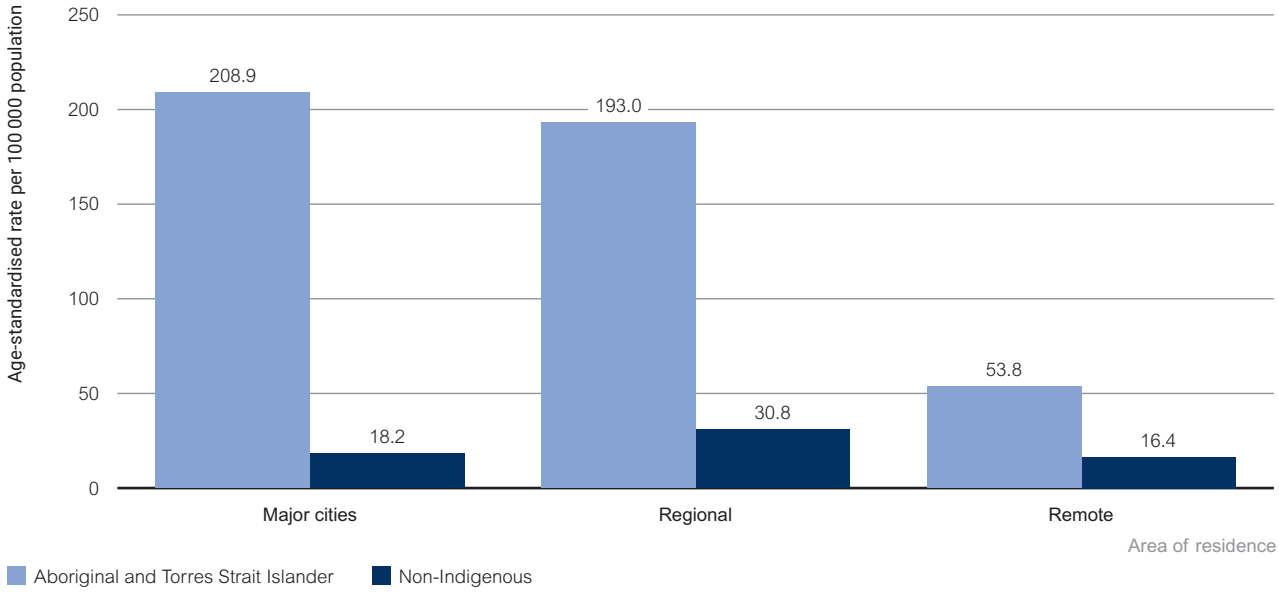


	2018	2019	2020	2021	2022
ACT	28.3	25.3	26.5	20.6	19.0
NT	61.7	55.6	42.1	40.0	31.0
QLD	36.5	37.7	34.8	31.6	27.3
SA	22.0	17.4	14.2	10.9	10.0
WA	29.3	26.7	24.9	26.0	19.2

Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Aboriginal and Torres Strait Islander status was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, Queensland, South Australia, and Western Australia).

In 2022, the hepatitis C notification rate in major cities was >11 times as high in Aboriginal and Torres Strait Islander peoples compared to non-Indigenous people (208.9 and 18.2 per 100 000, respectively). In regional areas, the rate among Aboriginal and Torres Strait Islander peoples was more than six times as high as among non-Indigenous people (193.0 and 30.8 per 100 000, respectively). In remote areas, hepatitis C notification rates among the Aboriginal and Torres Strait Islander population were more than three times as high as among non-Indigenous people (53.8 and 16.4 per 100 000, respectively) (Figure 49).

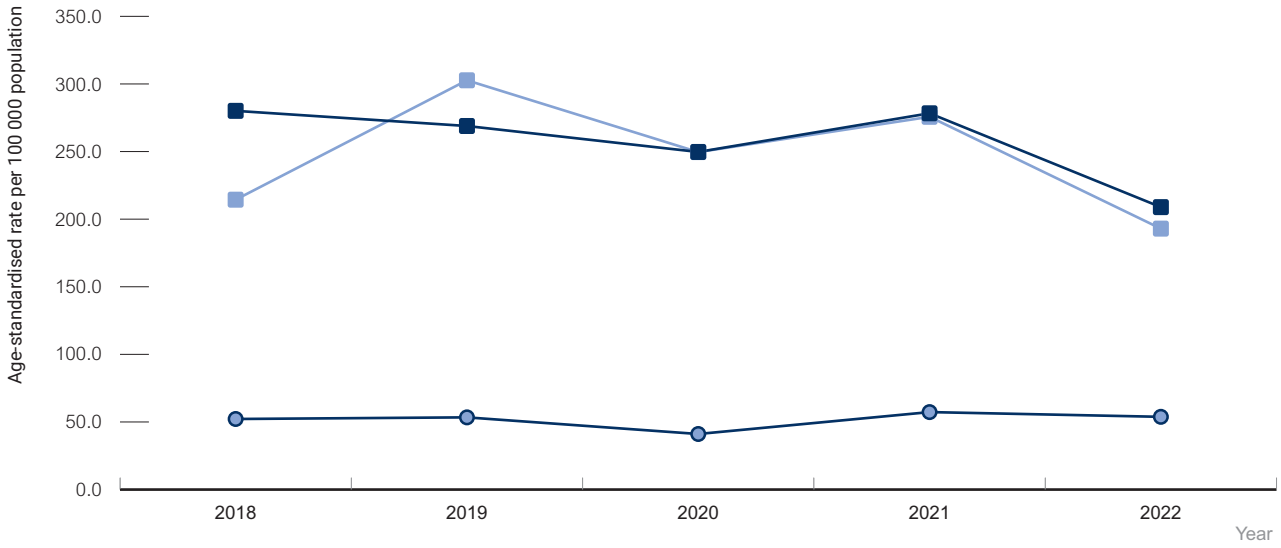
Figure 49 Hepatitis C notification rate per 100 000 population by Aboriginal and Torres Strait Islander status and area of residence, 2022



Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Aboriginal and Torres Strait Islander status was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, Queensland, South Australia, and Western Australia).

Hepatitis C notification rates declined by 25% among Aboriginal and Torres Strait Islander peoples living in major cities from 2018 to 2022 (280.1 per 100 000 and 208.9 per 100 000 respectively) and by 10% among Aboriginal and Torres Strait Islander people living in regional areas (214.4 per 100 000 to 193.0 per 100 000). In remote areas rates fluctuated and were 53.8 per 100 000 in 2022 (Figure 50).

Figure 50 Hepatitis C notification rate per 100 000 population among Aboriginal and Torres Strait Islander peoples by area of residence, 2018–2022



	2018	2019	2020	2021	2022
Major cities	280.1	268.9	249.7	278.3	208.9
Regional	214.4	302.7	249.6	275.7	193.0
Remote	52.2	53.4	41.1	57.3	53.8

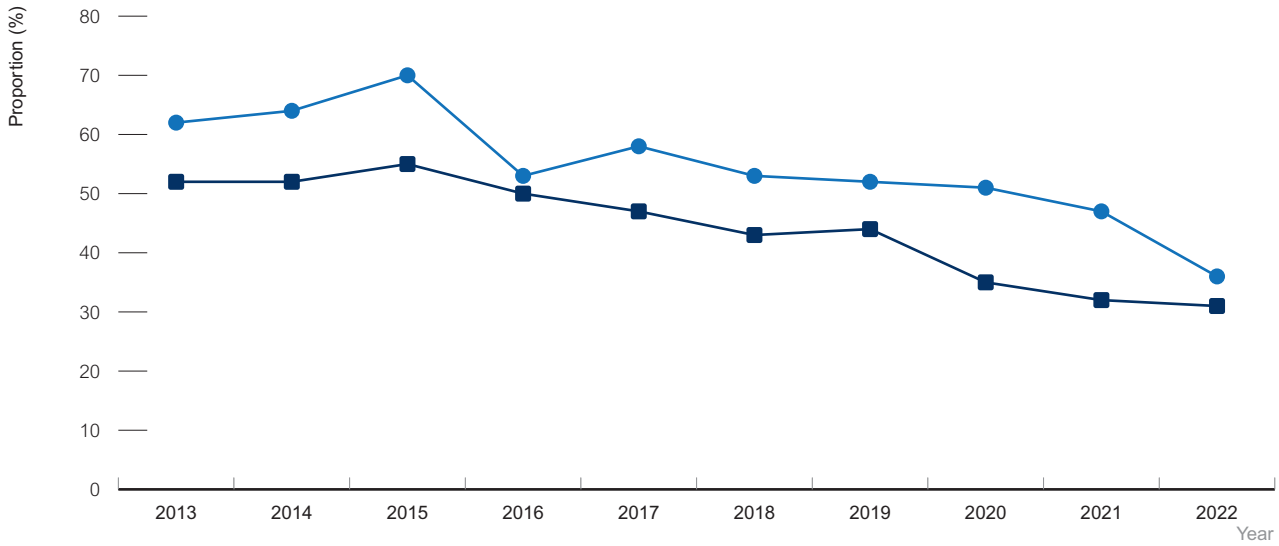
Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Aboriginal and Torres Strait Islander status was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, Queensland, South Australia, and Western Australia).

