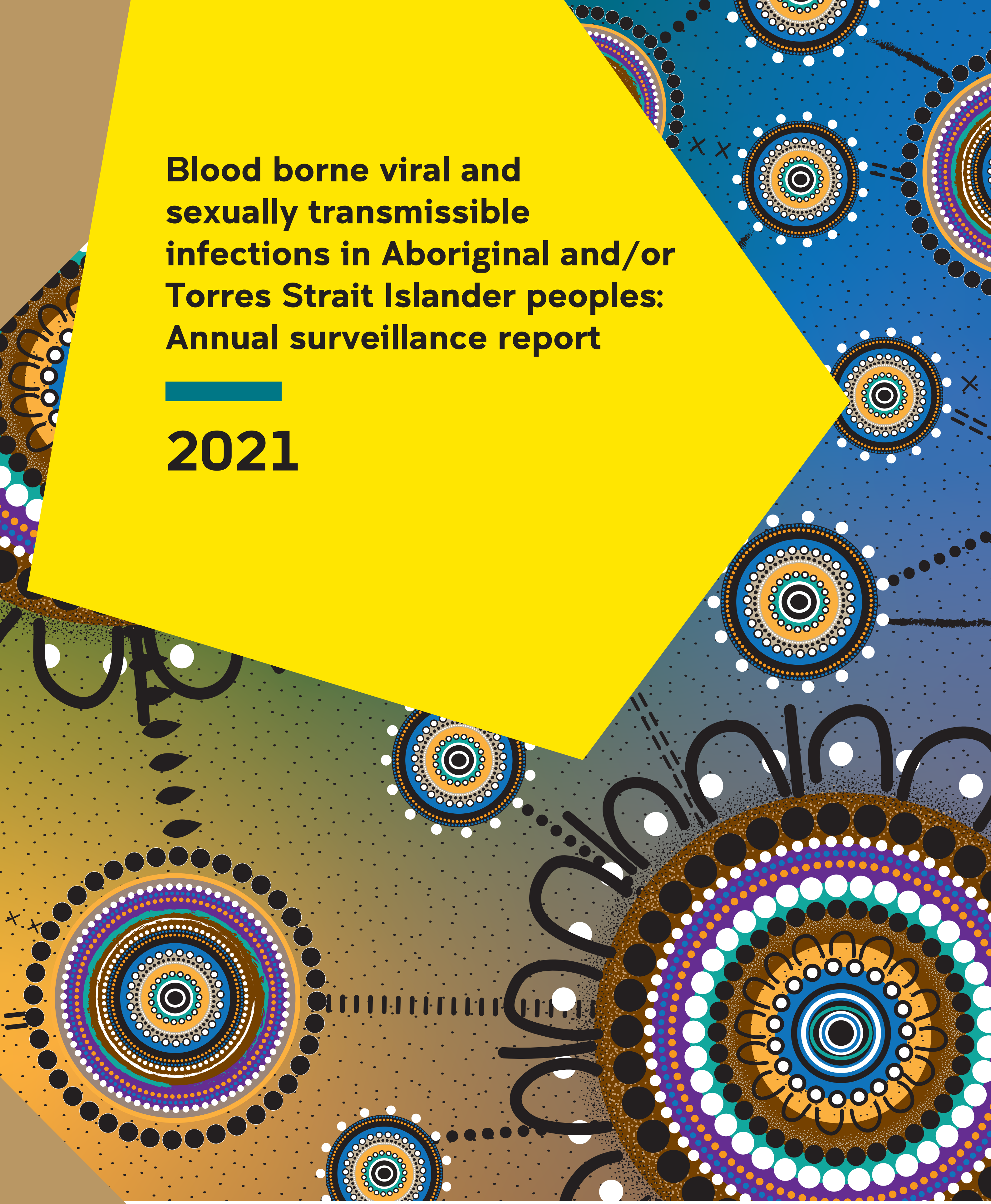

Blood borne viral and sexually transmissible infections in Aboriginal and/or Torres Strait Islander peoples: Annual surveillance report

2021

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Cover Artwork

The cover artwork was created by Jasmine Sarine. Jasmine is a proud Kamilaroi and Jerrinja woman from NSW. Born and raised in Wollongong (Dharawal country) as well as South Coast in Nowra (Jerrinja and Yuin country) and has family connections to Coonabarabran (Kamilaroi country). Jasmine is also a Rescue Qualified Firefighter with FRNSW, a lover of good coffee, rugby league and a selftaught 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."

Jasmine Sarine

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ISSN 2206-1622 (Online)

DOI: 10.26190/28zk-8025

This publication and associated data are available at internet address kirby.unsw.edu.au

Suggested citation:
Kirby Institute. Blood borne viral and sexually transmissible infections in Aboriginal and/or Torres Strait Islander peoples: annual surveillance report 2021. Sydney: Kirby Institute, UNSW Sydney, 2021.

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Blood borne viral and sexually transmissible infections in Aboriginal and/or Torres Strait Islander peoples:
Annual surveillance report 2021

The Kirby Institute

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The Kirby Institute is funded by the Australian Government Department of Health and is affiliated with the Faculty of Medicine, UNSW Sydney. The Surveillance, Evaluation and Research Program at the Kirby Institute is responsible for the public health monitoring and evaluation of patterns of transmission of blood borne viral and sexually transmissible infections.

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Preface

This report provides information on the occurrence of blood borne viruses (BBV) and sexually transmissible infections (STI) among the Aboriginal and/or Torres Strait Islander population 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 consequences within Aboriginal and/or 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/or Torres Strait Islander health services and communities. Table, 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 2020. Data in the report are provisional and subject to future revision.

We acknowledge the Kirby Aboriginal and Torres Strait Islander Reference group who advise on the interpretation, presentation, and distribution of data for the report and national projects relating to STIs and BBVs. Additionally, this report could not have been prepared without the collaboration of a large number of public health entities and community organisations throughout Australia. Their ongoing contributions are gratefully acknowledged.We also acknowledge Jasmine Sarine, 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
HBsAg	hepatitis B surface antigen
HIV	human immunodeficiency virus
HPV	human papillomavirus
PrEP	pre-exposure prophylaxis
STI	sexually transmissible infection
UNAIDS	Joint United Nations Programme on HIV/ AIDS

Summary

Data reported in 2020 were likely influenced the ongoing COVID-19 pandemic and trends should be interpreted with caution. The years for comparison in this report are from 2011 to 2020 unless focus is given to the impact of the COVID-19 epidemic, where the years for comparison are 2011 to 2019, and 2019 and 2020.

HIV

- In 2020, there were 18 new HIV notifications among Aboriginal and/or Torres Strait Islander people, accounting for 3% of all HIV notifications (633 notifications overall). This represents a 61% decline from 46 notifications in 2016, and a 28% decline from 25 notifications in 2019 [i].
- The HIV notification rate was higher among the Aboriginal and/or Torres Strait Islander population than among the Australian-born non-Indigenous population every year from 2012 to 2019. In 2011 and 2020, the opposite was true and in 2020, the HIV notification rate was 2.2 per 100 000 among the Aboriginal and/or Torres Strait Islander population compared with 2.3 per 100 000 among the Australian-born non-Indigenous population.
- In 2020, among Aboriginal and/or Torres Strait Islander people, the HIV notification rate was 3.2 per 100 000 for those aged 35 and older and was 1.4 per 100 000 for those aged under 35 years. Also in 2020, among non-Indigenous people, the HIV notification rate was 2.5 per 100 000 for those aged 35 and older and was 1.6 per 100 000 for those aged under 35 years.
- In the five-year period 2016–2020, similar proportions of HIV notifications by exposure classification were seen among the Aboriginal and/or Torres Strait Islander population and the Australian-born non-Indigenous population.
- Based on mathematical modelling, there were an estimated 570 Aboriginal and/or Torres Strait Islander people living with HIV in Australia in 2020.
- Based on the test for immune function (CD4+ cell count), one in eight HIV notifications (12.5%) among Aboriginal and/or Torres Strait Islander people in 2020 were classified as late diagnoses (CD4+ cell count of less than 350 cells/μL). These notifications are likely to have been in people who had acquired HIV at least four years prior to diagnosis without being tested.
- According to the Australian Needle Syringe Program Survey (ANSPS), a higher proportion of Aboriginal and/or Torres Strait Islander women than non-Indigenous women reported having tested for HIV in the last 12 months (45% vs 43% in 2020, respectively). Similarly, a higher proportion of Aboriginal and/or Torres Strait Islander men participants than non-Indigenous men participants reported a HIV test in the past 12 months each year since 2011 (51% vs 45% in 2020)
- The prevalence of HIV among Aboriginal and/or Torres Strait Islander men participating in the ANSPS has increased almost 13-fold between 2011-2012 and 2019–2020 from 0.3% to 4.0%.
- In 2020, among participants of ANSPS, 77% of Aboriginal and/or Torres Strait Islander women reported inconsistent condom use with casual partners compared to 74% of Aboriginal and/or Torres Strait Islander men.
- For detailed findings see pp. 17

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[i] In each year of the ten-year period 2011–2020, Aboriginal and/or Torres Strait Islander status was >95% complete for HIV notifications in all jurisdictions, and therefore data from all jurisdiction are included in reporting.

Hepatitis C

- There were 7990 hepatitis C notifications in Australia in 2020, of which 1106 (14%) were among the Aboriginal and/or Torres Strait Islander population, 3450 (43%) among the non-Indigenous population, and a further 3434 (43%) among people whose Aboriginal and/or Torres Strait Islander status was not reported.
- Aboriginal and/or Torres Strait Islander hepatitis C notification rates are based on data from six jurisdictions (the Australian Capital Territory, Northern Territory, Queensland, South Australia, Tasmania and Western Australia) where Aboriginal and/or Torres Strait Islander was ≥50% complete for all hepatitis C notifications for each of the five years (2016–2020) [ii].
- In 2020, the hepatitis C notification rate in the Aboriginal and/or Torres Strait Islander population was almost six times as high as in the non-Indigenous population (167.3 per 100 000 vs 28.5 per 100 000, respectively).
- From 2016 to 2019, there was a 4.2% increase in the notification rate of hepatitis C in the Aboriginal and/or Torres Strait Islander population (from 191.2 per 100 000 in 2016 to 199.3 per 100 000 in 2020), and a decline of 16% in 2020 to 167.3 per 100 000.
- The newly acquired hepatitis C notification rate (hepatitis C diagnosis with evidence of acquisition in the 24 months prior to diagnosis) in the Aboriginal and/or Torres Strait Islander population in 2020 was 18 times that of the non-Indigenous population (28.5 and 1.6 per 100 000, respectively)[iii].
- In 2020, 24% of Aboriginal and/or Torres Strait Islander respondents to the Australian Needle Syringe Program Survey reported receptive syringe sharing, a key risk factor for hepatitis C transmission, compared with 13% among non-Indigenous survey respondents.
- Among Aboriginal and/or Torres Strait Islander respondents to the Australian Needle Syringe Program Survey in 2020, almost half of those who self-reported living with chronic hepatitis C had received treatment in their lifetime, a proportion that has more than doubled since 2016 when it was 19%. In 2020, Aboriginal and/or Torres Strait Islander participants had lower uptake of treatment in the last 12 months (24%) as compared to non-Indigenous participants (37%).
- For detailed findings see pp. 27

[ii] Almost two thirds (61%) of the Aboriginal and/or Torres Strait Islander population reside in these jurisdictions so it is important to note that notification rates may not be nationally representative. Incomplete information on Aboriginal and/or Torres Strait Islander status can underestimate the true extent of these infections in the Aboriginal and/or Torres Strait Islander population.

[iii] These data on newly acquired infections should be interpreted with caution, as they are likely to misrepresent the true number of newly acquired infections in the community.

Hepatitis B

- There were 5106 notifications of hepatitis B infection in Australia in 2020, of which 151 (3%) were among Aboriginal and/or Torres Strait Islander people and 2483 (49%) were among non-Indigenous people. For 2472 notifications (48%), Aboriginal and/or Torres Strait Islander status was not reported.
- The hepatitis B notification rate among the Aboriginal and/or Torres Strait Islander population is based on data from six jurisdictions (Australian Capital Territory, Northern Territory, Queensland, South Australia, Tasmania and Western Australia), where Aboriginal and/ or Torres Strait Islander status was reported in at least half of all hepatitis B notifications for each the five years (2016–2020)[iv].
- From 2016 to 2019, the hepatitis B notification rate in the Aboriginal and/or Torres Strait Islander population declined by 37% from 38.7 per 100 000 to 24.5 per 100 000, and increased by 26% to 30.9 per 100 000 in 2020.
- In 2020, the hepatitis B notification rate for the Aboriginal and/or Torres Strait Islander population was almost double that of the non-Indigenous population (30.9 per 100 000 vs 16.9 per 100 000, respectively).
- Based on mathematical modelling, there were an estimated 16 137 Aboriginal and/or Torres Strait Islander people living with hepatitis B in Australia at the end of 2020 (7.3% of total estimated people living with chronic hepatitis B in Australia at the end of 2020).
- From 2016 to 2020, there were high hepatitis B vaccination coverage rates for Aboriginal and/or Torres Strait Islander children, and in 2020, the coverage rate was 93% for children aged 12 months and 97% for children aged 24 months.
- For detailed findings see pp. 44

[iv] Approximately 60% of the Aboriginal/or and Torres Strait Islander population reside in these jurisdictions, so it is important to note that the notification rates are not necessarily nationally representative

Sexually transmissible infections

For detailed findings see pp. 53

Chlamydia

- Chlamydia is the most frequently diagnosed sexually transmissible infection in Australia. In 2020, there were a total of 90 516 chlamydia notifications in Australia, of which 7030 (8%) were among the Aboriginal and/or Torres Strait Islander population, 34 131 (38%) were among the non-Indigenous population, and Aboriginal and/or Torres Strait Islander status was not reported for 49 355 (55%) notifications.
- The chlamydia notification rates among the Aboriginal and/or Torres Strait Islander population are based on data from five jurisdictions (the Australian Capital Territory, the Northern Territory, Queensland, South Australia, and Western Australia), where Aboriginal and/or Torres Strait Islander status was ≥50% complete for each of the five years 2016–2020.[v]
- In 2020, Aboriginal and Torres Strait Islander peoples aged 15 to 19 years had the highest chlamydia notification rate of all Aboriginal and Torres Strait Islander peoples. In comparison, non-Indigenous people aged 20-29 years had the highest notification rates of chlamydia out of all age groups.
- Between 2016 and 2020, the chlamydia notification rate in both the Aboriginal and/or Torres Strait Islander population and the non-Indigenous population has remained relatively stable.
- In 2020, the chlamydia notification rate for the Aboriginal and/or Torres Strait Islander population of 1110.8 per 100 000 people was 2.8 times higher than the non-Indigenous population (396.7 per 100 000).

Gonorrhoea

- There were 29 497 gonorrhoea notifications in Australia in 2020, of which 4237 (14%) were in the Aboriginal and/or Torres Strait Islander population, 16 034 (54%) were in the non-Indigenous population, and 9226 (31%) were in people whose Aboriginal and/or Torres Strait Islander status was not reported.
- Aboriginal and/or Torres Strait Islander gonorrhoea notification rates are based on data from all jurisdictions, as Aboriginal and/or Torres Strait Islander status was ≥50% complete for gonorrhoea notifications for each of the five years (2016–2020).
- In 2020, the ratio of male to female notifications among Aboriginal and/or Torres Strait Islander people was 0.8:1, suggesting transmission occurs largely through heterosexual contact. By contrast, the male to female ratio among non-Indigenous people was 2.8:1 suggesting greater transmission through male-to-male sexual contact.
- In 2020, the gonorrhoea notification rate in the Aboriginal and/or Torres Strait Islander population was more than four times that of the non-Indigenous population (446.0 per 100 000 vs 105.4 per 100 000 population), increasing to nearly 23 times higher in remote and very remote areas.

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[v] Just over half (56%) of the Aboriginal and/or Torres Strait Islander population reside in these jurisdictions, so it is important to note that the notification rates may not be nationally representative.

Infectious Syphilis

- There were 5248 infectious syphilis notifications in Australia in 2020, of which 883 (17%) notifications were among Aboriginal and/or Torres Strait Islander people, 4012 (76%) were among the non-Indigenous population, and 353 (7%) for people whose Aboriginal and/or Torres Strait Islander status was not reported.
- Aboriginal and/or Torres Strait Islander infectious syphilis notification rates are based on data from all jurisdictions, as Aboriginal and/or Torres Strait Islander status was at least ≥80% complete for infectious syphilis notifications for each of the ten years (2011–2020).
- In 2020, the ratio of male to female notifications among Aboriginal and/or Torres Strait Islander people was 1:1, suggesting transmission occurs largely through heterosexual contact. By contrast, the male to female ratio among non-Indigenous people was 8:1, suggesting greater transmission through male-to-male sexual contact.
- The infectious syphilis notification rate among the Aboriginal and/or Torres Strait Islander population increased four-fold between 2011 and 2019 from 29.8 per 100 000 to 122.0 per 100 000. In 2020, the infectious syphilis notification rate was 101.5 per 100 000.
- The infectious syphilis notification rate in 2020 was more than three times as high among Aboriginal and/or Torres Strait Islander males (106.2 per 100 000 vs 32.1 per 100 000) and more than 23 times as high among Aboriginal and/or Torres Strait Islander females (98.0 per 100 000 vs 4.2 per 100 000) compared with male and female non-Indigenous people, respectively.
- Between 2011 and 2019, among Aboriginal and/or Torres Strait Islander people aged 20–29 years, the infectious syphilis notification rate more than quadrupled. In the same period, among Aboriginal and/or Torres Strait Islander people aged 15–19 years, the infectious syphilis notification rate more than doubled. The decrease between 2019 and 2020 may be attributed to impact of COVID-19 control measures.
- In 2020, the infectious syphilis notification rate in the Aboriginal and/or Torres Strait Islander population was more than three times as high as among the non-Indigenous population in major cities, increasing to eight times as high in regional areas and 35 times as high in remote areas.
- There were 17 cases of congenital syphilis recorded in 2020, of which eight were among the Aboriginal and/or Torres Strait Islander population, eight were among the non-Indigenous population, and one case did not have Aboriginal and/or Torres Strait Islander status recorded.

Donovanosis

- Donovanosis has been virtually eliminated in the Aboriginal and/or Torres Strait Islander population. Only two cases (one case in 2012 and 2014 each) were notified in the Aboriginal and/or Torres Strait Islander population between 2011-2015, with none recorded since 2016.

Human papillomavirus

- In Australia, the national vaccination program for human papillomavirus (HPV) was introduced in 2007. The program began in 2007 for girls, aged 12 to 13 years, and in 2013 was extended to include boys of the same age. Since 2007, there has been a 100% reduction in both Aboriginal and/or Torres Strait Islander males and the proportion of Aboriginal and/or Torres Strait Islander females aged 21 years or younger being diagnosed with genital warts at their first visit to a sexual health clinic.

1 Interpretation

In 2020, testing, diagnosis and treatment of STIs and BBVs has been strongly influenced by the ongoing COVID19 pandemic. The decline in sexually transmissible infections and blood borne virus notifications between 2019 and 2020 is likely to have been influenced changes to sexual behaviour, healthcare access, testing practices, and travel, that have arisen as a consequence of the COVID-19 pandemic.

The HIV notification rate in the Aboriginal and/or Torres Strait Islander population declined by 39% between 2011 and 2020. In 2020, the HIV notification rate among the Aboriginal and/or Torres Strait Islander population (2.2 per 100 000) was lower than the Australian-born non-Indigenous population (2.3 per 100 000), for the first time since 2011. The HIV notification rate among Aboriginal and/or Torres Strait Islander people is but is based on small numbers of HIV notifications (18 notifications) so should be interpreted with caution.

Declines in hepatitis C notifications were also seen among Aboriginal and/or Torres Strait Islander people in 2020, although not to the same extent when compared with declines seen among non-Indigenous people. Among people aged 15 to 24 years, smaller declines were seen between Aboriginal and/or Torres Strait Islander people compared with non-Indigenous people suggesting 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 younger Aboriginal and/or Torres Strait Islander people. Further, hepatitis C notification rates in this age group remain several-fold higher among Aboriginal and/or Torres Strait Islander people compared to non-indigenous people.

The declining trend in hepatitis B notifications in Aboriginal and/or Torres Strait Islander people aged less than 35 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/or Torres Strait Islander people and the non-Indigenous population. However, hepatitis B notification rates in Aboriginal and/or Torres Strait Islander people in older age groups remain high compared to the non-Indigenous population, highlighting the need for a continued focus on hepatitis B testing, immunisation, and engagement in care among Aboriginal and/or Torres Strait Islander people.

In 2020, notification rates of STIs remain higher among the Aboriginal and/or Torres Strait Islander population, than among the non-Indigenous population: gonorrhoea was more than six times as high, infectious syphilis was more than five times as high, and chlamydia was almost three times as high. The increases in infectious syphilis among young Aboriginal and/or Torres Strait Islander peoples in regional 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.

There has been success in controlling a limited number of sexually transmissible diseases (STIs) in Aboriginal and/or 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/or Torres Strait Islander populations. These declines reflect the success of the national vaccination program for HPV, introduced in 2007 for girls and in 2013 for boys.

Social determinants of health, such as access to health care, education, unemployment, poverty and discrimination, can also influence risk factors for blood borne viruses and sexually transmissible infections (2). These must be addressed concurrently with the development of culturally appropriate and relevant prevention, targeted testing and treatment strategies, to counter the decline in testing in 2020.

2 Overview

Aboriginal and/or Torres Strait Islander completeness

Incomplete information on Aboriginal and/or Torres Strait Islander identification has the potential to misrepresent the true extent of blood borne virus and sexually transmissible infections in the Aboriginal and/or Torres Strait Islander population.

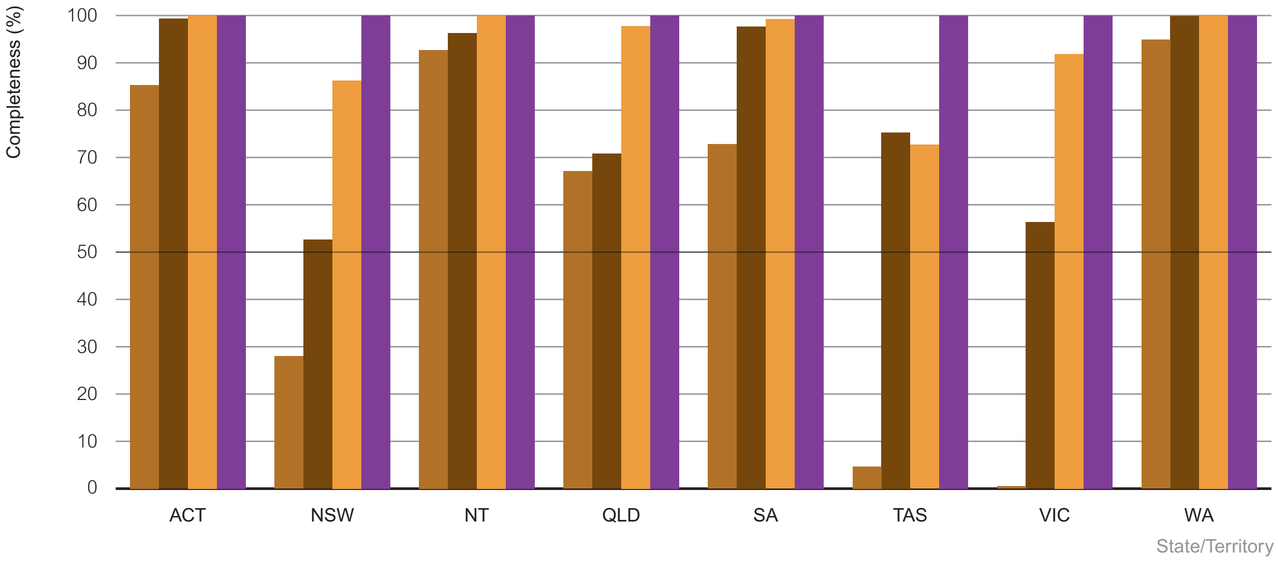
In 2020, all jurisdictions reported the Aboriginal and/or Torres Strait Islander status of the patient for at least 50% of notifications of HIV, gonorrhoea, infectious syphilis and newly acquired hepatitis C and hepatitis B (infections acquired within the last two years). However, Aboriginal and/or Torres Strait Islander etc. status was reported for less than 50% of notifications in the following jurisdictions for the following conditions (Figure 1 and Figure 2):

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

Time trends of notification rates for specific infections by jurisdiction were included in this report if information on Aboriginal and/or Torres Strait Islander etc. 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 2020 (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/or Torres Strait Islander status reporting is low.

A number of enhanced surveillance and health force education activities are being undertaken at the jurisdictional and national level, in an effort to improve completeness of Aboriginal and/or 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/or Torres Strait Islander people as stated in national strategies (3–6).

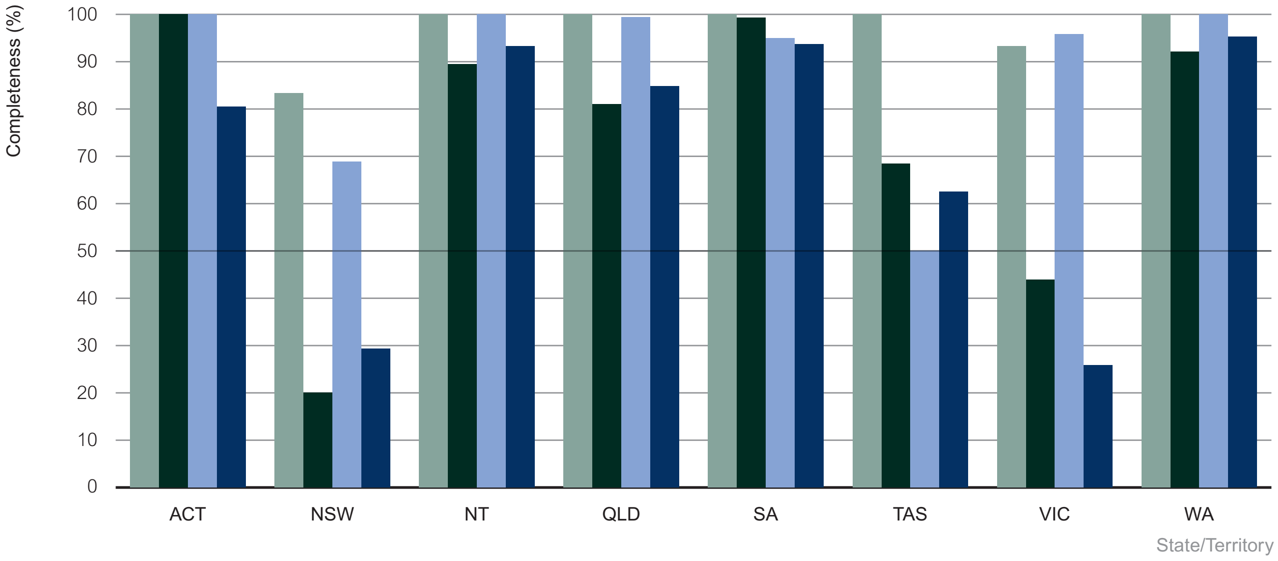
Figure 1 **Reporting of Aboriginal and/or Torres Strait Islander status at notification for sexually transmissible infections, 2020, by state/territory**



	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
🟫 Chlamydia	85.3	28	92.7	67.1	72.8	4.7	0.5	94.9
🟫 Gonorrhoea	99.3	52.6	96.3	70.8	97.7	75.3	56.3	99.9
🟧 Infectious syphilis	100.0	86.3	100.0	97.8	99.2	72.7	91.9	100.0
🟪 HIV	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: National Notifiable Diseases Surveillance System. (See Methodology for details.)

Figure 2 Reporting of Aboriginal and/or Torres Strait Islander status at notification of viral hepatitis, 2020, by state/territory



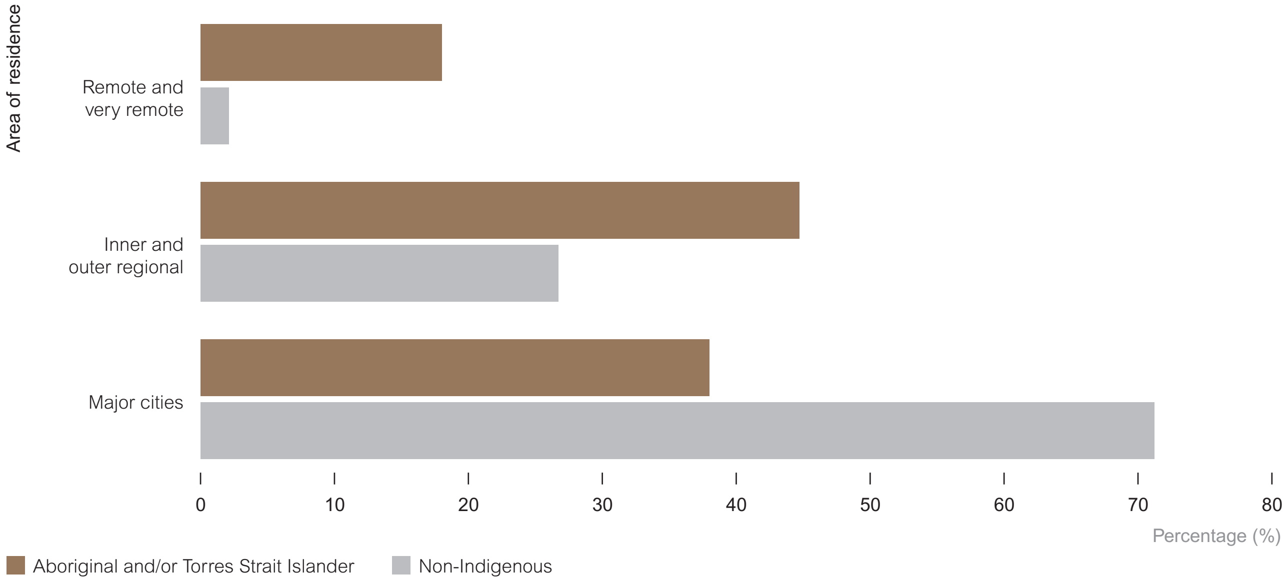
	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
🟩 Newly acquired hepatitis B	100.0	83.3	100.0	100.0	100.0	100.0	93.3	100.0
⬛ Newly diagnosed hepatitis B	100.0	20	89.5	81	99.3	68.4	43.9	92.1
🟦 Newly acquired hepatitis C	100.0	68.8	100.0	99.4	95	50	95.8	100.0
🟦 Newly diagnosed hepatitis C	80.5	29.3	93.3	84.8	93.7	62.5	25.8	95.3

Source: National Notifiable Diseases Surveillance System (see Methodology for details)

Area of residence

Based on ABS population projections (2019) (7). it is estimated that in 2020, 18% of the Aboriginal and/or Torres Strait Islander population lived in remote or very remote areas, 44% in inner or outer regional areas and 38% in major cities, compared with 2%, 27% and 71% of the non-Indigenous population respectively (Figure 3). See Methodology for further information.