Hepatitis C prevalence

Australia's hepatitis C epidemic affects many people across differing age groups, ethnicities, and sociodemographic backgrounds including Aboriginal and Torres Strait Islander peoples. Key populations include people with a history of injecting drug use and people with a history of incarceration.

Between 2013 and 2015, the hepatitis C antibody prevalence among Aboriginal and Torres Strait Islander participants of the ANSPS increased from 62% to 70%, and then declined to 36% in 2022. For each year between 2013 and 2022 hepatitis C antibody prevalence was higher among Aboriginal and Torres Strait Islander ANSPS respondents than among non-Indigenous respondents (Figure 51).

Figure 51 Hepatitis C antibody prevalence in needle and syringe program participants by Aboriginal and Torres Strait Islander status, 2013–2022



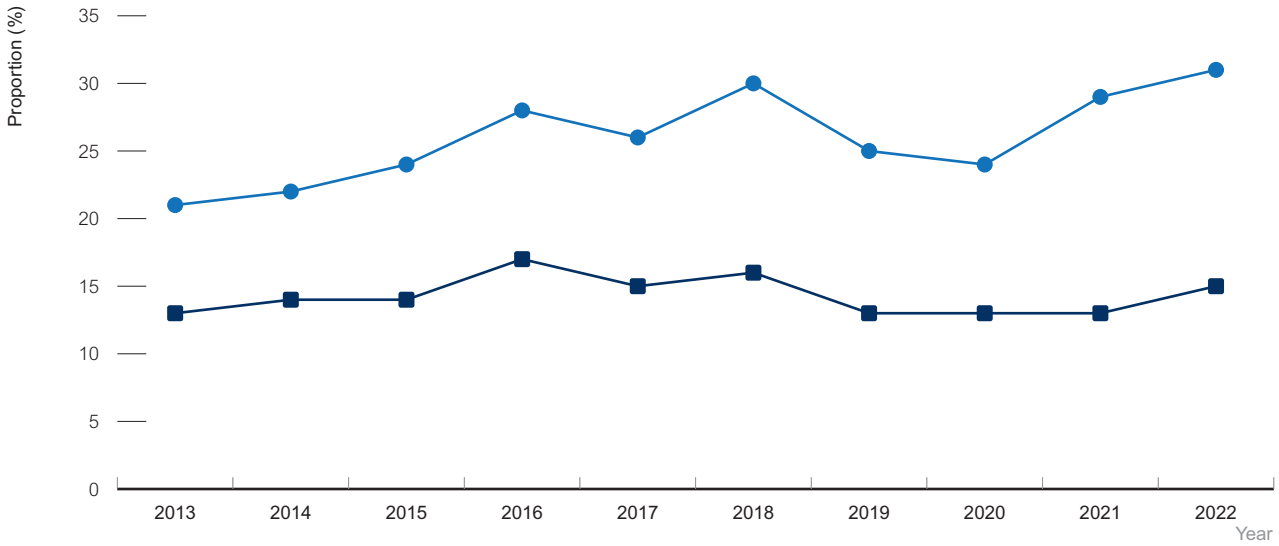
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander (%)	62	64	70	53	58	53	52	51	47	36
Non-Indigenous (%)	52	52	55	50	47	43	44	35	32	31

Source: Australian Needle Syringe Program Survey; see Methodology for detail.

Injection drug use

Receptive syringe sharing was determined in the ANSPS by the question: 'How many times in the last month did you reuse a needle and syringe after someone else had used it, including your sex partner (even if it was cleaned)?'. The proportion of Aboriginal and Torres Strait Islander people participating in the survey who reported receptive syringe sharing increased from 21% in 2013 to 31% in 2022. This proportion was higher among Aboriginal and Torres Strait Islander participants than among non-Indigenous participants in each of the years 2013–2022 (Figure 52).

Figure 52 Prevalence of receptive syringe sharing by needle and syringe program participants by Aboriginal and Torres Strait Islander status, 2013–2022



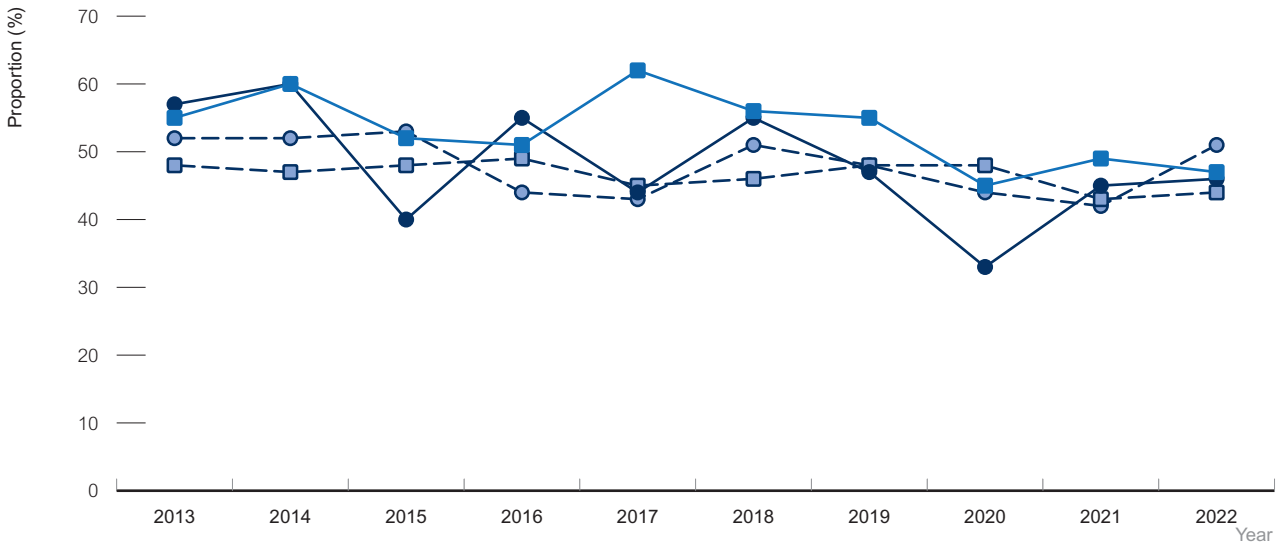
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander (%)	21	22	24	28	26	30	25	24	29	31
Non-Indigenous (%)	13	14	14	17	15	16	13	13	13	15

Source: Australian Needle Syringe Program Survey; see Methodology for detail.

Testing

Of Aboriginal and Torres Strait Islander women who were hepatitis C antibody negative and who participated in the ANSPS, the proportion who reported a hepatitis C antibody test in the past 12 months declined over the period 2013 to 2022 from 57% to 46%, however the rates fluctuated over last 10 years between 33% and 60%. (Figure 53). The proportion of participating Aboriginal and Torres Strait Islander men who were hepatitis C antibody negative and who reported a hepatitis C antibody test in the past 12 months also declined between 2013 and 2022 from 55% to 47%. Among non-Indigenous women who were hepatitis C antibody negative, rates fluctuated between 2013 and 2022 and were 51% in 2022. A similar trend was seen among hepatitis C antibody negative non-Indigenous men, with the proportion of ANSPS participants who reported a hepatitis C antibody test in the past 12 months 44% in 2022 (Figure 53).