Figure 3 Area of residence, 2020, by Aboriginal and/or Torres Strait Islander status



Source: Australian Bureau of Statistics, 2019

Aboriginal and/or Torres Strait Islander population in Australia

Aboriginal and/or Torres Strait Islander people make up 3% of the Australian population, with the greatest proportions living in New South Wales (33%) and Queensland (28%) (Table 1).

Table 1 Proportion of all notifications by Aboriginal and/or Torres Strait Islander status, 2020

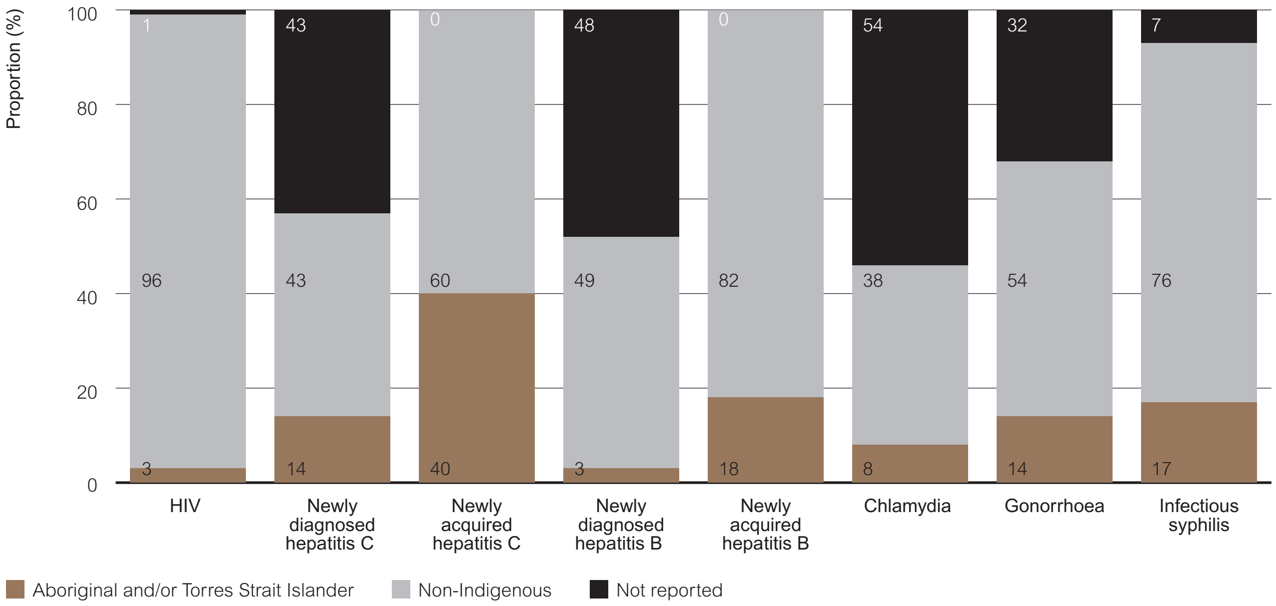
State/Territory	Estimated resident Aboriginal and/or Torres Strait Islander population	Proportion of total Australian Aboriginal and/or Torres Strait Islander population
Australian Capital Territory	8414	1%
New South Wales	286 553	33%
Northern Territory	78 596	9%
Queensland	241 086	28%
South Australia	45 962	5%
Tasmania	30 604	4%
Victoria	63 615	7%
Western Australia	109 138	13%
Total	**863 968**	**100%**

Source: Estimates and Projections, Aboriginal and/or Torres Strait Islander Australians, 2011–2026, Australian Bureau of Statistics

Number of notifications and notification rates in Aboriginal and/or Torres Strait Islander people

While Aboriginal and/or Torres Strait Islander people make up 3% of the Australian population, they accounted for a disproportionate level (3% to 40%) of all notifications of sexually transmissible infections and blood borne viruses (except HIV notifications) in 2020 (Figure 4). For many infections this proportion may not be truly representative due to the incomplete reporting of Aboriginal and/or Torres Strait Islander status.

Figure 4 **Proportion of all notifications by Aboriginal and/or Torres Strait Islander status, 2020**



Note: Proportions may not add to 100% due to rounding

Source: National HIV Registry and Australian National Notifiable Diseases Surveillance System (see Methodology for details)

In 2020, notification rates of most STIs and blood borne viruses in Aboriginal and/or Torres Strait Islander peoples were between two to seven times higher than in the non-Indigenous population, except for newly acquired hepatitis C, for which the notification rate was close to 18 times as high as the non-Indigenous population (Table 2 and Figure 5).

Table 2 **Number and notifications rate[b] of sexually transmissible infections and blood borne viruses in Australia in 2020, by Aboriginal and/or Torres Strait Islander status**

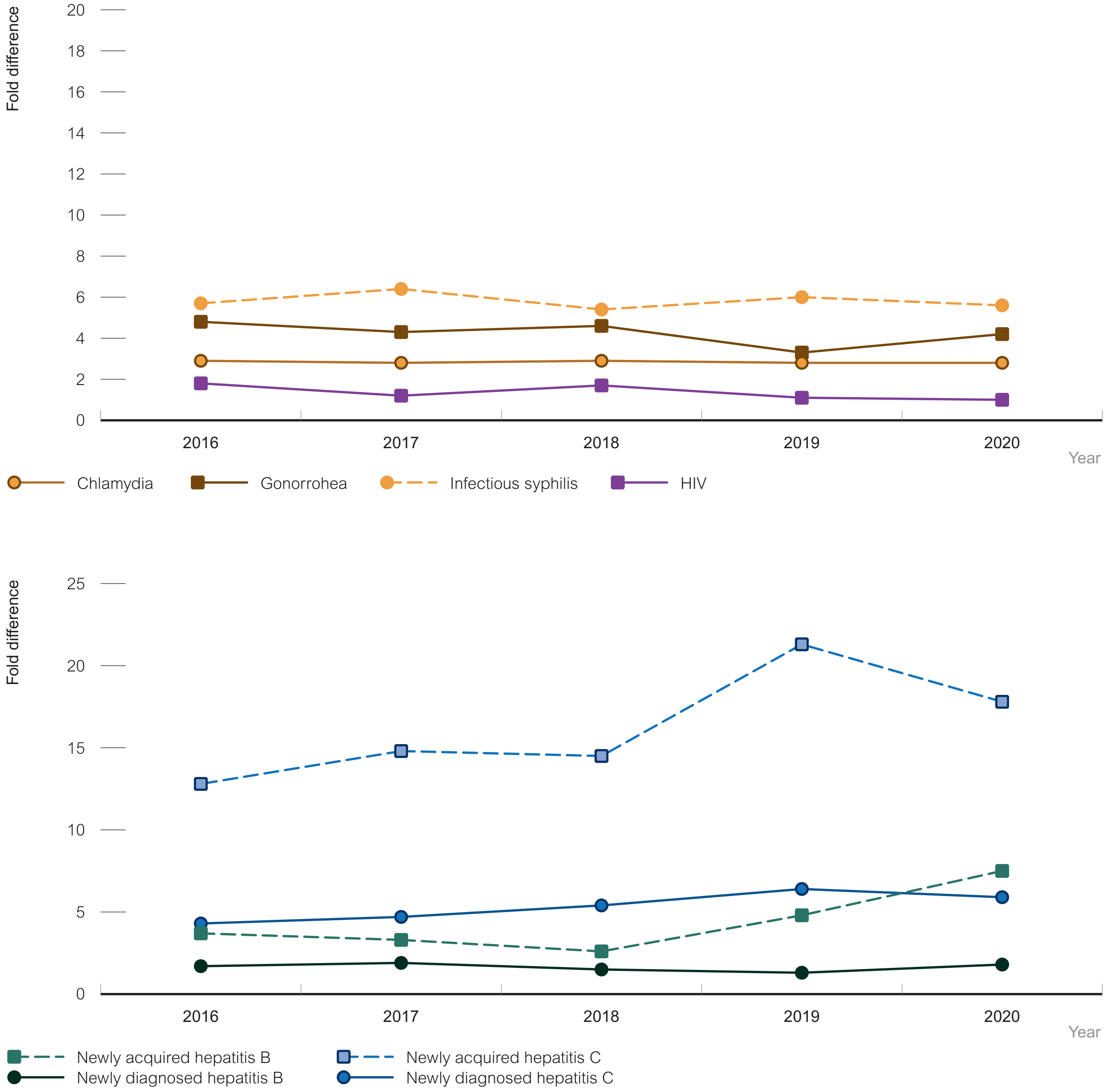
	Aboriginal and/or Torres Strait Islander		Non-Indigenous		Fold difference	Excluded jurisdictions[c]
Notifications of sexually transmissible infections and viral hepatitis	Number[a]	Rate[b]	Number	Rate[b]		
Chlamydia	7 015	1 110.8	31 502	396.7	2.8	New South Wales, Victoria, Tasmania
Gonorrhoea	4 237	446.0	16 034	105.4	4.2	None
Infectious syphilis	883	101.5	4 012	18.1	5.6	None
HIV[d,e]	18	2.2	633	2.3	1.0	None
Newly acquired hepatitisB	22	3.0	89	0.4	7.5	None
Newly diagnosed hepatitis B (ALL)	151	30.9	2 483	16.9	1.8	New South Wales, Victoria
Newly acquired hepatitis C	269	28.5	378	1.6	17.8	None
Newly diagnosed hepatitis C (ALL)	1 106	167.7	3 450	28.5	5.9	New South Wales, Victoria

a Jurisdictions in which Aboriginal and/or 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/or Torres Strait Islander status was reported for less than 50% of notifications.
d Notifications from National HIV Registry (see Methodology for details)
e the non-Indigenous population is restricted to those born in Australia

Source: National Notifiable Diseases Surveillance System (see Methodology for details)

Between 2016 and 2020 the difference between the age-standardised notification rates between Aboriginal and/or Torres Strait Islander and non-Indigenous populations, expressed as a ratio, remained stable for chlamydia, gonorrhoea, infectious syphilis, HIV, newly diagnosed hepatitis B, with slight increase in newly diagnosed hepatitis C. In 2016, rates were more than 16 times as high among the Aboriginal and/or Torres Strait Islander and non-Indigenous populations, increased for newly acquired hepatitis B (3.7 fold in 2016 vs 7.5 fold in 2020) and newly acquired hepatitis C (12.8 fold in 2016 vs 17.8 fold in 2020) (Figure 5).

Figure 5 The ratio of Aboriginal and/or Torres Strait Islander to non-Indigenous notification rates, 2016–2020, by condition



Source: National Notifiable Diseases Surveillance System (see Methodology for details)

3 HIV

Please see p. 6 for summary.

HIV notifications

The trend in HIV notifications to 2020 was likely strongly influenced by COVID-19, including changes to sexual behaviour, healthcare access and testing practices and travel.

All jurisdictions have high completeness rates (>95%) for the reporting of Aboriginal and/or Torres Strait Islander status in HIV notifications for each ten years of reporting (2011–2020) and thus data from all jurisdictions are included.

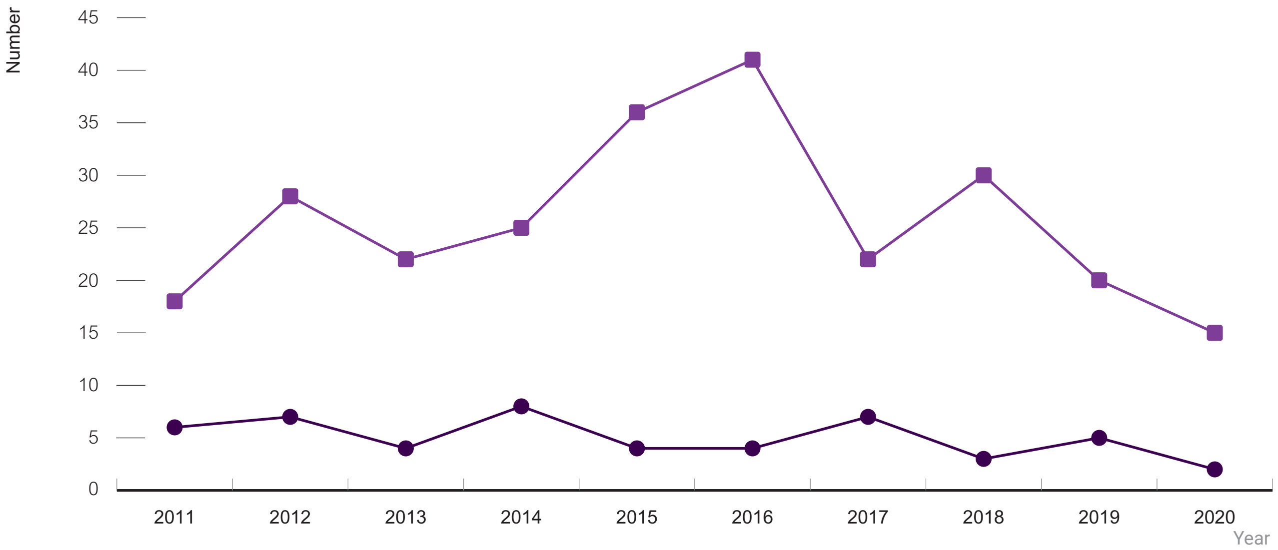
There were 633 new HIV notifications in Australia in 2020, of which 18 (3%) were among the Aboriginal and/or Torres Strait Islander population. An additional eight (1%) notifications were among people for whom Aboriginal and/or Torres Strait Islander status was not reported. The majority (83%) of Aboriginal and/or Torres Strait Islander notifications were in males and the median age at diagnosis was 35.5 years

Between 2011 and 2020, the number of HIV notifications in the Aboriginal and/or Torres Strait Islander population increased steadily, from 24 notifications in 2011 to 25 notifications in 2019 followed by a reduction to 18 notifications in 2020 (Table 3).

Notifications among Aboriginal and/or Torres Strait Islander males almost doubled from 18 notifications in 2011 to 20 notifications in 2019, followed by 25% decrease between 2019 and 2020 to 15 notifications. HIV notifications among females has remained relatively stable with a maximum of eight notifications in 2014, and a minimum of two in 2020 (Figure 6).

For comparison of HIV notification rates between the Aboriginal and/or Torres Strait Islander and the non-Indigenous populations, the non-Indigenous population is restricted to those born in Australia. This is done to exclude HIV notifications in overseas born people, for whom trends can fluctuate in response to immigration patterns, and to focus on HIV infection endemic to Australia.

Figure 6 **HIV notifications in Aboriginal and/or Torres Strait Islander people, 2011–2020, by gender**



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
■ Males	18	28	22	25	36	41	22	30	20	15
● Females	6	7	4	8	4	4	7	3	5	2

Note: Does not include notifications among trans and gender diverse people.
Source: State and territory health authorities; includes all jurisdiction due to high completeness (>95%) of Aboriginal and/or Torres Strait Islander status in all years.

Table 3 Characteristics of HIV notifications in Aboriginal and/or Torres Strait Islander people, 2011–2020.

Characteristic	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total cases[a]	24	35	26	34	40	46	30	33	25	18
Gender[b]										
Male	18	28	22	25	36	41	22	30	20	15
Female	6	7	4	8	4	4	7	3	5	2
Median age in years	32.5	27	36	33.5	35.5	30.5	33.5	28	31	35.5
Newly acquired HIV[c]	5	11	9	8	12	14	7	8	9	7
(% of notifications)	21%	31%	35%	24%	30%	30%	23%	24%	36%	39%
Late HIV diagnosis[d] **%**	34.8%	34.6%	40.0%	32.3%	31.4%	26.2%	30.8%	26.9%	26.3%	12.5%
Advanced HIV diagnosis, %	30.4%	26.9%	25.0%	19.4%	17.1%	14.3%	7.7%	23.1%	10.5%	6.3%
State/Territory										
Australian Capital Territory	0	0	0	1	0	0	0	1	0	0
New South Wales	6	12	8	7	7	10	8	11	7	5
Northern Territory	2	2	1	1	1	5	1	1	0	0
Queensland	8	14	9	14	13	20	11	13	9	7
South Australia	1	1	2	0	2	2	5	1	2	2
Tasmania	1	0	2	2	2	0	1	0	1	0
Victoria	1	5	4	6	8	5	1	4	4	2
Western Australia	5	1	0	3	7	4	3	2	2	2
HIV exposure category[e]**, %**										
Male-to-male sex[e]	63%	69%	27%	38%	55%	59%	40%	55%	48%	50%
Male-to-male sex and injecting drug use	0%	6%	19%	9%	10%	15%	7%	9%	20%	28%
Injecting drug use	25%	17%	31%	18%	18%	20%	27%	24%	16%	17%
Heterosexual sex	4%	6%	23%	26%	15%	4%	23%	3%	16%	0%
Mother with/at risk of HIV infection	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%
Other/undetermined exposure	4%	0%	0%	9%	3%	2%	3%	9%	0%	6%

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.

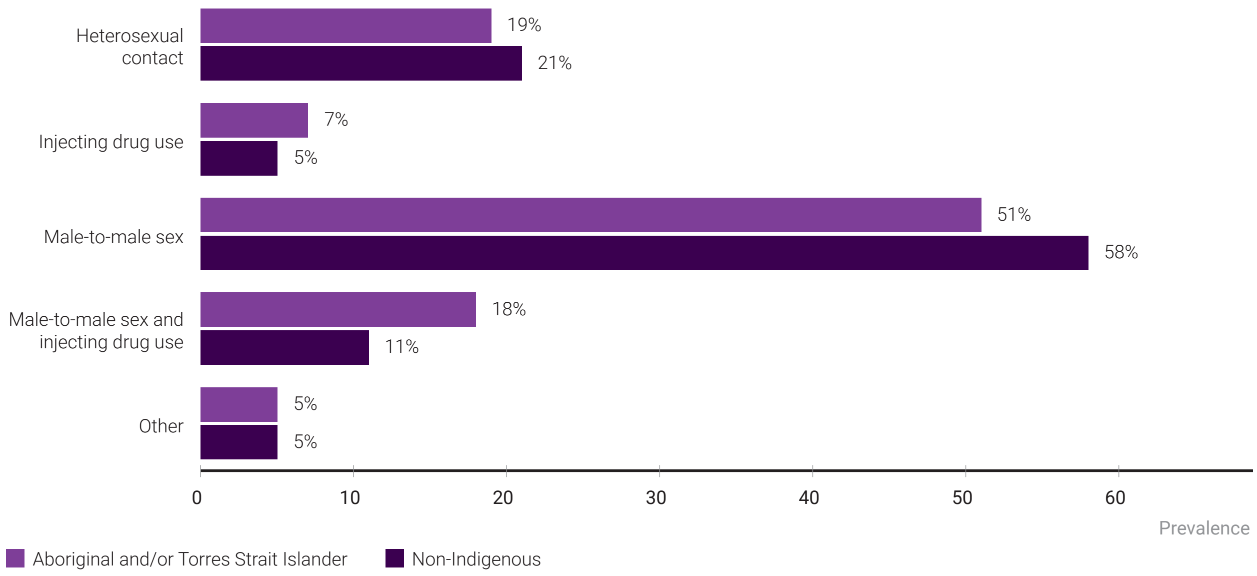
e Includes males who had sex with both males and females.

Source: State and Territory health authorities; includes all jurisdiction

By exposure classification, the proportion of notifications attributed to male-to-male sexual contact was 7% lower among the Aboriginal and/or Torres Strait Islander population than among the Australian-born non-Indigenous population (51% compared to 58%). The proportion of notification were 7% more in the Aboriginal and/or Torres Strait Islander population as compared to Australian-born non-Indigenous population (18% compared to 11%). Otherwise, similar proportions were observed between Aboriginal and/or Torres Strait Islander people and non-Indigenous people in other exposure classifications (Figure 7).

Non-Indigenous overseas-born populations were excluded from this analysis, as the proportions of exposure categories fluctuate in response to immigration patterns and may not accurately represent HIV infection endemic to Australia.

Figure 7 HIV notification exposure category, 2016–2020, by Aboriginal and/or Torres Strait Islander status



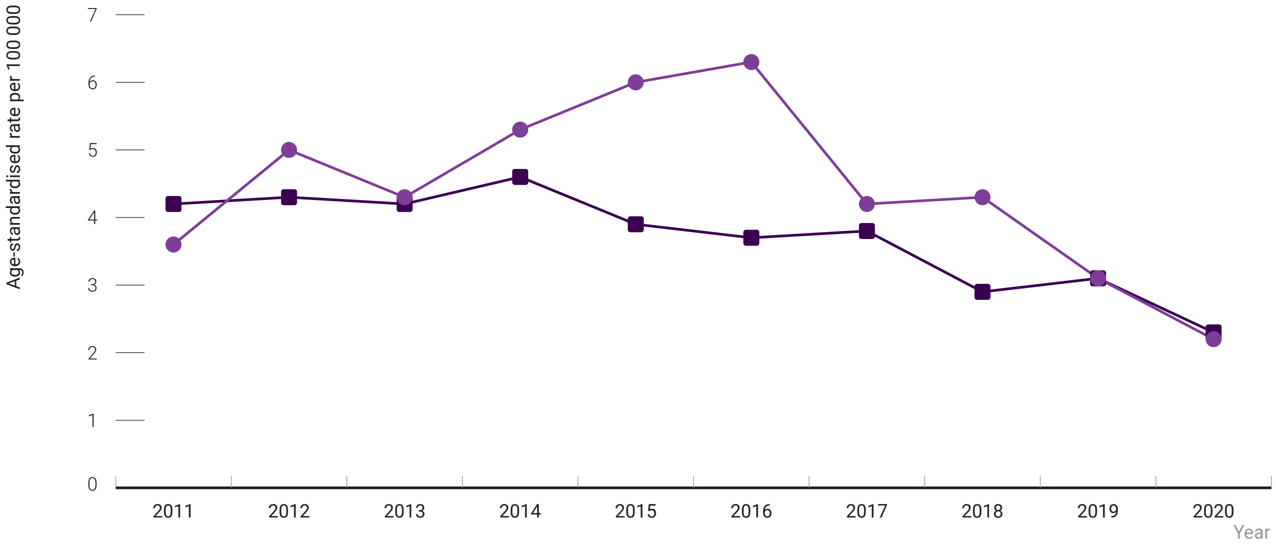
Source: State and territory health authorities; see Methodology for detail.

To allow a more appropriate comparison between the Aboriginal and/or Torres Strait Islander and Australian-born non-Indigenous populations, 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 2011 and 2016, the HIV notification rate among Aboriginal and/or Torres Strait Islander people increased from 3.6 per 100 000 to 6.3 per 100 000 (Figure 8). The HIV notification rate among Aboriginal and/or Torres Strait Islander people declined by 51% between 2016 and 2019 (6.3 per 100 000 in 2016 to 3.1 per 100 000 in 2019) and then notification rate further declined to 2.2 per 100 000 people in 2020. By comparison, the HIV notification rate was 2.3 per 100 000 among Australian-born non-Indigenous people in 2020.

Trends in HIV notification rates in the Aboriginal and/or Torres Strait Islander population are based on small numbers of HIV notifications and may reflect localised occurrences rather than national patterns (see Table 3 for the number of notifications by jurisdiction).

Figure 8 HIV notification rate per 100 000, 2011–2020, by Aboriginal and/or Torres Strait Islander status

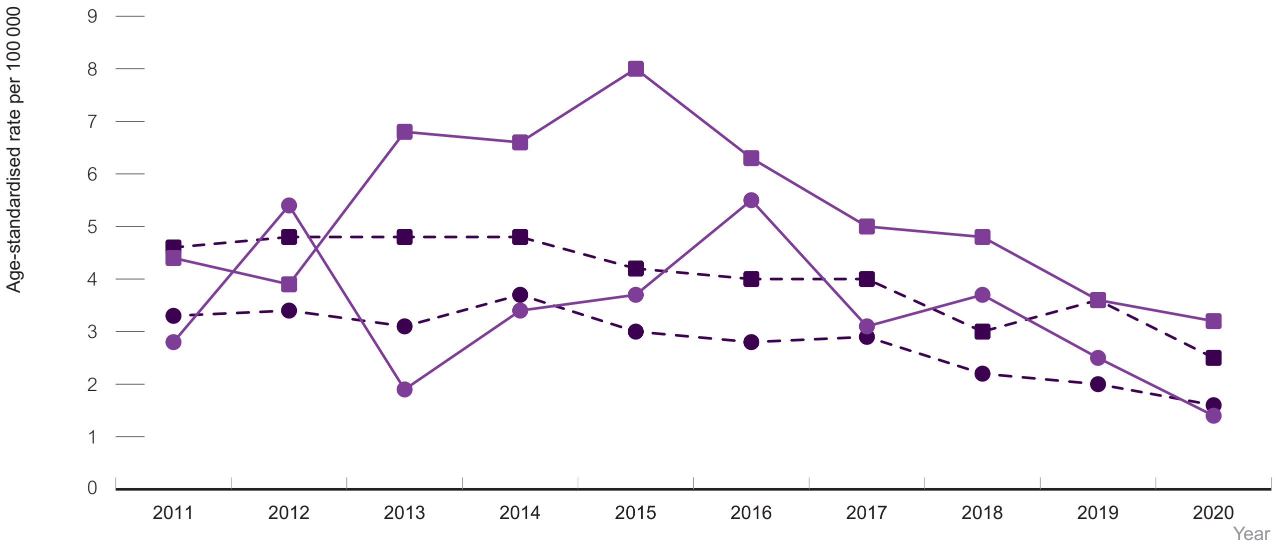


	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
● Aboriginal and/or Torres Strait Islander	3.6	5.0	4.3	5.3	6.0	6.3	4.2	4.3	3.1	2.2
■ Australian-born non-Indigenous	4.2	4.3	4.2	4.6	3.9	3.7	3.8	2.9	3.1	2.3

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

Among those aged under 35 year and those aged over 35 years, HIV notifications rates declined between 2011 and 2020 for both the Aboriginal and/or Torres Strait Islander population and the Australian-born non-Indigenous populations. The HIV notification rate among Aboriginal and/or Torres Strait Islander people aged 35 and over, declined by 18% from 2011 to 2019 (from 4.4 per 100 000 in 2011 to 3.6 per 100 000 in 2019). The rate declined by 11 % in 2020 and 3.2 per 100 000 for those aged over 35 years (Figure 9). The HIV notification rate among Aboriginal and/or Torres Strait Islander people aged under 35 years, declined by 11% from 2011 to 2019 (from 2.8 per 100 000 in 2011 to 2.5 per 100 000 in 2019). The rate declined by 44 % in 2020 and was 1.4 per 100 000 for those aged under 35 years in 2020. (Figure 9)

Figure 9 **HIV notification rate per 100 000 population, 2011–2020, by Aboriginal and/or Torres Strait Islander status and age group**



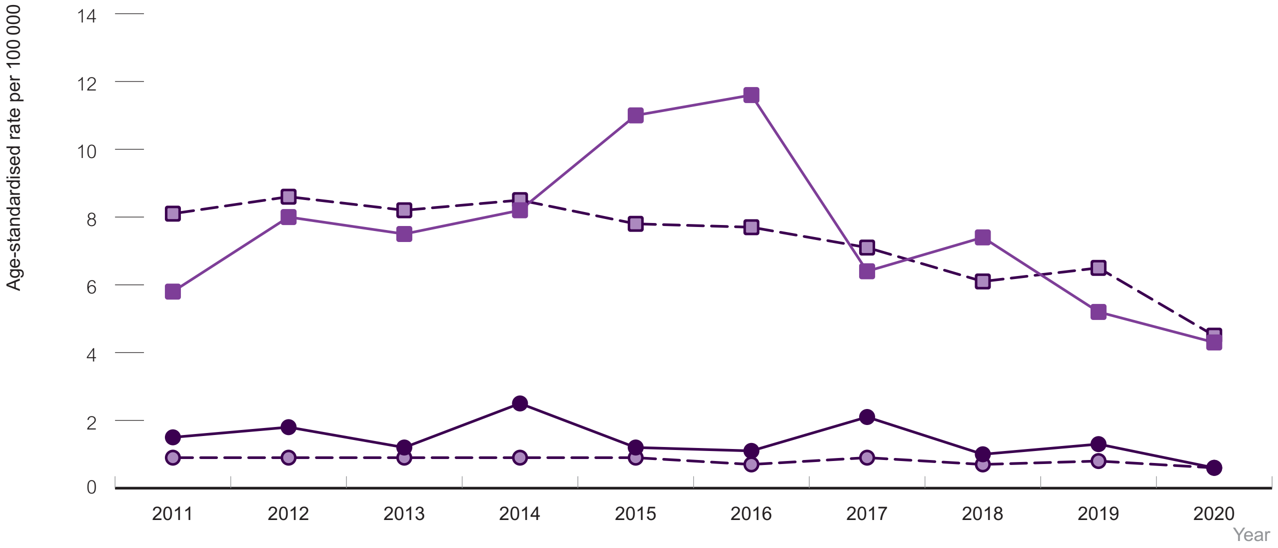
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
● Aboriginal and/or Torres Strait Islander <35 years	2.8	5.4	1.9	3.4	3.7	5.5	3.1	3.7	2.5	1.4
● Australian-born non-Indigenous <35 years	3.3	3.4	3.1	3.7	3.0	2.8	2.9	2.2	2.0	1.6
■ Aboriginal and/or Torres Strait Islander ≥35 years	4.4	3.9	6.8	6.6	8.0	6.3	5.0	4.8	3.6	3.2
■ Australian-born non-Indigenous ≥ 35 years	4.6	4.8	4.8	4.8	4.2	4.0	4.0	3.0	3.6	2.5

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

HIV notification rates among Aboriginal and/or Torres Strait Islander males steadily increased from 5.8 per 100 000 in 2011 to 11.6 per 100 000 in 2016 and then declined by 57% to 5.2 per 100 000 in 2019. Between 2019 and 2020 the HIV notification rate declined by 17% to 4.3 per 100 000 in 2020. HIV notification rates among Aboriginal and/or Torres Strait Islander males were higher than the Australian-born non-Indigenous male population between 2012–2016 (Figure 10).

Notification rates among females, in both Aboriginal and/or Torres Strait Islander and Australian-born non-Indigenous populations remained below the rates of males in both populations between 2011 and 2020. Due to small numbers of HIV notifications, rates among Aboriginal and/or Torres Strait Islander females fluctuated between 2011 and 2019 (between 1.0 per 100 000 and 2.5 per 100 000). In 2020, the HIV notification rate was 0.6 per 100 000 the lowest in the preceding nine years (Figure 10). By comparison, the HIV notification rate among non-Indigenous females remained stable between 2011 and 2019 (between 0.7 per 100 000 and 0.9 per 100 000) and was 0.6 per 100 000 in 2020.