Figure 53 Proportion of ANSPS participants who were hepatitis C antibody negative and reported a hepatitis C antibody test in the past 12 months, by Aboriginal and Torres Strait Islander status, 2013–2022



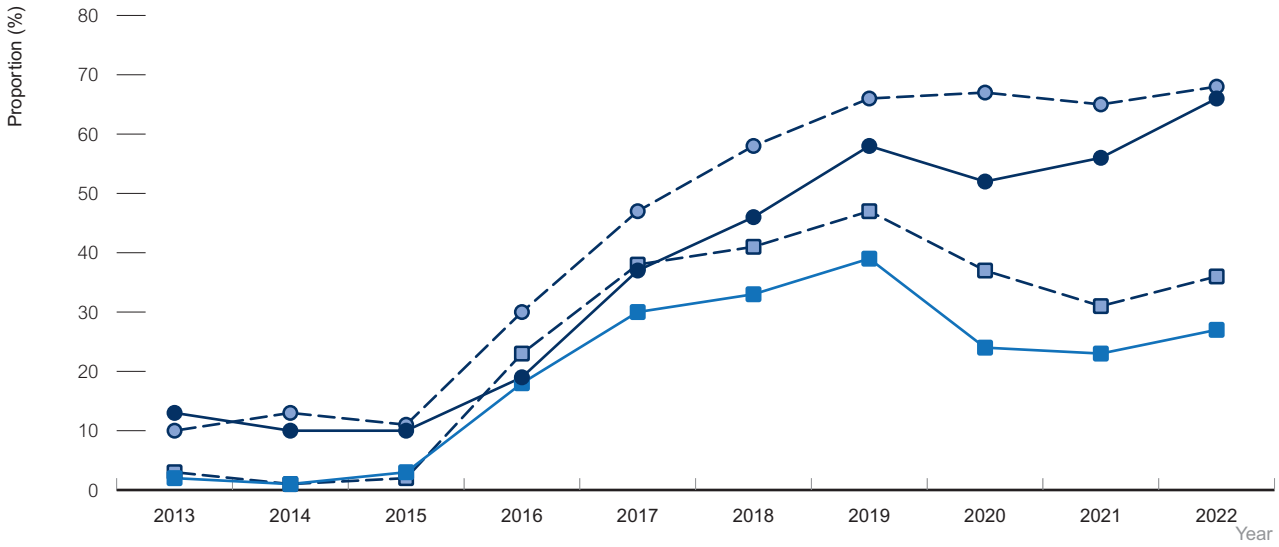
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander women (%)	57	60	40	55	44	55	47	33	45	46
Non-Indigenous women (%)	52	52	53	44	43	51	48	44	42	51
Aboriginal and Torres Strait Islander men (%)	55	60	52	51	62	56	55	45	49	47
Non-Indigenous men (%)	48	47	48	49	45	46	48	48	43	44

Source: Australian Needle Syringe Program Survey; see Methodology for detail

Treatment

In 2022, among Aboriginal and Torres Strait Islander participants in the ANSPS, 66% reported a lifetime history of hepatitis C treatment, an increase from 13% in 2013 (Figure 54). In 2022, Aboriginal and Torres Strait Islander participants had a slightly lower lifetime uptake of treatment than non-Indigenous participants (66% vs 68%). In 2022, Aboriginal and Torres Strait Islander participants had lower uptake of treatment in the last 12 months than non-Indigenous participants (27% vs 36%). Increases in treatment uptake after 2015 reflect PBS-subsidised interferon-free direct-acting antiviral regimens becoming available in Australia in March 2016.

Figure 54 Hepatitis C antiviral therapy ever for hepatitis C antibody-positive needle syringe program participants, by Aboriginal and Torres Strait Islander status, 2013–2022



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Lifetime history of treatment - Aboriginal and Torres Strait Islander (%)	13	10	10	19	37	46	58	52	56	66
Treatment in the last 12 months - Aboriginal and Torres Strait Islander (%)	2	1	3	18	30	33	39	24	23	27
Lifetime history of treatment - non-Indigenous (%)	10	13	11	30	47	58	66	67	65	68
Treatment in the last 12 months - non-Indigenous (%)	3	1	2	23	38	41	47	37	31	36

Source: Australian Needle Syringe Program Survey; see Methodology for detail.

6 Hepatitis B

Please see p. 9 for summary.

Hepatitis B notifications

This section focuses on notified cases of hepatitis B infection, which means that a person previously not known to have the infection has since been tested and now found to have hepatitis B. These notifications include newly acquired infections (previous negative test in the past two years) plus those with a previous test more than two years ago or where the time-period is unknown.

There was a total of 5075 hepatitis B notifications in Australia in 2022. Of these 108 (2%) were among Aboriginal and Torres Strait Islander peoples (Table 8), 2757 (54%) were among non-Indigenous people, and 2210 (44%) were among people for whom Aboriginal and Torres Strait Islander status was not reported [(1)]. Details of Aboriginal and Torres Strait Islander notifications for the 2018-2022 reporting period are provided in Table 8.

Table 8 Hepatitis B notifications in Aboriginal and Torres Strait peoples, by characteristic, 2018–2022

Characteristic	2018	2019	2020	2021	2022
Total cases	168	150	166	161	108
Sex[a]					
Male	115	90	98	101	67
Female	53	60	68	60	40
Age group					
<20	14	14	12	9	7
20-29	25	20	22	13	13
30-39	45	48	40	28	23
40-49	41	32	42	50	19
50-59	23	20	33	35	28
60-69	11	12	12	18	13
70+	9	4	5	8	10
State/Territory[b]					
Australian Capital Territory	0	2	0	0	2
New South Wales	57	45	39	37	32
Northern Territory	25	17	21	6	10
Queensland	55	58	55	57	28
South Australia	4	6	10	1	2
Tasmania	0	1	0	0	0
Victoria	8	3	2	4	2
Western Australia	19	18	39	56	32

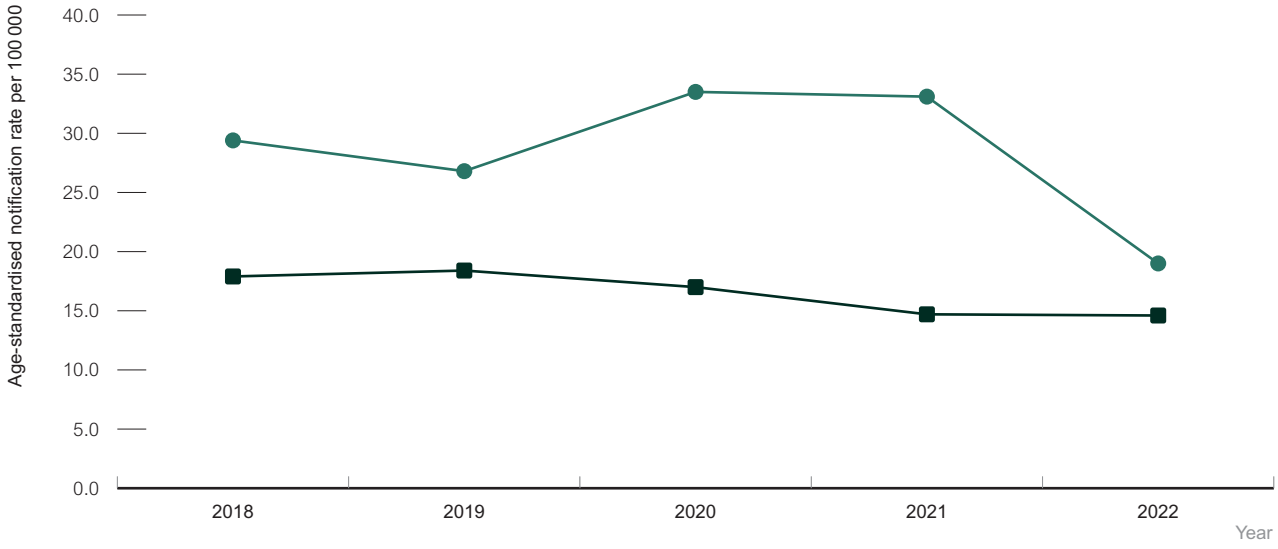
a Excludes 'Not reported'; The National Notifiable Diseases Surveillance System includes the variable 'Sex' to indicate Sex/Gender.
b Numbers of notifications in some jurisdictions may be strongly influenced by completeness of Aboriginal and Torres Strait Islander status.

Source: National Notifiable Diseases Surveillance System.

In the five-year period 2018–2022, Aboriginal and Torres Strait Islander status was recorded at least 50% of notifications per year in the Australian Capital Territory, the Northern Territory, Queensland, South Australia, and Western Australia. Incomplete reporting of Aboriginal and Torres Strait Islander status can result in a misrepresentation of the true extent of the notifications in Aboriginal and Torres Strait Islander peoples and may not reflect national trends.

The hepatitis B age standardised notification rate among Aboriginal and Torres Strait Islander peoples decreased by 35% between 2018 and 2022 from 29.4 per 100 000 to 19.0 per 100 000. Similarly, the hepatitis B notification rate among non-Indigenous people declined by 18% between 2018 and 2022 from 17.9 to 14.6 per 100 000 (Figure 55).