Figure 10 **HIV notification rate per 100 000 Australian-born population, 2011–2020, by Aboriginal and/or Torres Strait Islander status and gender**

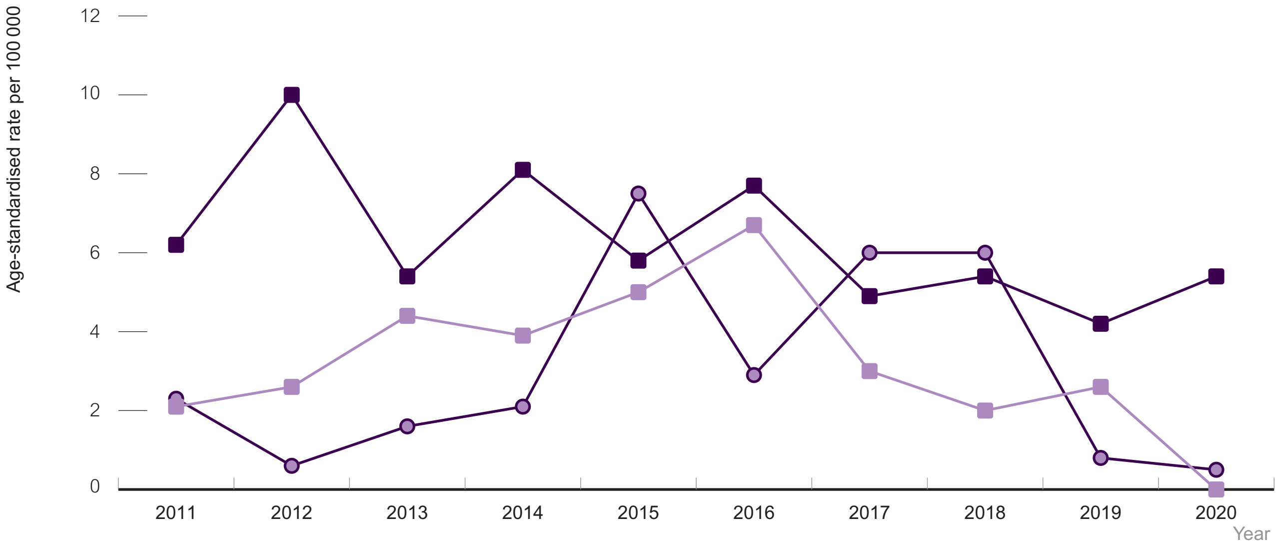


	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
■ Aboriginal and/or Torres Strait Islander males	5.8	8.0	7.5	8.2	11.0	11.6	6.4	7.4	5.2	4.3
▢ Australian-born non-Indigenous males	8.1	8.6	8.2	8.5	7.8	7.7	7.1	6.1	6.5	4.5
● Aboriginal and/or Torres Strait Islander females	1.5	1.8	1.2	2.5	1.2	1.1	2.1	1.0	1.3	0.6
○ Australian-born non-Indigenous females	0.9	0.9	0.9	0.9	0.9	0.7	0.9	0.7	0.8	0.6

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

The HIV notification rates in regional areas increased by 24% from 2011 to 2019 (2.1 per 100 000 in 2011 to 2.6 per 100 000 in 2019) and then declined by 100 % from 2019 to 2020 (2.6 per 100 000 in 2019 to 0.0 per 100 00 in 2020). The HIV notification rates in remote areas declined by 65% from 2011 to 2019 (2.3 per 100 000 in 2011 to 0.8 per 100 000 in 2020) and then declined by 38% from 2019 to 2020 (0.8 per 100 00 in 2019 to 0.5 per 100 00 in 2020). Rates within populations residing in urban areas have fluctuated but have declined by 13% from 6.2 per 100 000 in 2011 to 5.4 per 100 000 in 2020 (Figure 11). Caution should be taken in interpretation of these trends, due to small numbers of notifications.

Figure 11 **HIV notification rate per 100 000 in Aboriginal and/or Torres Strait Islander people, 2011–2020, by area of residence**



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
■ Major cities	6.2	10.0	5.4	8.1	5.8	7.7	4.9	5.4	4.2	5.4
■ Regional	2.1	2.6	4.4	3.9	5.0	6.7	3.0	2.0	2.6	0.0
● Remote	2.3	0.6	1.6	2.1	7.5	2.9	6.0	6.0	0.8	0.5

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

Prevalence

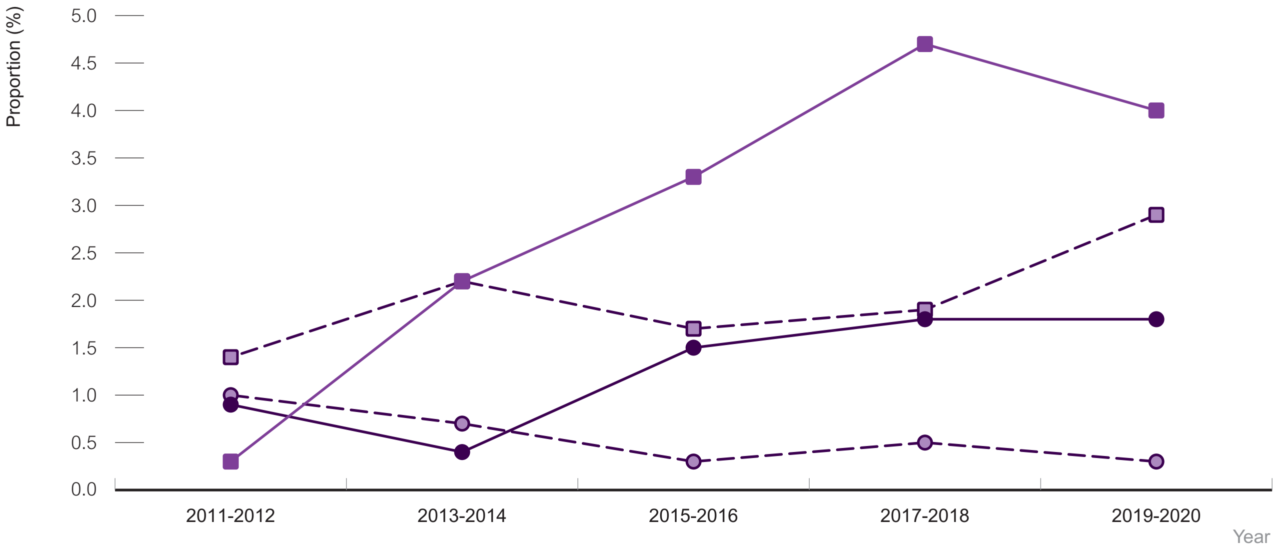
HIV prevalence is the proportion of people who are living with HIV in a given year. In 2020, an estimated 570 Aboriginal and/or Torres Strait Islander people were living with HIV in Australia. The estimated HIV prevalence among Aboriginal and/or Torres Strait Islander people was 0.10% (range 0.09 % to 0.11%) in 2020.

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

Data collected annually from the Australian Needle Syringe Program Survey (ANSPS)(8) 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 2011–2012 to 2019–2020, the proportion of participants in the ANSPS identifying as Aboriginal and/or Torres Strait Islander increased from 12% to 22%.

The overall HIV prevalence among Aboriginal and/or Torres Strait Islander respondents in the ANSPS was 2.6% (data not shown). Between 2011–2012 and 2019–2020, HIV prevalence among Aboriginal and/or Torres Strait Islander men and women respondents increased from 0.3% to 4% and from 0.9% to 1.8% respectively. By comparison, the HIV prevalence among non-Indigenous men and women fluctuated and was 2.9 and 0.3 for the years 2019 to 2020, respectively. (Figure 12).

Figure 12 **HIV prevalence in needle and syringe program participants, 2011–2020, by Aboriginal and/or Torres Strait Islander status and gender**



	2011-2012	2013-2014	2015-2016	2017-2018	2019-2020
■ Aboriginal and/or Torres Strait Islander men (%)	0.3	2.2	3.3	4.7	4.0
▣ Non-Indigenous men (%)	1.4	2.2	1.7	1.9	2.9
● Aboriginal and/or Torres Strait Islander women (%)	0.9	0.4	1.5	1.8	1.8
◉ Non-Indigenous women (%)	1.0	0.7	0.3	0.5	0.3

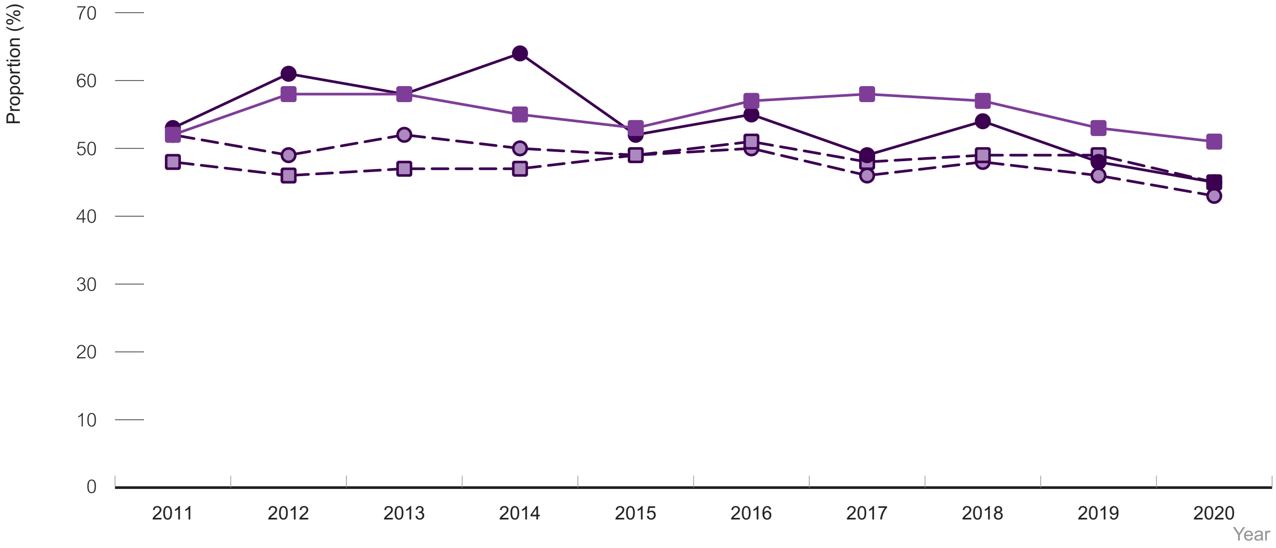
Note: Data presented in two-year groupings due to small numbers
Source: Australian Needle Syringe Program Survey

Testing

National testing guidelines recommend HIV testing in a number of contexts, including after HIV risk exposure, during antenatal care, and for particular priority populations. The Fifth National *Aboriginal and/or Torres Strait Islander blood borne viruses and sexually transmissible infections strategy 2018–2022* prioritises (9) annual testing for STIs, including HIV .

Among participants of the ANSPS, a higher proportion of Aboriginal and/or Torres Strait Islander women than non-Indigenous men reported having had a HIV test in the past 12 months for each year between 2011 and 2020 (45% vs 43% in 2020). Similarly, among men, a higher proportion of Aboriginal and/or Torres Strait Islander participants than non-Indigenous participants reported a HIV test in the past 12 months each year since 2011 (51% vs 45% in 2020) (Figure 13). These data may not be representative of all Aboriginal and/or Torres Strait Islander people who inject drugs.

Figure 13 **Proportion of people who inject drugs seen at needle and syringe programs who reported an HIV antibody test in the past 12 months, 2011–2020, by Aboriginal and/or Torres Strait Islander status and gender**



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
■ Aboriginal and/or Torres Strait Islander men (%)	52	58	58	55	53	57	58	57	53	51
□ Non-Indigenous men (%)	48	46	47	47	49	51	48	49	49	45
● Aboriginal and/or Torres Strait Islander women (%)	53	61	58	64	52	55	49	54	48	45
○ Non-Indigenous women (%)	52	49	52	50	49	50	46	48	46	43

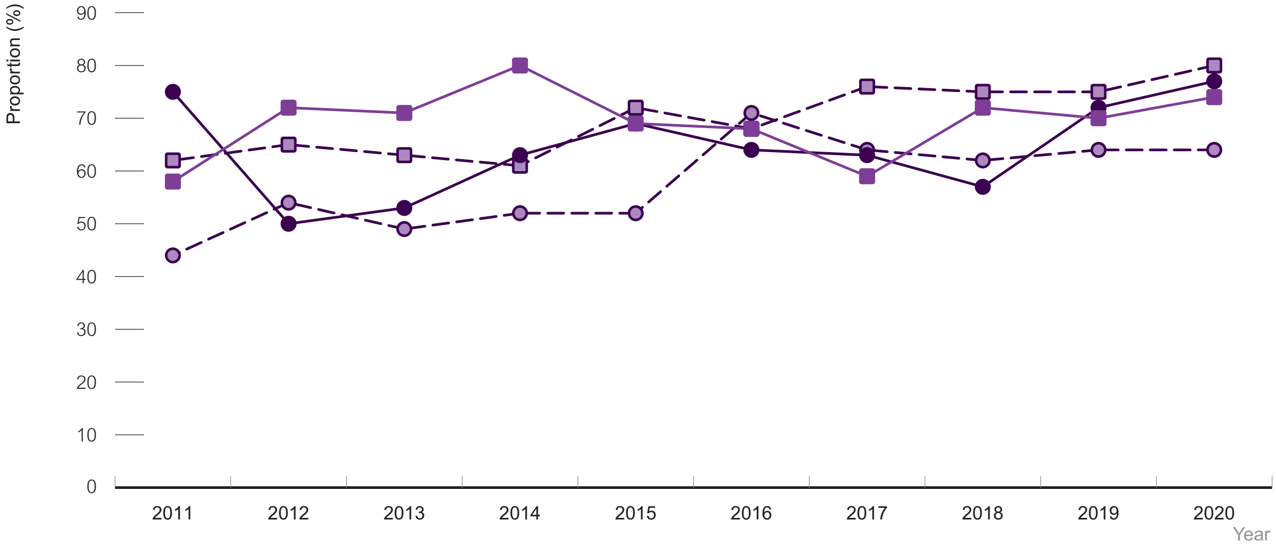
Source: Australian Needle Syringe Program Survey

Condom use

According to the Australian Needle Syringe Program Survey, more than half of Aboriginal and/or Torres Strait Islander women and men participants reported inconsistent condom (who used injecting drug use) use with casual partners in all years 2011–2020. This proportion fluctuated but remained stable among both women (range 50-77%) and men (range 58-80%) participants over the ten years. Conversely, inconsistent condom use increased among non-Indigenous women (44% in 2011 to 64% in 2020) and men (62% in 2011 to 80% in 2020). In 2020, inconsistent condom use with casual partners was comparable among Aboriginal and/or Torres Strait Islander and non-Indigenous women (77% and 64%) and men (74% and 80%) (Figure 14).

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

Figure 14 Prevalence of inconsistent condom use with casual partners in the last montha among people who inject drugs attending needle and syringe programs, 2011–2020, by Aboriginal and/or Torres Strait Islander status and gender



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
■ Aboriginal and/or Torres Strait Islander men (%)	58	72	71	80	69	68	59	72	70	74
□ Non-Indigenous men (%)	62	65	63	61	72	68	76	75	75	80
● Aboriginal and/or Torres Strait Islander women (%)	75	50	53	63	69	64	63	57	72	77
○ Non-Indigenous women (%)	44	54	49	52	52	71	64	62	64	64

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

4 Hepatitis C

Please see p. 7 for summary.

Hepatitis C notifications

This section focuses on newly notified hepatitis C infection, which means that a person previously not known to have the infection has since been tested and now found to have the infection.

A total of 7990 hepatitis C notifications were reported in Australia in 2020; 1106 (14%) occurred among the Aboriginal and/or Torres Strait Islander population, 3450 (43%) were among the non-Indigenous population, and there were a further 3434 (43%) notifications among people whose Aboriginal and/or Torres Strait Islander status was not reported (Table 4).

Table 4 Hepatitis C notifications in Aboriginal and/or Torres Strait people, by characteristic

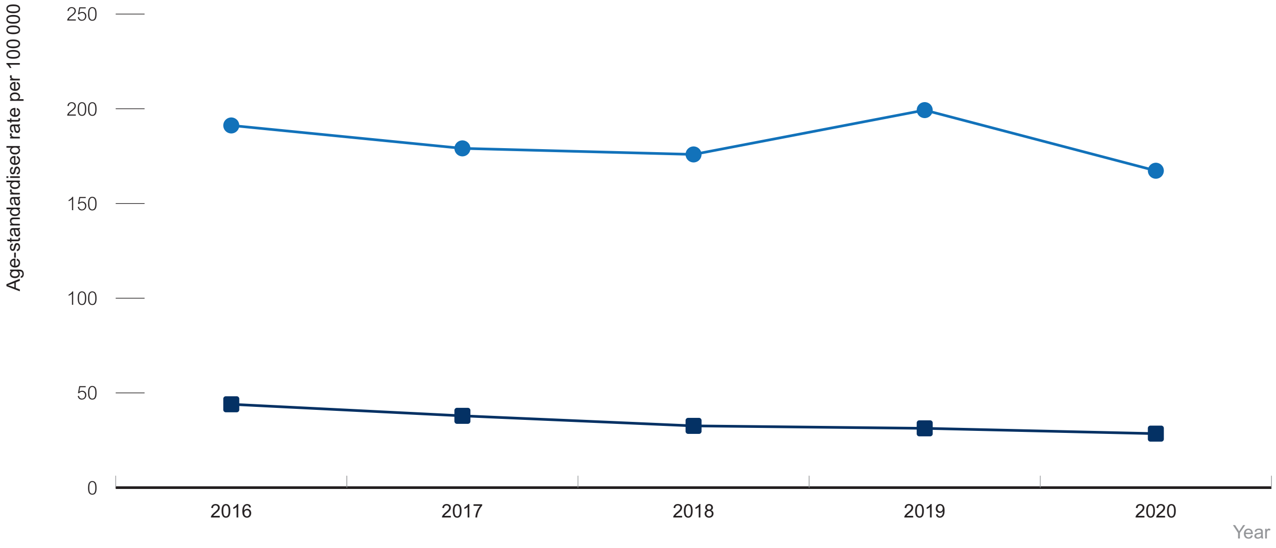
Characteristic	2016	2017	2018	2019	2020
Total cases[a]	1301	1379	1347	1351	1106
Gender					
Female	385	386	340	314	311
Male	686	777	796	681	524
Newly Acquired	230	214	208	356	269
Median age in years	30	30	30	30	31
Age group					
0-14	1	2	5	2	6
15-24	237	212	204	290	244
25-39	393	408	369	474	380
≥40	221	196	228	208	205

a Total cases data includes all jurisdictions, regardless of Aboriginal and/or Torres Strait Islander status completeness.

Aboriginal and/or Torres Strait Islander hepatitis C notification rates are based on data from six jurisdictions (the Australian Capital Territory, Northern Territory, Queensland, South Australia, Tasmania and Western Australia) where Aboriginal and/or Torres Strait Islander was ≥50% complete for all hepatitis C notifications for each of the five years (2016–2020). Incomplete reporting of Aboriginal and/or Torres Strait Islander status can result in a misrepresentation of the true extent of the notifications in the Aboriginal and/or Torres Strait Islander population and may not reflect national trends.

The age-standardised notification rate of hepatitis C in the Aboriginal and/or Torres Strait Islander population increased by 4.2% between 2016 and 2019 (from 191.2 per 100 000 in 2016 to 199.3 per 100 000 in 2019) followed by a decrease to 167.3 per 100 000 in 2020. By comparison, among the non-Indigenous population, the hepatitis C notification rate steadily decreased by 35% from 44.0 per 100 000 in 2016 to 28.5 per 100 000 in 2020 (Figure 15).

Figure 15 **Hepatitis C notification rate per 100 000 population, 2016–2020, by Aboriginal and/or Torres Strait Islander status**

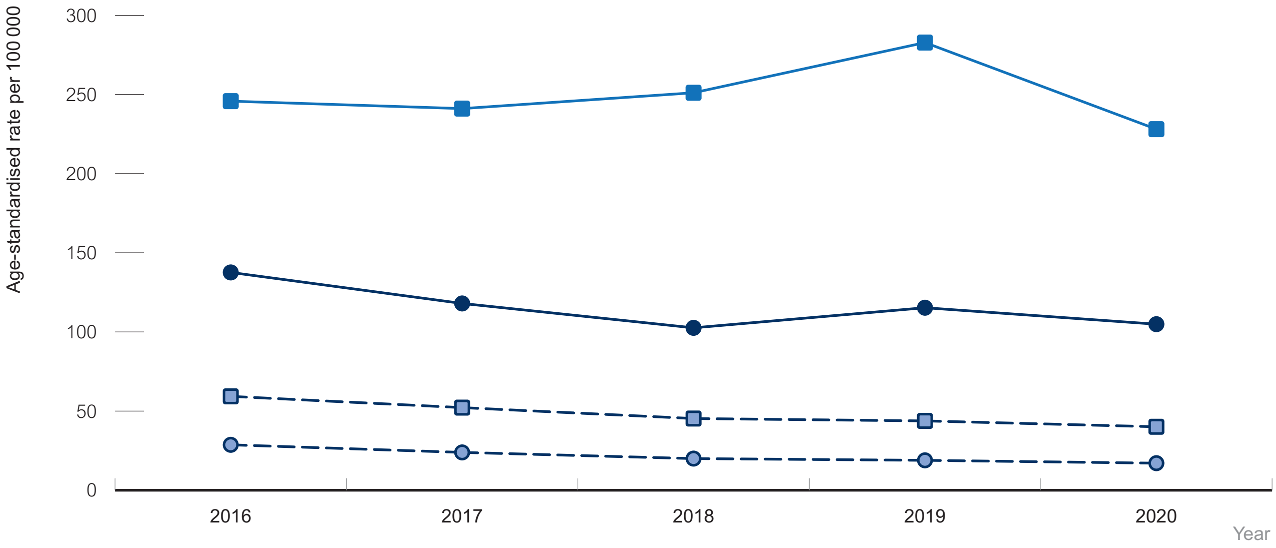


	2016	2017	2018	2019	2020
● Aboriginal and/or Torres Strait Islander	191.2	179.1	175.9	199.3	167.3
■ Non-Indigenous	44.0	37.9	32.6	31.3	28.5

Source: National Notifiable Disease Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness≥50% i.e. Australian Capital Territory, Northern Territory, South Australia, Tasmania, Queensland and Western Australia) for each of the five years 2016–2020.

In all years from 2016 to 2020, the hepatitis C notification rate was higher in male and female Aboriginal and/or Torres Strait Island people than in the gender equivalent non-Indigenous population (Figure 16). Among Aboriginal and/or Torres Strait Island males, the hepatitis C notification rate increased by 14.5% from 245.8 per 100 000 in 2016 to 282.8 per 100 000 in 2019 and then declined to be 228.1 per 100 000 in 2020. Among Aboriginal and/or Torres Strait Island females, the hepatitis C notification rate steadily decreased by 24% from 137.6 per 100 000 in 2016 to 104.9 per 100 000 in 2020 (Figure 16).

Figure 16 Hepatitis C notification rates per 100 000, 2016–2020, by Aboriginal and/or Torres Strait Islander status and gender

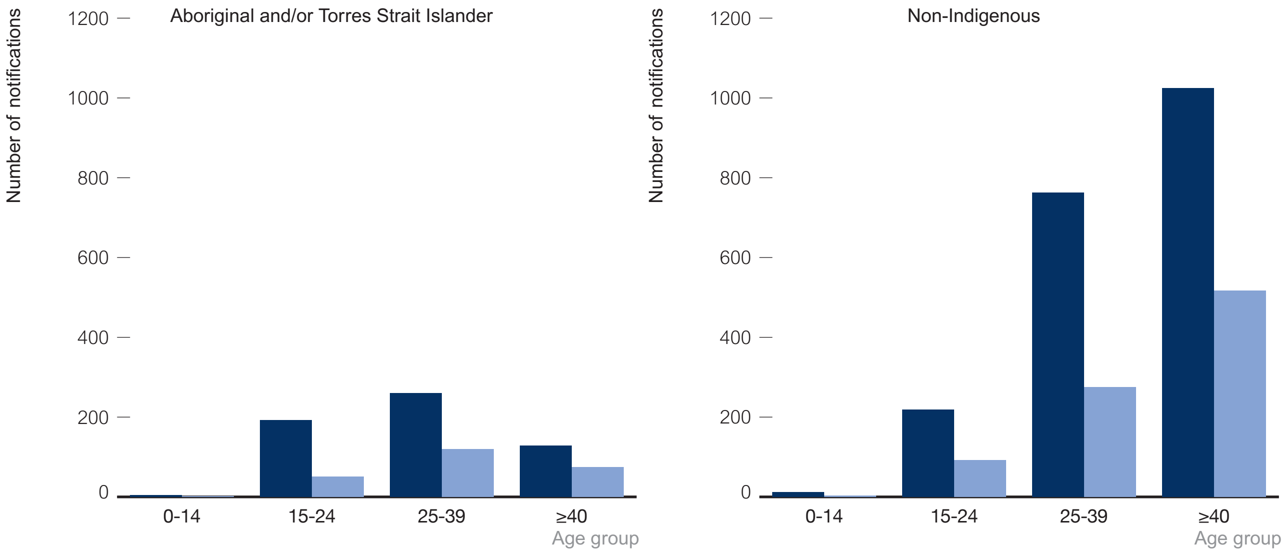


■ Aboriginal and/or Torres Strait Islander males	245.8	241.1	251.1	282.8	228.1
◪ Non-Indigenous males	59.3	52.2	45.3	43.8	40.1
● Aboriginal and/or Torres Strait Islander females	137.6	118.0	102.6	115.3	104.9
○ Non-Indigenous females	28.7	23.9	20.0	18.9	17.1

Source: National Notifiable Disease Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness≥50% (Australian Capital Territory , Northern Territory, South Australia, Tasmania, Queensland and Western Australia) for each of the five years 2016–2020.

In 2020, over 90% of hepatitis C notifications in both the Aboriginal and/or Torres Strait Islander and the non-Indigenous population occurred in people aged over 20 years (Figure 17). For number of notifications of hepatitis C infection in 2020, where gender was known, 70% were in males and 30% were in females. Similarly, in the non-Indigenous population, 69% of hepatitis C notifications were in males and 31% were in females (Figure 17).

Figure 17 Number of notifications of hepatitis C infection in 2020, by Aboriginal and/or Torres Strait Islander status, age and gender



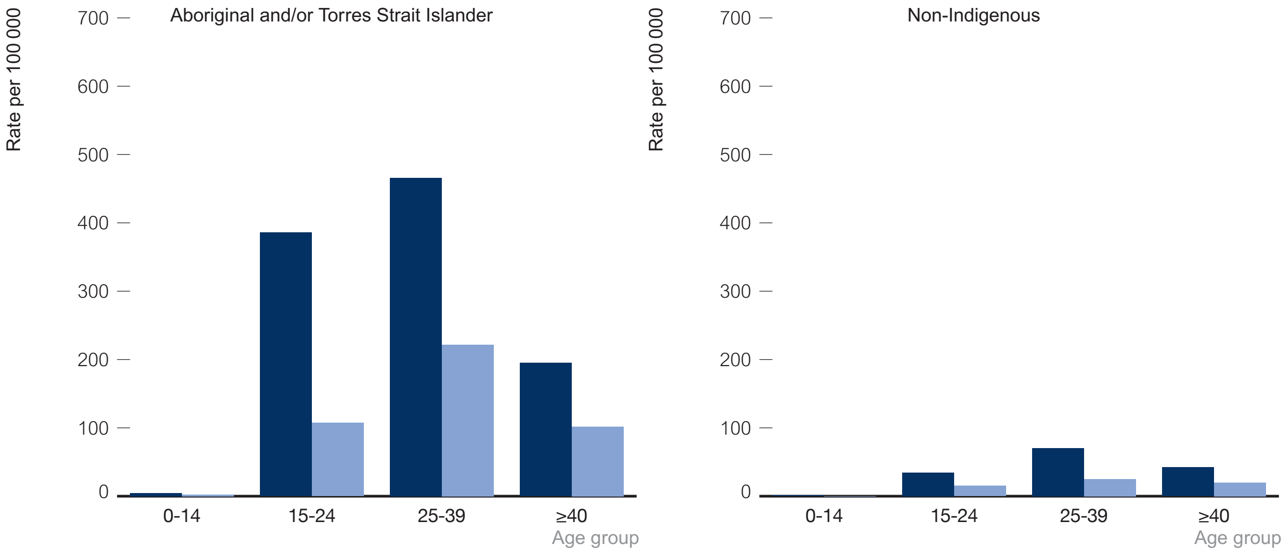
■ Males	4	193	260	129	12	219	762	1024
■ Females	2	51	120	75	3	92	275	517

Source: National Notifiable Disease Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness≥50% (Australian Capital Territory , Northern Territory, South Australia, Tasmania, Queensland and Western Australia) for each of the five years 2016–2020.

The greatest difference in notification rates of hepatitis C infection between the Aboriginal and/or Torres Strait Islander population and the non-Indigenous was observed in the younger age groups. In 2020, among males, Hepatitis C notification rates in the Aboriginal and/or Torres Strait Islander population aged 15–24 and 25–39 years were 11.2 and 6.6 times as high as the rates in the non-Indigenous population in the same age groups, respectively (Figure 18)

Similar findings were observed in females: for every age group, notification rates in the Aboriginal and/or Torres Strait Islander female population were two to nine times as high as in the non-Indigenous female population (Figure 18).

Figure 18 Hepatitis C notification rate per 100 000 population, 2020, by Aboriginal and/or Torres Strait Islander status, gender and age group



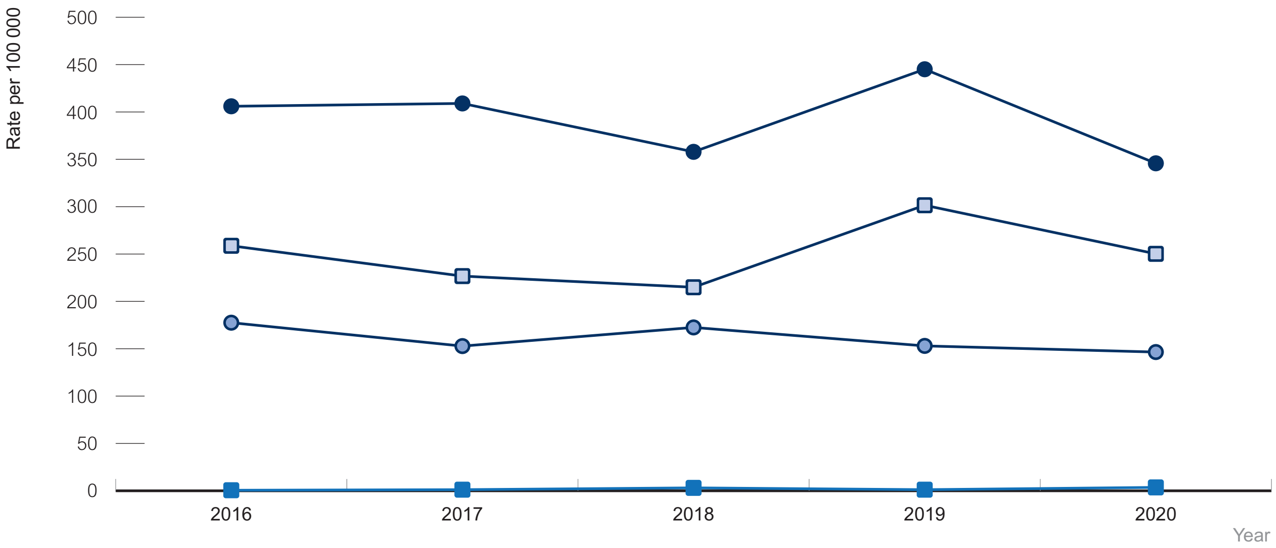
	0-14	15-24	25-39	≥40	0-14	15-24	25-39	≥40
■ Males	4.7	385.7	466	194.9	1.2	34.4	70.4	42.3
■ Females	2.5	107.4	221.8	101.7	0.3	15.1	24.9	20.1

Source: National Notifiable Disease Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness≥50% (Australian Capital Territory, Northern Territory, South Australia, Tasmania, Queensland and Western Australia) for each of the five years 2016–2020.