Figure 55 Hepatitis B notification rate per 100 000 population by, Aboriginal and Torres Strait Islander status, 2018–2022

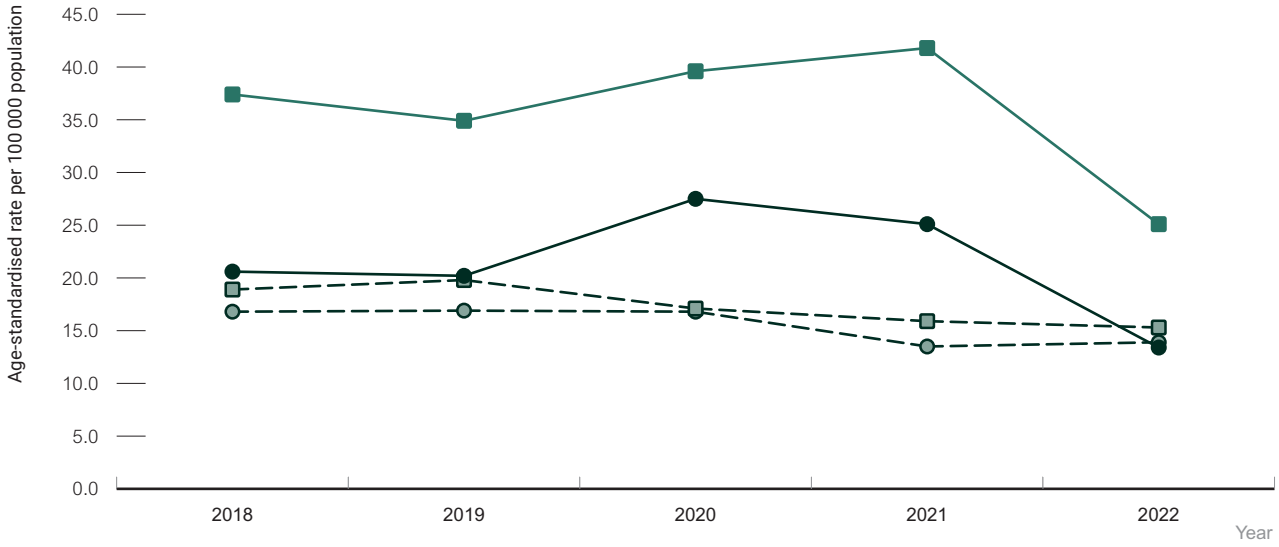


	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander peoples	29.4	26.8	33.5	33.1	19.0
Non-Indigenous	17.9	18.4	17.0	14.7	14.6

Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Non-Indigenous people was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, Queensland, South Australia, and Western Australia).

For the years 2018 to 2022, age standardised hepatitis B notification rates have been consistently higher in Aboriginal and Torres Strait Islander males than in Aboriginal and Torres Strait Islander females. Hepatitis B rates declined among Aboriginal and Torres Strait Islander females by 35% (20.6 per 100 000 to 13.4 per 100 000). Similarly, amongst Aboriginal and Torres Strait Islander males, rates decreased by 33% (37.4 to 25.1 per 100 000). In the same period, hepatitis B notification rates also declined among non-Indigenous females from 16.8 to 13.9 per 100 000 (by 17%) and among non-Indigenous males from 18.9 to 15.3 per 100 000 (by 19%) (Figure 56).

Figure 56 Hepatitis B notification rates per 100 000, by Aboriginal and Torres Strait Islander status and gender, 2018–2022

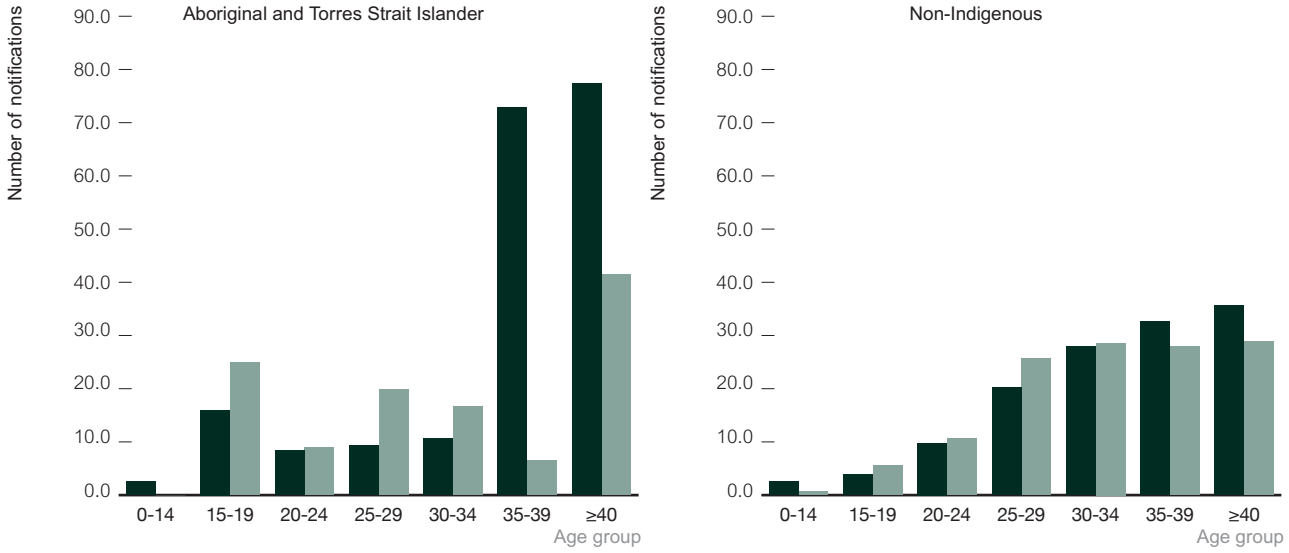


	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander females	20.6	20.2	27.5	25.1	13.4
Aboriginal and Torres Strait Islander males	37.4	34.9	39.6	41.8	25.1
Non-Indigenous females	16.8	16.9	16.8	13.5	13.9
Non-Indigenous males	18.9	19.8	17.1	15.9	15.3

Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Non-Indigenous people was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, Queensland, South Australia, and Western Australia).

In 2022, hepatitis B notification rates among Aboriginal and Torres Strait Islander peoples were highest among men and women aged 40 years and older (Figure 57). A similar trend was seen in non-Indigenous men and women. Small numbers of notifications among Aboriginal and Torres Strait Islander peoples mean that comparisons by age-group should be conducted with caution.

Figure 57 Hepatitis B notification rate per 100 000 population by Aboriginal and Torres Strait Islander status, age group, and gender, 2022

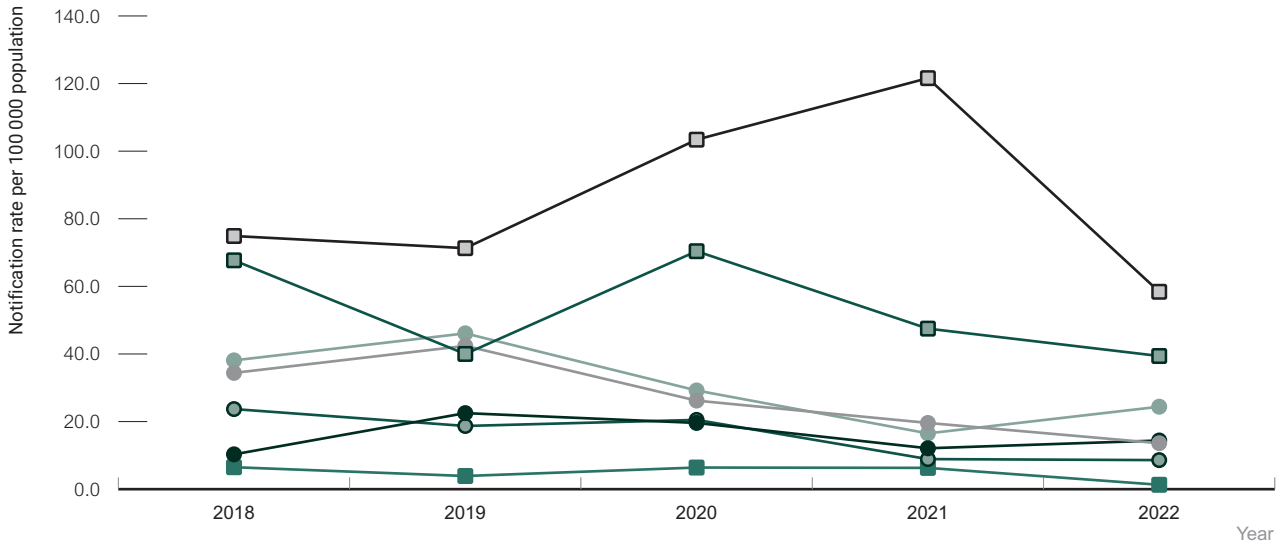


	Aboriginal and Torres Strait Islander							Non-Indigenous						
	0-14	15-19	20-24	25-29	30-34	35-39	≥40	0-14	15-19	20-24	25-29	30-34	35-39	≥40
Male	2.5	16.0	8.4	9.3	10.6	72.9	77.4	2.6	3.9	9.8	20.2	27.9	32.7	35.6
Female	0.0	24.9	8.9	19.8	16.7	6.5	41.4	0.7	5.6	10.6	25.7	28.6	28.0	28.8

Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Non-Indigenous people was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, Queensland, South Australia, and Western Australia).

By age-group, the highest rates in 2022 were among those aged 40 years and over (58.4 notifications per 100 000) followed by those aged 35 to 39 years (39.4 per 100 000), likely reflecting the impact of childhood and adolescent vaccination programs on the younger age groups (Figure 58).

Figure 58 Hepatitis B notification rate per 100 000 population among Aboriginal and Torres Strait Islander peoples by age group, 2018–2022

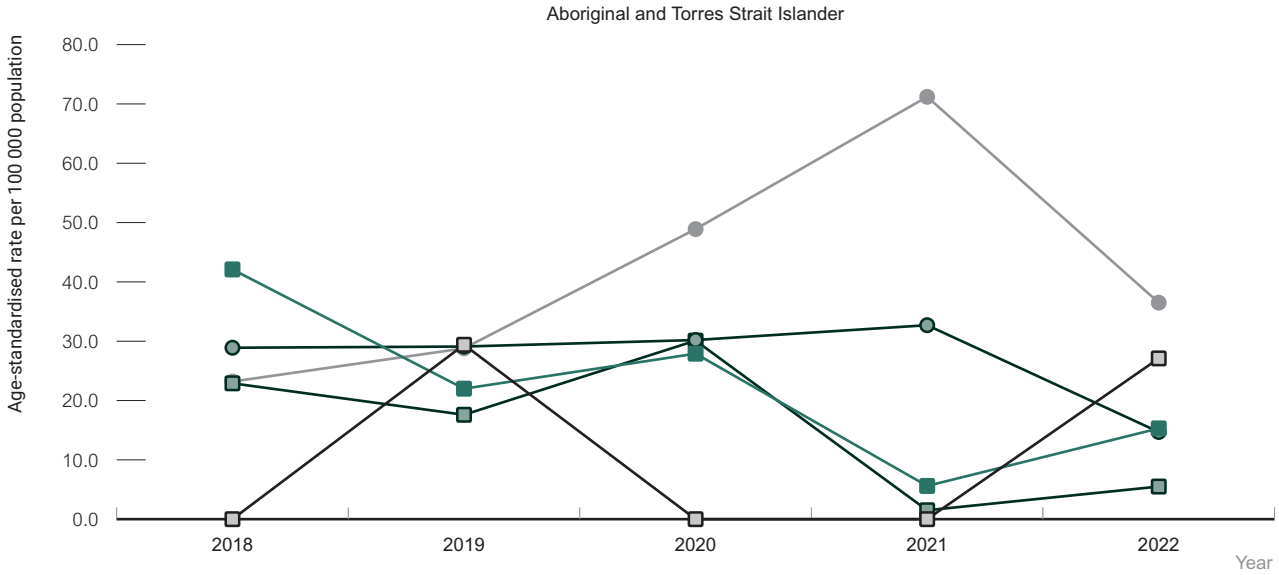


	2018	2019	2020	2021	2022
0–14	6.5	3.9	6.4	6.3	1.3
15–19	38.1	46.1	29.2	16.5	24.4
20–24	23.7	18.7	20.5	8.9	8.6
25–29	10.3	22.5	19.6	12.1	14.4
30–34	34.4	42.4	26.2	19.6	13.6
35–39	67.7	40.0	70.4	47.5	39.4
≥40	74.9	71.3	103.4	121.6	58.4

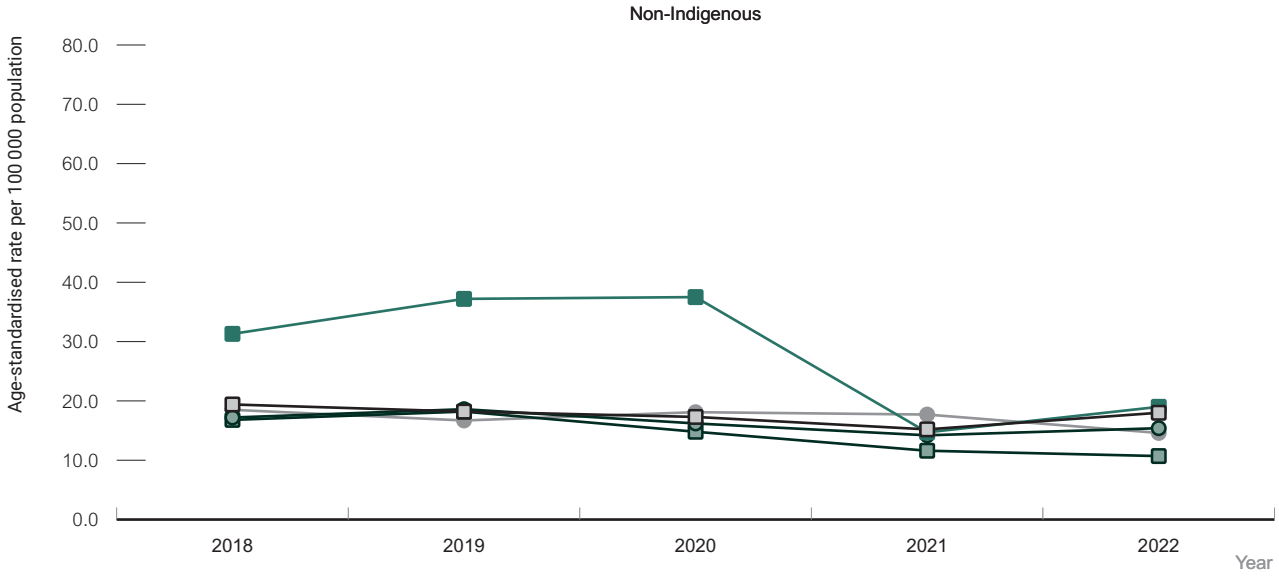
Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Non-Indigenous people was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, Queensland, South Australia, and Western Australia).

In 2022, hepatitis B notification rates among Aboriginal and Torres Strait Islander peoples were highest in Western Australia (36.5 per 100 000), followed by the Australian Capital Territory (27.1 per 100 000). Interpretation of trends over time by state and territory are difficult due to an overall small number of notifications (Figure 59).

Figure 59 Hepatitis B notification rate per 100 000 population by Aboriginal and Torres Strait Islander status and state/territory, 2018–2022



	2018	2019	2020	2021	2022
ACT	0.0	29.4	0.0	0.0	27.1
NT	42.1	22.0	27.9	5.6	15.3
QLD	28.9	29.1	30.2	32.7	14.7
SA	22.9	17.6	30.1	1.5	5.5
WA	23.2	28.8	48.9	71.2	36.5