As the primary route of transmission of hepatitis C is injecting drug use, a practice that typically starts in late adolescence or early adulthood, trends in the rate of notifications in those aged 15-24 years can be a proxy for the incidence of hepatitis C infection.

The hepatitis C notification rate in Aboriginal and/or Torres Strait Islander people aged 15- to 24-years showed a slight increase (17%) from 258.7 per 100 000 in 2016 to 301.5 per 100 000 in 2019 and decreased to 250.2 per 100 000 in 2020 (17% decline from 2019) (Figure 19). Conversely, a 14% decline was seen in non-Indigenous people within the same age group from 32.5 per 100 000 in 2016 to 28.1 per 100 000 in 2019. There was a 11% decline from 2019 to 2020, in this age group among non-Indigenous people when the hepatitis C notification rate was 24.9 per 100 000 in 2020. (Figure 20).

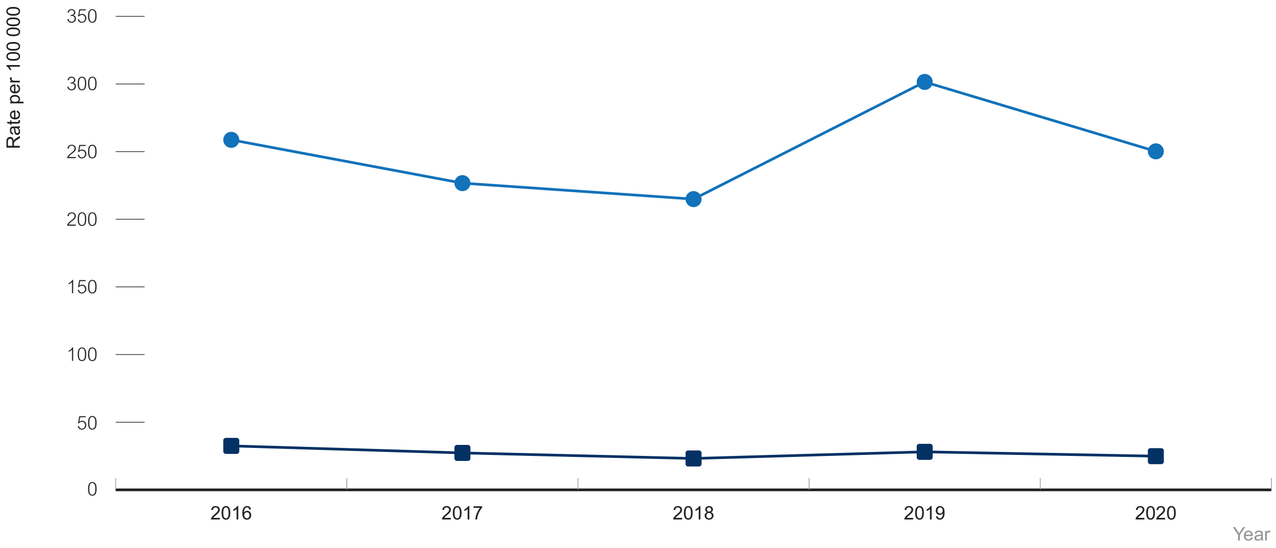
Figure 19 Hepatitis C notification rate in Aboriginal and/or Torres Strait Islander people per 100 000 population, 2016–2020, by age group



	2016	2017	2018	2019	2020
■ 0–14	0.6	1.2	3.1	1.2	3.6
□ 15–24	258.7	226.7	214.9	301.5	250.2
● 25–39	406.0	409.0	357.9	445.1	345.8
○ ≥40	177.5	152.8	172.5	153.0	146.5

Source: National Notifiable Disease Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness≥50% (Australian Capital Territory, Northern Territory, South Australia, Tasmania, Queensland, and Western Australia) for each of the five years 2016–2020

Figure 20 Hepatitis C notification rate per 100 000 in people aged 15-24 years and younger, 2016–2020, by Aboriginal and/or Torres Strait Islander status

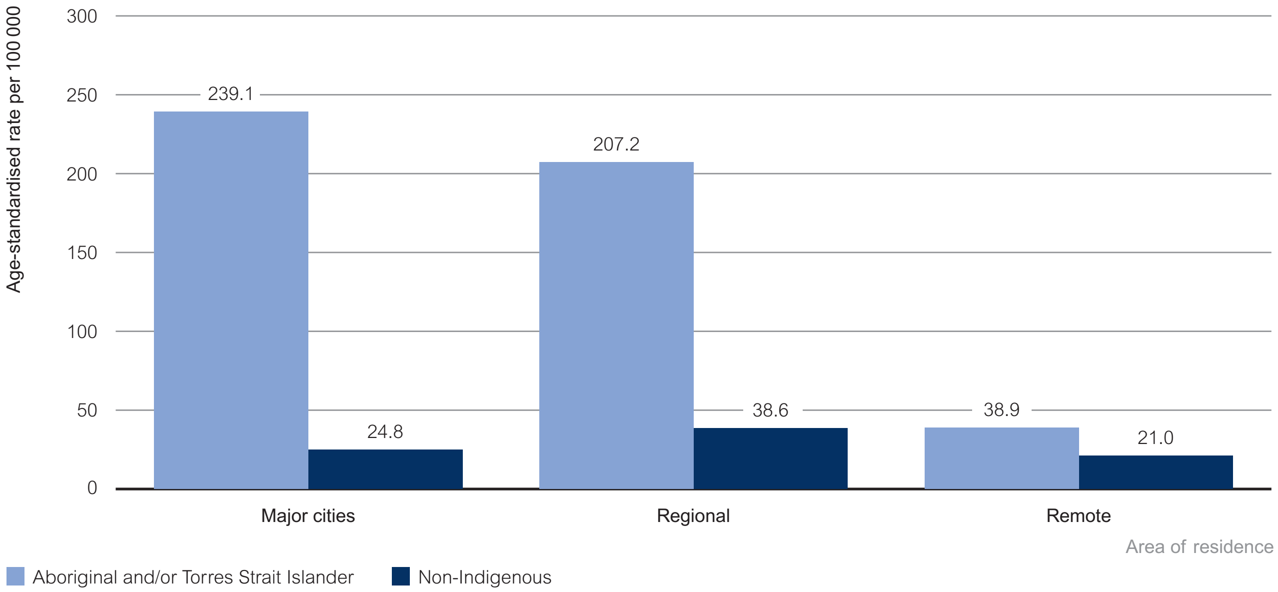


	2016	2017	2018	2019	2020
● Aboriginal and/or Torres Strait Islander	258.7	226.7	214.9	301.5	250.2
■ Non-Indigenous	32.5	27.3	23.2	28.1	24.9

Source: National Notifiable Disease Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% (Australian Capital Territory ,Northern Territory, South Australia, Tasmania, Queensland and Western Australia) for each of the five years 2016–2020

In 2020, the hepatitis C notification rate in major cities was almost ten times as high in the Aboriginal and/or Torres Strait Islander population compared to the non-Indigenous population. Similarly, in regional areas, the rate among Aboriginal and/or Torres Strait Islander people was five times as high as in the non-Indigenous population. Rates in Aboriginal and/or Torres Strait Islander and non-Indigenous populations were nearly two times higher in remote and very remote areas (Figure 21).

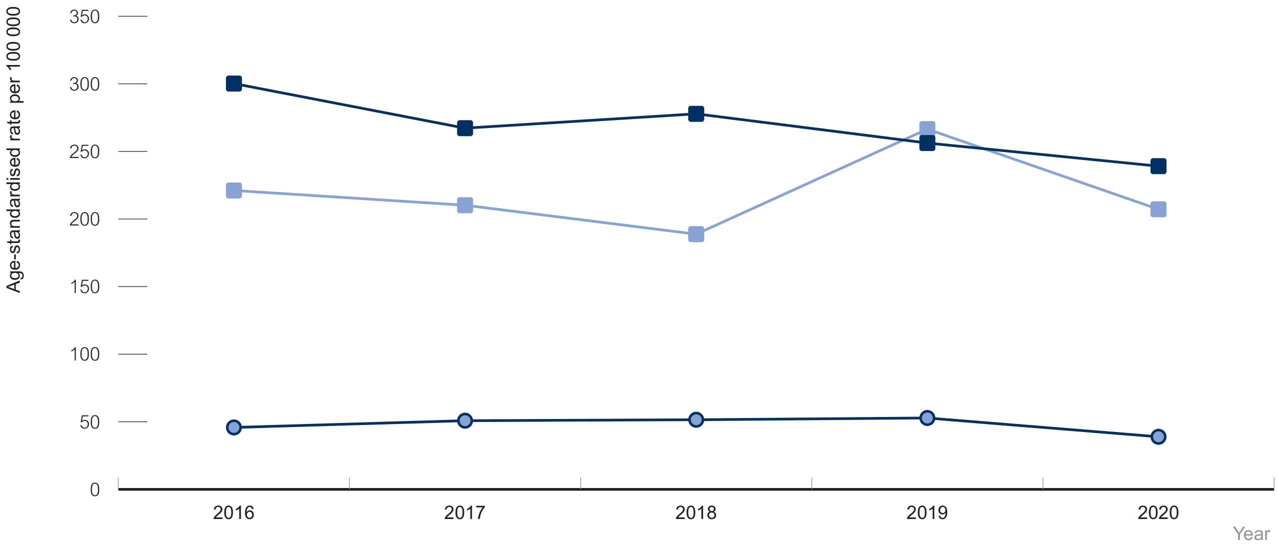
Figure 21 **Hepatitis C notification rate per 100 000 population, 2020, by Aboriginal and/or Torres Strait Islander Status and area of residence**



Source: National Notifiable Disease Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness≥50% (Australian Capital Territory, Northern Territory, South Australia, Tasmania, Queensland and Western Australia) for each of the five years 2016–2020

The hepatitis C notification rates declined by 15% in the major cities from 2016 to 2019 and then declined by 7% from 2019 to 2020 (Figure 22). The hepatitis C notification rates increased in both regional and remote areas from 2016 to 2019 and then declined by 22% from 2019 to 2020 in regional areas and declined by 26% in remote areas from 2019 to 2020, respectively (Figure 22).

Figure 22 Hepatitis C notification rate in Aboriginal and/or Torres Strait Islander people, per 100 000 population, 2016–2020, by area of residence



	2016	2017	2018	2019	2020
■ Major cities	300.2	267.2	277.8	256.2	239.1
■ Regional	221.1	210.2	188.8	266.5	207.2
● Remote	45.8	50.8	51.5	52.8	38.9

Source: National Notifiable Disease Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% (Australian Capital Territory, Northern Territory, South Australia, Tasmania, Queensland and Western Australia) for each of the five years 2016–2020.

Newly acquired hepatitis C infection

This section focuses on newly acquired hepatitis C infection. Infection is recorded as newly acquired if a person previously known not to have hepatitis C within the last two years has been tested and now found to have it. These data on newly acquired infections should be interpreted with caution, as they are likely to misrepresent the true number of newly acquired infections in the community. Infections are rarely symptomatic in the early stages[vi] and most cases therefore remain undetected. Also, even if testing is conducted, it may be difficult to be sure that an infection was newly acquired unless the person has had a recent negative test before the positive diagnosis or clinical evidence [vii] of newly acquired hepatitis C.

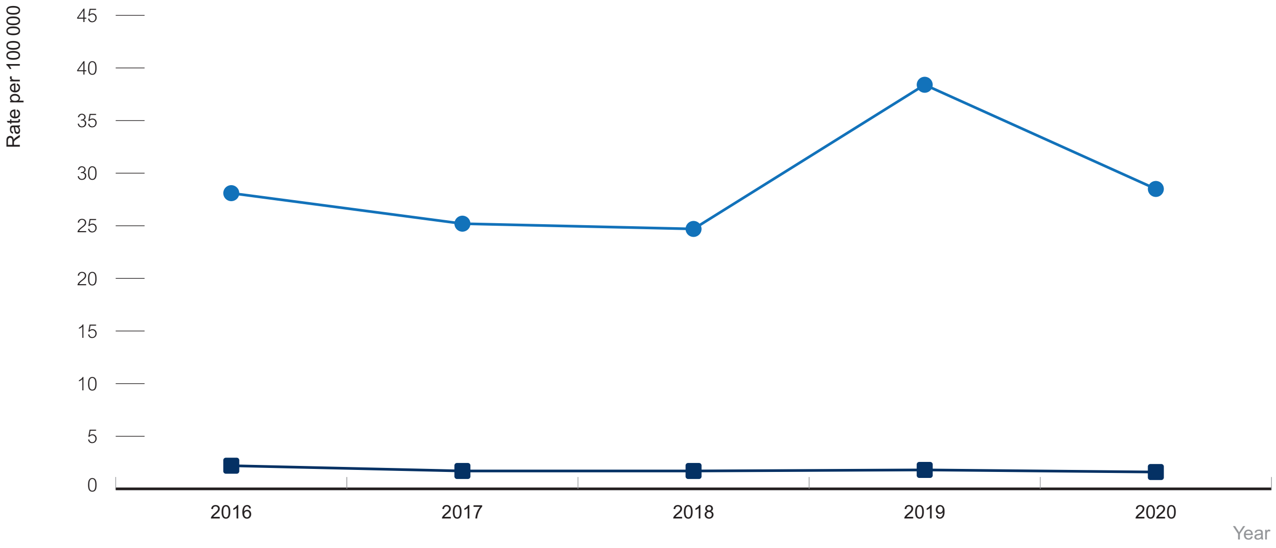
Aboriginal and/or Torres Strait Islander status was reported for at least 50% of notifications of newly acquired hepatitis C infection in all jurisdictions in the period 2016–2020. Therefore, rates of newly acquired hepatitis C infection in all jurisdictions are discussed in this section.

In 2020, of the 658 newly acquired hepatitis C notifications, 269 (41%) were among Aboriginal and/or Torres Strait Islander people, 378 (57%) among non-Indigenous people and 11 (2%) were in people for whom Aboriginal and/or Torres Strait Islander status was not recorded.

In 2020, the age-standardised notification rate of newly acquired hepatitis C infection in the Aboriginal and/or Torres Strait Islander population was 17 times that of the non-Indigenous population (28.5 per 100 000 vs 1.6 per 100 000) (Figure 23).

In the five-year period 2016–2020, the notification rate of newly acquired hepatitis C infection in the Aboriginal and/or Torres Strait Islander population increased from 28.1 per 100 000 in 2016 to 38.4 per 100 0000 in 2019 and then declined by 26% to 28.5 per 100 000 in 2020) (Figure 23). Over the same period, among the non-Indigenous population, the newly acquired hepatitis C notification rate declined by 27% from 2.2 per 100 000 in 2016 to 1.6 per 100 000 in 2020.