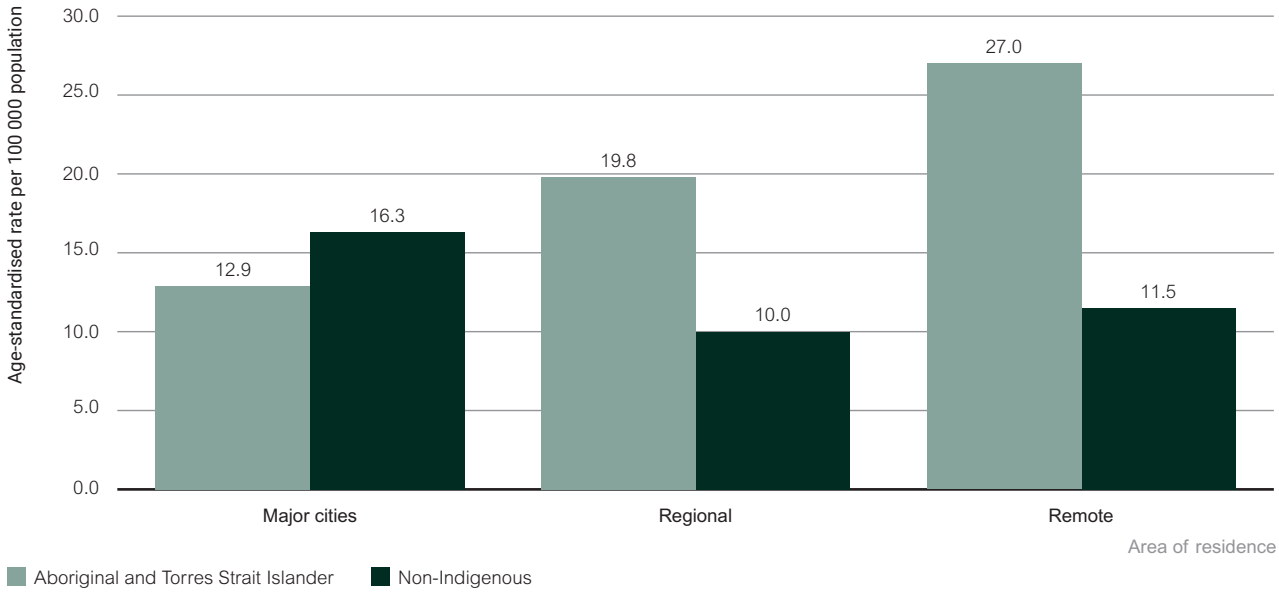


	2018	2019	2020	2021	2022
ACT	19.4	18.2	17.3	15.2	18.0
NT	31.3	37.2	37.5	14.7	19.0
QLD	17.2	18.6	16.2	14.2	15.4
SA	16.8	18.2	14.8	11.6	10.7
WA	18.5	16.7	18.1	17.7	14.6

Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Non-indigenous people was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, Queensland, South Australia, and Western Australia).

In 2022, the hepatitis B notification rate among Aboriginal and Torres Strait Islander peoples was highest among people living in remote areas (27.0 per 100 000), followed by regional areas (19.8 per 100 000), then major cities (12.9 per 100 000). The hepatitis B notification rate in Aboriginal and Torres Strait Islander peoples was higher than among non-Indigenous people in all areas of residence with the exception of major cities (Figure 60).

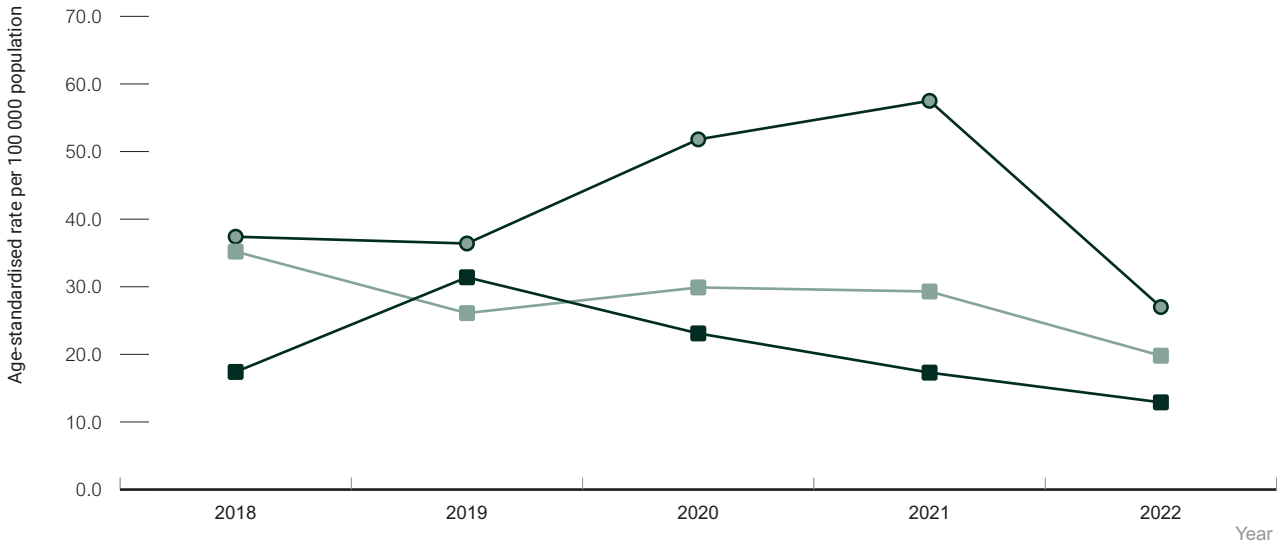
Figure 60 Hepatitis B notification rate per 100 000 population by Aboriginal and Torres Strait Islander status and area of residence, 2022



Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Non-Indigenous people was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, Queensland, South Australia, and Western Australia).

Over the five-year reporting period, hepatitis B notification rates among Aboriginal and Torres Strait Islander peoples decreased across all areas of residence. Rates decreased by 28% in remote areas (37.4 per 100 000 in 2018 and 27.0 in 2022), 44% in regional areas (35.2 per 100 000 in 2018 and 19.8 in 2022) and 26% in major cities (17.4 per 100 000 in 2018 and 12.9 in 2022) (Figure 61).

Figure 61 Hepatitis B notification rate per 100 000 population among Aboriginal and Torres Strait Islander peoples, by area of residence, 2018–2022



	2018	2019	2020	2021	2022
Major cities	17.4	31.4	23.1	17.3	12.9
Regional	35.2	26.1	29.9	29.3	19.8
Remote	37.4	36.4	51.8	57.5	27.0

Source: Australian National Notifiable Diseases Surveillance System. Includes jurisdictions in which Non-Indigenous people was reported for ≥50% of notifications for each year (Australian Capital Territory, Northern Territory, Queensland, South Australia, and Western Australia).

Newly acquired hepatitis B infection

Newly acquired hepatitis B infection is defined as hepatitis B infection in a person previously known not to have the infection within the last two years. Determination of a case as 'newly acquired' is heavily reliant on public health follow-up, with the method and intensity of follow-up varying by jurisdiction and over time. For each of the five years 2018–2022, Aboriginal and Torres Strait Islander status was complete for at least 50% of newly acquired hepatitis B notifications in every state and territory. Because of risk of misinterpretation of low numbers, data on newly acquired hepatitis B infection is not reported in this report.

Hepatitis B prevalence

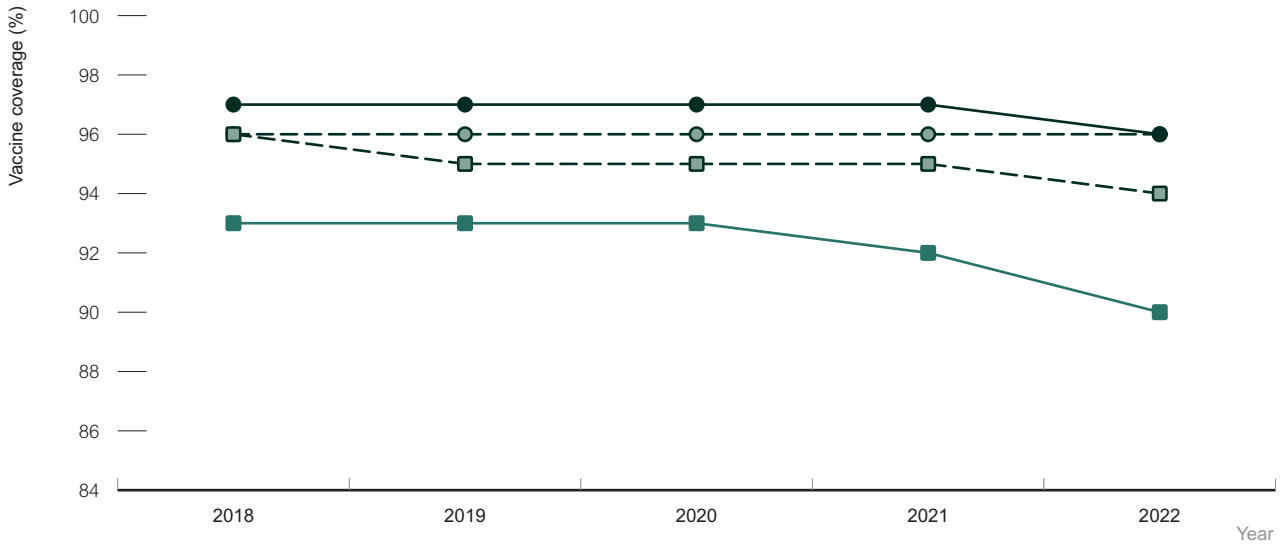
Data relating to hepatitis B was not available at the time of reporting. Future reporting will include modelled hepatitis B prevalence estimates.

Vaccination

In the Northern Territory in 1985, hepatitis B screening was introduced for all pregnant women as well as vaccination for infants born to people living with chronic hepatitis B infection. In 1990, universal infant vaccination was implemented in the Northern Territory and, in 1998, a catch-up program targeting children aged 6–16 years was introduced. A universal school-based hepatitis B vaccination catch-up program for adolescents aged 12–15 years commenced in 1998 and in other jurisdictions of Australia, hepatitis B vaccination of all infants commenced in 2000 [5].

Over the period 2018–2022, hepatitis B vaccination coverage rates for children were high. For Aboriginal and Torres Strait Islander children, coverage was marginally lower than for non-Indigenous children at 12 months of age (at 90% to 94%). At 24 months of age, vaccination coverage was similar between Aboriginal and Torres Strait Islander children and non-Indigenous children, sitting at 96% (Figure 62).

Figure 62 Hepatitis B vaccination coverage estimates at 12 and 24 months by Aboriginal and Torres Strait Islander status, 2018–2022



	2018	2019	2020	2021	2022
Aboriginal and Torres Strait Islander peoples 12 months (%)	93	93	93	92	90
Aboriginal and Torres Strait Islander peoples 24 months (%)	97	97	97	97	96
Non-Indigenous 12 months (%)	96	95	95	95	94
Non-Indigenous 24 months (%)	96	96	96	96	96

Source: National Centre for Immunisation Research and Surveillance of Vaccine Preventable Diseases.

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- Troy Combo, Burnet Institute, Vic

ACCESS (Australian Collaboration for Coordinated Enhanced Sentinel Surveillance)

- Canberra Sexual Health Centre, Canberra; Hobart Place Practice, Canberra; ACT
- Liverpool Sexual Health Clinic, Liverpool; Coffs Harbour Sexual Health Clinic, Coffs Harbour; Grafton Sexual Health Clinic, Grafton; Albury Sexual Health Clinic, Albury; Bega Community Health Service, Bega; Goulburn Sexual Health Clinic, Goulburn; Griffith Sexual Health Clinic, Griffith; Narooma Sexual Health Clinic, Narooma; Queanbeyan Sexual Health Clinic, Queanbeyan; Wagga Sexual Health Clinic, Wagga Wagga; Holden Street Clinic, Gosford; Newcastle Sexual Health Clinic, Newcastle; Forster Sexual Health Clinic, Forster; Bligh Street Clinic, Tamworth; Taree Manning Clinic, Taree; Illawarra Sexual Health Clinic, Warrawong; Nowra Sexual Health Clinic, Nowra; Clinic 180, Potts Point; Lismore Sexual Health Service, Lismore; Tweed Heads Sexual Health Service, Tweed Heads; Clinic 16, North Shore Sexual Health Service, Sydney; Manly Sexual Health Clinic, Sydney; RPA Sexual Health Clinic, Sydney; Short Street Centre Sexual Health Clinic, Kogarah; Western Sydney Sexual Health Centre, Parramatta; Mt Druitt Sexual Health Clinic (formerly Luxford Road Sexual Health Clinic), Mt Druitt; Blue Mountains Sexual Health Clinic, Katoomba; Nepean Sexual Health Clinic, Penrith; Sydney Sexual Health Centre, Sydney; WAYS Youth Health Clinic, Bondi Junction; Lightning Ridge Sexual Health Service, Lightning Ridge; Bourke Sexual Health Service, Bourke; Dubbo Sexual Health, Dubbo; Orange Sexual Health Clinic, Kite Street Community Health Centre, Orange; Broken Hill Sexual Health, Broken Hill; Balranald Sexual Health Service, Dareton; a[TEST], Darlinghurst; a[TEST], Newtown; a[TEST], Surry Hills; Bungendore Medical Centre, Bungendore; East Sydney Doctors, Darlinghurst; Fountain Street General Practice, Alexandria; Macleay Street Medical, Potts Point; Taylor Square Private Clinic, Surry Hills; Dr Doong Practice, Burwood; Kildare Road Medical Centre, Blacktown; Waterloo Medical Centre, Waterloo; Holdsworth House Medical Practice, Darlinghurst; Westmead Hospital, Westmead; Immunology B Ambulatory Care, St Vincent's Hospital, Darlinghurst; NSW
- Clinic 34 Darwin and Clinic 34 Alice Springs, Sexual Health and Blood Borne Virus Unit, Centre for Disease Control, Department of Health, Darwin, NT
- Cairns Sexual Health Clinic, Cairns; Gold Coast Sexual Health Service, Miami; Princess Alexandra Sexual Health, Woolloongabba; Townsville Sexual Health Service, Townsville; Mackay Sexual Health Clinic, Mackay; Mount Isa Sexual Health Clinic, Mount Isa; Palm Island Sexual Health Clinic, Palm Island; Clinic 30, Brisbane; Medeco Inala, Inala; Stonewall Medical, Windsor; QLD
- Clinic 275 Sexual Health, Adelaide; O'Brien Street General Practice, Adelaide; Shine SA clinics (including Rapido Testing Service), Adelaide; SA
- Hobart Sexual Health Service, Hobart; Launceston Sexual Health Service, Launceston; Devonport Sexual Health Service, Devonport; TAS
- Melbourne Sexual Health Centre, Melbourne; Barwon Reproductive and Sexual Health (BRASH) Clinic, Geelong; Ballarat Community Health, Ballarat; Bendigo Community Health Clinic, Bendigo; Centre Clinic, St Kilda; Docker St Medical Centre, Wangaratta; Frankston Health, Frankston; Cohealth, Melbourne; North Richmond Community Health, Richmond; EACH Social and Community Health, Melbourne; Dandenong Superclinic, Dandenong; Lygon Court Medical Centre, Carlton; Mediclinic, Clayton; Prahran Market Clinic, Prahran; Pronto!, Abbotsford; Northside Clinic, Fitzroy North; The Alfred Hospital HIV Clinic, Melbourne; VIC
- South Terrace Sexual Health Clinic, Fremantle; Perth Sexual Health Clinic, Perth; Deen Clinic, Northbridge; GP on Beaufort, Mount Lawley; M Clinic, Perth; View St Medical, North Perth; WA

Genital Warts Surveillance Network

- ACT - Canberra Sexual Health Centre, Canberra
- NSW - Liverpool Sexual Health Clinic, Liverpool; Coffs Harbour Sexual Health Clinic, Coffs Harbour; Grafton Sexual Health Clinic, Grafton; Albury Sexual Health Clinic, Albury; Bega Community Health Service, Bega; Goulburn Sexual Health Clinic, Goulburn; Griffith Sexual Health Clinic, Griffith; Narooma Sexual Health Clinic, Narooma; Queanbeyan Sexual Health Clinic, Queanbeyan; Wagga Sexual Health Clinic, Wagga Wagga; Holden Street Clinic, Gosford; Newcastle Sexual Health Clinic, Newcastle; Forster Sexual Health Clinic, Forster; Bligh Street Clinic, Tamworth; Taree Manning Clinic, Taree; Illawarra Sexual Health Clinic, Warrawong; Nowra Sexual Health Clinic, Nowra; Kirketon Road Centre, Darlinghurst; Clinic 180, Potts Point; Lismore Sexual Health Service, Lismore; Tweed Heads Sexual Health Service, Tweed Heads; Clinic 16, North Shore Sexual Health Service, Sydney; Manly Sexual Health Clinic, Sydney; RPA Sexual Health Clinic, Sydney; Short Street Centre Sexual Health Clinic, Kogarah; Western Sydney Sexual Health Centre, Parramatta; Mount Druitt Sexual Health Clinic (formerly Luxford Road Sexual Health Clinic), Mount Druitt; Blue Mountains Sexual Health Clinic, Katoomba; Nepean Sexual Health Clinic, Penrith; Sydney Sexual Health Centre, Sydney; WAYS Youth Health Clinic, Bondi Junction; Lightning Ridge Sexual Health Service, Lightning Ridge; Bourke Sexual Health Service, Bourke; Dubbo Sexual Health, Dubbo; Orange Sexual Health Clinic, Kite Street Community Health Centre, Orange; Broken Hill Sexual Health, Broken Hill; Balranald Sexual Health Service, Dareton; a[TEST], Darlinghurst; a[TEST], Newtown; a[TEST], Surry Hills
- NT - Alice Springs Clinic 34, Alice Springs; Darwin Clinic 34, Darwin
- QLD - Cairns Sexual Health Clinic, Cairns; Gold Coast Sexual Health Service, Miami; Princess Alexandra Sexual Health, Woolloongabba; Townsville Sexual Health Service, Townsville; Mackay Sexual Health Clinic, Mackay; Mount Isa Sexual Health Clinic, Mt Isa; Palm Island Sexual Health Clinic, Palm Island
- SA - Clinic 275 Sexual Health, Adelaide
- TAS - Hobart Sexual Health Service, Hobart; Launceston Sexual Health Service, Launceston; Devonport Sexual Health Service, Devonport
- VIC - Melbourne Sexual Health Centre, Melbourne; Barwon Reproductive and Sexual Health Clinic, Geelong
- WA - Fremantle Hospital Sexual Health Clinic, Fremantle

Collaboration of Australian Needle Syringe Programs

- ACT - Directions ACT, Canberra
- NSW - ACON Hunter; First Step Program Port Kembla; Hunter Harm Reduction Services, Newcastle; Kirketon Road Centre and Clinic 180, Kings Cross; Mid North Coast Harm Reduction, Coffs Harbour; NSW Users and AIDS Association, Surry Hills; Northern NSW Harm Reduction, Ballina, Byron Bay, Lismore, Nimbin, and Tweed Heads; Sydney Harm Minimisation, Redfern, Canterbury and RPA Hospital; South Court Primary Care NSP, Nepean; Western Sydney HIV/ Hepatitis C Prevention Service, Blacktown, Mount Druitt and Parramatta, St Vincent's Centre for Applied Medical Research, NSW State Reference Laboratory for HIV at St Vincent's Hospital
- NT - Northern Territory AIDS and Hepatitis C Council, Alice Springs, Darwin and Palmerston
- QLD - Biala Community Alcohol and Drug Services, Brisbane; Cairns ATODS NSP, Cairns; Queensland Injectors Health Network, Brisbane, Gold Coast and Sunshine Coast; Kobi House, Toowoomba; West Moreton Sexual Health Service, Ipswich; Townsville ATODS NSP
- SA - Drug and Alcohol Services South Australia, Adelaide; Anglicare Salisbury, Salisbury; Drug Arm, Warradale; Hindmarsh Centre, Hindmarsh; Noarlunga Community Health Service, Noarlunga; Nunkuwarrin Yunti Community Health Centre, Adelaide; Port Adelaide Community Health Centre, Port Adelaide; Street Link Youth Health Service, Adelaide
- TAS - Anglicare NSP Service, Hobart and Glenorchy; Clarence Community Health Centre, Clarence; Burnie NSP Service, Burnie
- VIC - Barwon Health Drug and Alcohol Services, Geelong; Health Information Exchange, St Kilda; Health Works, Footscray; Inner Space, Collingwood; North Richmond NSP, North Richmond; Southern Hepatitis/HIV/AIDS Resource and Prevention Service, Melbourne
- WA - Hepatitis WA, Perth: WA AIDS Council Mobile Exchange, Perth; Western Australia Substance Users Association, Perth and South Coast; WA.

National Organisations

- Australasian Sexual Health Alliance, Sydney, NSW
- Australasian Society for HIV, Viral Hepatitis and Sexual Health Medicine, Sydney, NSW
- Australasian Society for Infectious Diseases, Melbourne, VIC
- Australian Federation of AIDS Organisations, Sydney, NSW
- Australian Government Department of Health, Canberra, ACT
- Australian Injecting and Illicit Drug Users League, Canberra, ACT
- Australian Institute of Health and Welfare, Canberra, ACT
- Australian Paediatric Surveillance Unit, Westmead, NSW
- Australian Red Cross Lifeblood, Melbourne, VIC
- Centre for Social Research in Health, UNSW Sydney, Sydney, NSW
- Communicable Diseases Network Australia, Canberra, ACT
- Hepatitis Australia, Canberra, ACT
- Burnet Institute for Medical Research and Public Health, Prahran, VIC
- National Aboriginal Community Controlled Health Organisation, Canberra, ACT
- National Association of People with HIV Australia, Sydney, NSW
- National Serology Reference Laboratory, Australia, Fitzroy, VIC
- Scarlet Alliance, Australian Sex Workers Association, Sydney, NSW
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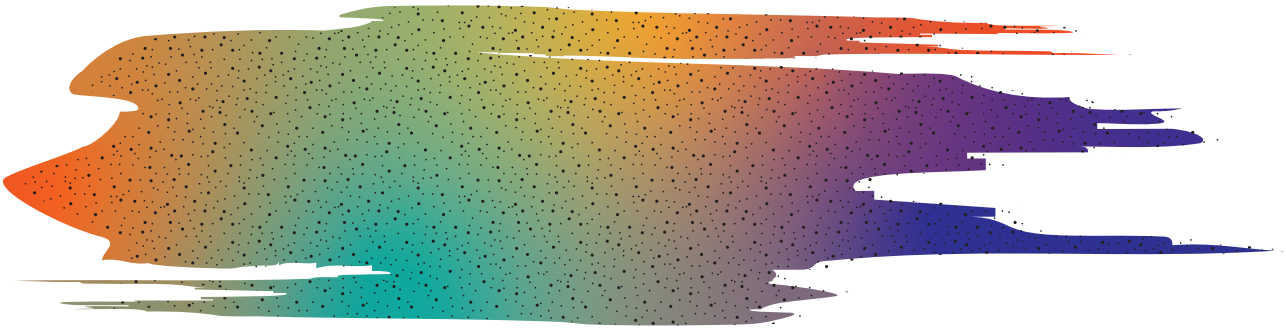
References

1. King, J, McManus, H, Kwon, A, Gray, R, McGregor, S. HIV, viral hepatitis and sexually transmissible infections in Australia: Annual surveillance report 2022. The Kirby Institute, UNSW Sydney, Sydney, Australia; 2022. Available from: http://handle.unsw.edu.au/1959.4/unsworks_81131.
2. MacPhail C, McKay K. Social determinants in the sexual health of adolescent Aboriginal Australians: a systematic review. Health Soc Care Community. 2018 Mar;26(2):131–46.
3. Australian Government Department of Health. National Aboriginal and Torres Strait Islander Blood Borne Viruses and Sexually Transmissible Infections Strategy 2018–2022. Canberra, Australia; 2018. Available from: https://www.health.gov.au/resources/publications/national-aboriginal-and-torres-strait-islander-blood-borne-viruses-and-sexually-transmissible-infections-strategy-2018-2022.
4. Heard S, Iversen J, Maher L. Australian Needle Syringe Program Survey National Data Report 2017-2021: Prevalence of HIV, HCV and injecting and sexual behaviour among NSP attendees. Sydney: Kirby Institute, UNSW Sydney; 2022.
5. Graham S, MacLachlan JH, Gunaratnam P, Cowie BC. Chronic hepatitis B prevalence in Australian Aboriginal and Torres Strait Islander people before and after implementing a universal vaccination program: a systematic review and meta-analysis. Sex Health. 2019 Jun;16(3):201–11.
6. Australian Institute of Family Studies. What is child abuse and neglect?. Available from: https://aifs.gov.au/resources/policy-and-practice-papers/what-child-abuse-and-neglect.
7. National Centre for Immunisation Research and Surveillance. Impact evaluation of Australian national human papillomavirus vaccination program. Sydney, Australia; 2021. Available from: https://www.ncirs.org.au/sites/default/files/2021-11/Impact%20evaluation%20of%20national%20HPV%20vaccination%20program_February%202021%20Report_0.pdf.

Cover Artwork Narrative & Description

The circles represent the different communities and organisations we are part of. These circles are all made up of many other circles with different styles and patterns, this is symbolic of the different kinds of people that make up a community or an organisation. Each person has their own story, knowledge and experience.

The background is made up of the changing landscapes as we move across this land from country to country. There is blue for the coast, with yellow sands. We move further inland and get rainforest green and bushland before coming into the oranges and burnt umbers that make up the deserts and grasslands.



The lines that connect everything together have two meanings. They represent the way we engage with each other, with services, the way we move about across country. They also represent the way we can easily spread viruses and diseases if we are not careful about the way we engage with others. Everybody communicates differently and we engage services at different times and for different reasons. We are all on a journey and that will look different for each person.

KOORI DESIGNS