Figure 23 Newly acquired hepatitis C notification rate per 100 000 population, 2016–2020, by Aboriginal and/or Torres Strait Islander status



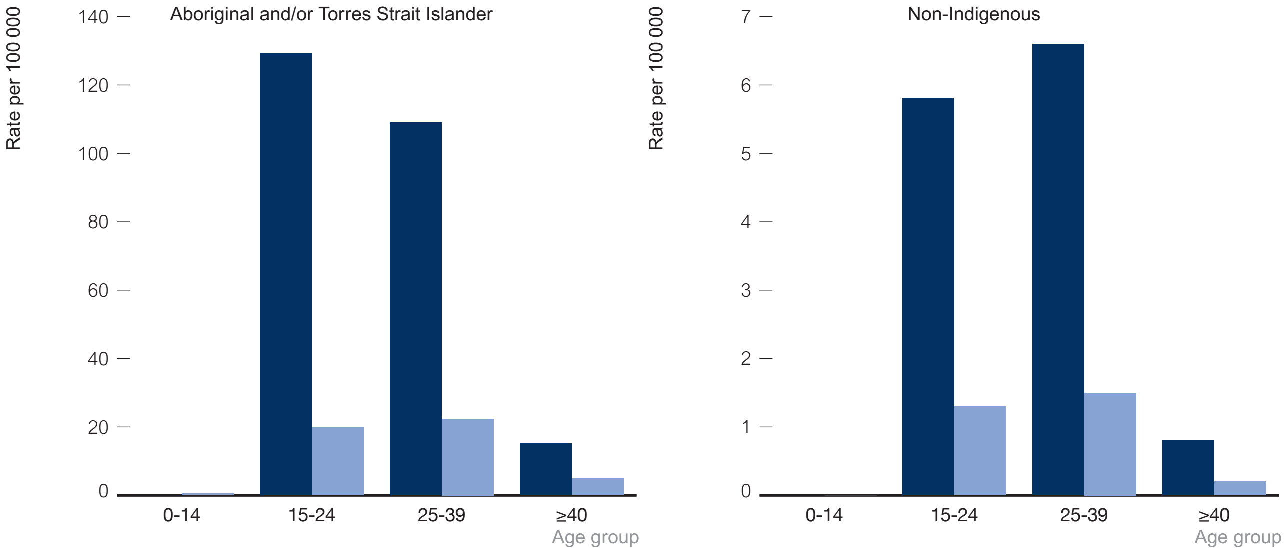
	2016	2017	2018	2019	2020
● Aboriginal and/or Torres Strait Islander	28.1	25.2	24.7	38.4	28.5
■ Non-Indigenous	2.2	1.7	1.7	1.8	1.6

Source: National Notifiable Disease Surveillance System; includes all jurisdictions.

[vi] The incubation period for hepatitis C ranges from 2 weeks to 6 months(10).
[vii] Clinical hepatitis within the past 24 months (where other causes of acute hepatitis have been excluded) defined as Jaundice or Bilirubin in urine or Alanine transaminase (ALT) ten times the upper limit of normal (10).

In 2020, by age group, among the Aboriginal and/or Torres Strait islander male population the newly acquired hepatitis C notification rate was highest among those aged 15–24 years (129.4 per 100 000). By comparison, among the non-Indigenous male population, the newly acquired hepatitis C notification rate was highest among those aged 25-39 years (6.6 per 100 0000) (Data not shown). By gender, rates were 15 times as high among Aboriginal and/or Torres Strait Islander females as among non-Indigenous females aged 15-24 and 25-39 years, respectively (20.0 per 100 000 vs 1.3 per 100 000 and 22.4 vs 1.5 per 100 000) (Figure 24).

Figure 24 Newly acquired hepatitis C notification rate per 100 000 population, 2020, by Aboriginal and/or Torres Strait Islander status, age group and gender

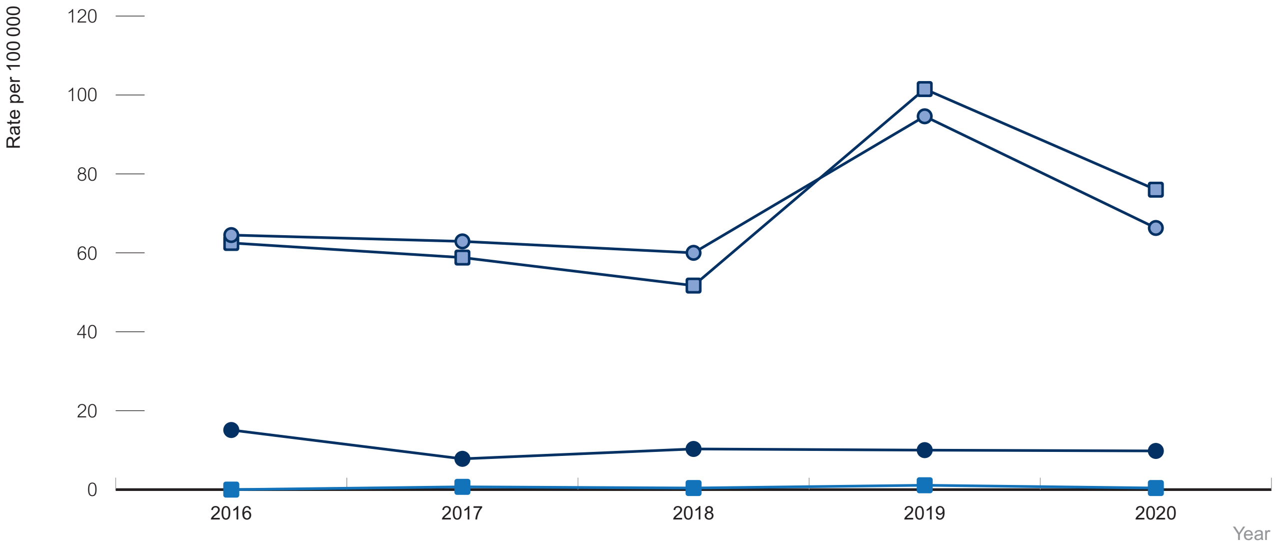


■ Males	0.0	129.4	109.2	15.2	0.0	5.8	6.6	0.8
▨ Females	0.7	20.0	22.4	4.9	0.0	1.3	1.5	0.2

Source: National Notifiable Disease Surveillance System; includes all jurisdictions

Between 2016 and 2020 in the Aboriginal and/or Torres Strait Islander population, the newly acquired hepatitis C notification rate in the age group 15-to 24 years and 25– to 39 years increased by 21% (62.5 per 100 000 to 76 per 100 000) and 4%, respectively (64.5 per 100 000 to 66.3 per 100 000) (Figure 25). Conversely, these rates decreased by 25% in Aboriginal and/or Torres Strait Islander people aged 40 years and older (15.1 per 100 000 in 2016 to 9.8 per 100 000 in 2020) (Figure 25). Overall, the rates in all age groups have been fluctuating and might be influenced by localised testing programs.

Figure 25 **Newly acquired hepatitis C notification rate in Aboriginal and/or Torres Strait Islander people per 100 000 population, 2016–2020, by age group**

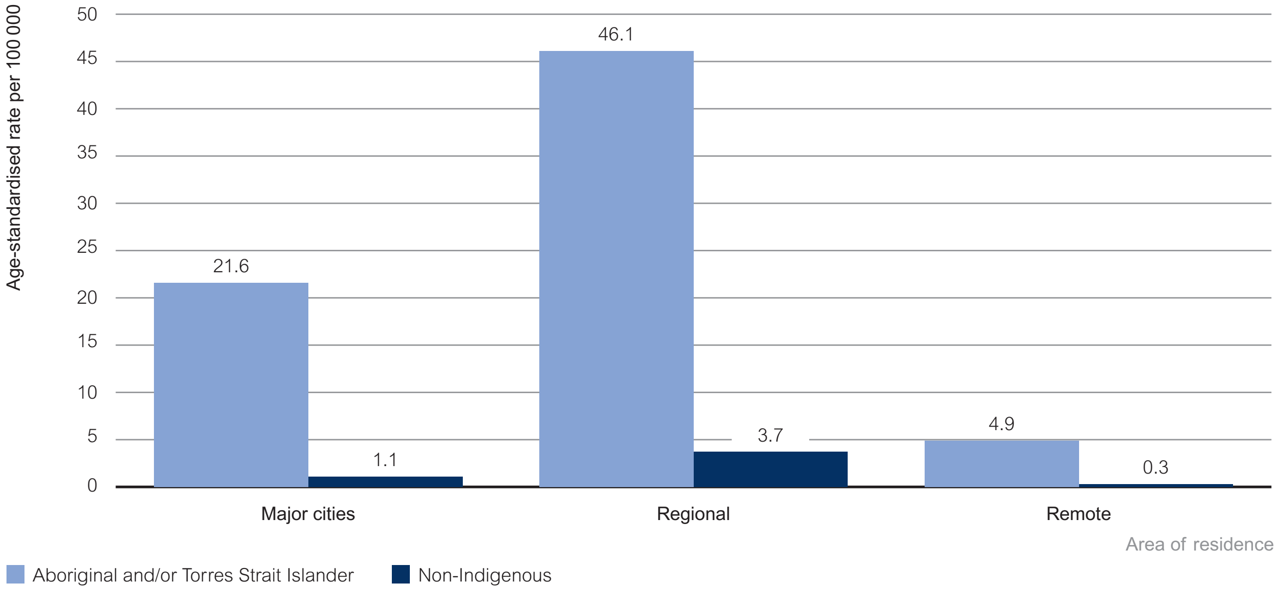


	2016	2017	2018	2019	2020
■ 0–14	0.0	0.7	0.4	1.1	0.4
▢ 15–24	62.5	58.8	51.7	101.5	76.0
● 25–39	64.5	62.9	60.0	94.6	66.3
○ ≥40	15.1	7.8	10.3	10.0	9.8

Source: National Notifiable Disease Surveillance System; includes all jurisdictions

In 2020 rates of newly acquired hepatitis C in the Aboriginal and/or Torres Strait Islander population were almost 20 times as high as in the non-Indigenous population in major cities, 12 times as high in regional areas, and 16 times as high in remote areas (Figure 26).

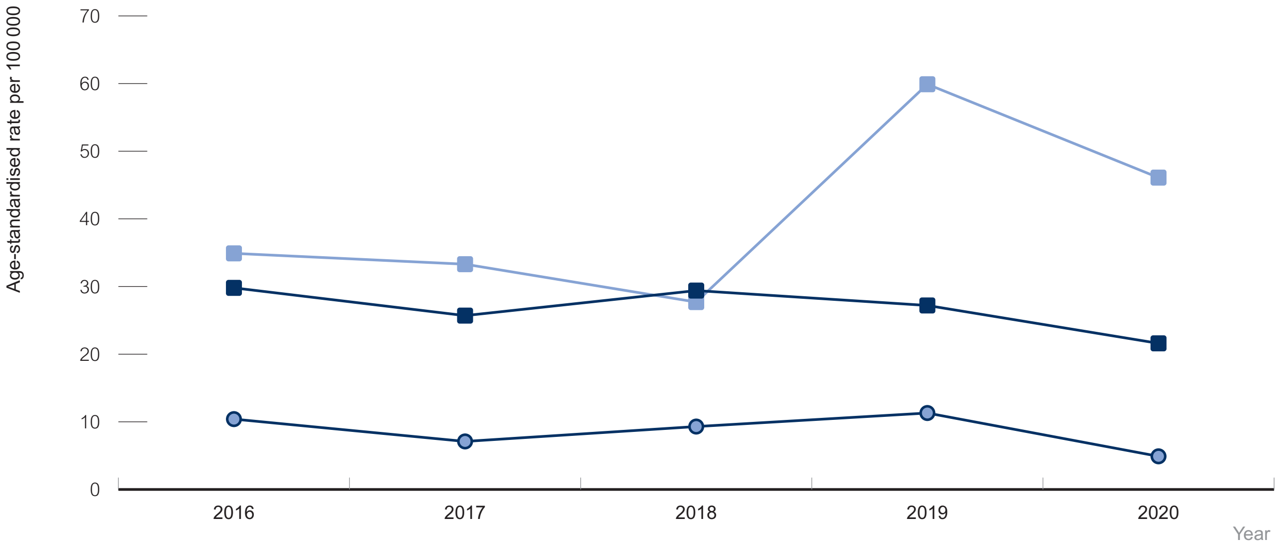
Figure 26 Newly acquired hepatitis C notification rate per 100 000 population, 2020, by Aboriginal and/or Torres Strait Islander status and area of residence



Source: National Notifiable Disease Surveillance System; includes all jurisdictions

From 2016 to 2019, notification rates of newly acquired hepatitis C in the Aboriginal and/or Torres Strait Islander population fluctuated in all three areas of residence. The rates decreased by 21% in major cities, by 23% in regional and by 57% in remote from 2019 to 2020 (Figure 27).

Figure 27 Newly acquired hepatitis C notification rate per 100 000 population, 2016–2020, by area of residence



	2016	2017	2018	2019	2020
■ Major cities	29.8	25.7	29.4	27.2	21.6
■ Regional	34.9	33.3	27.7	59.9	46.1
● Remote	10.4	7.1	9.3	11.3	4.9

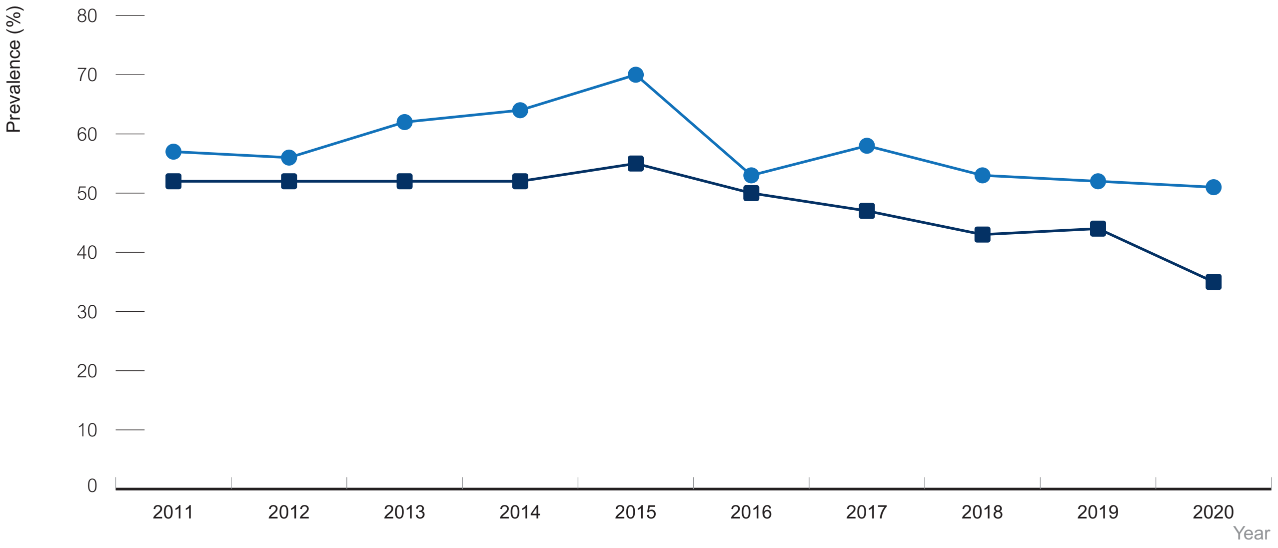
Source: National Notifiable Disease Surveillance System; includes all jurisdictions

Hepatitis C prevalence

Australia's epidemic of chronic hepatitis C is concentrated among key populations including people who inject drugs, and people from high-prevalence countries (defined as countries where the prevalence of hepatitis C is higher than 3.5%).

Over the past 10 years, hepatitis C antibody prevalence was higher among Aboriginal and/or Torres Strait Islander respondents than non-Indigenous respondents in each year of the Australian Needle Syringe Program Surveys (Figure 28). The hepatitis C antibody prevalence among Aboriginal and/or Torres Strait Islander participants in the six-year period 2015–2020 has fluctuated between 51% and 70%. This compares with a relatively stable prevalence in non-Indigenous respondents at 35% to 55% over the same period (Figure 28).

Figure 28 **Hepatitis C antibody prevalence in needle and syringe program participants, 2011–2020, by Aboriginal and/or Torres Strait Islander status**



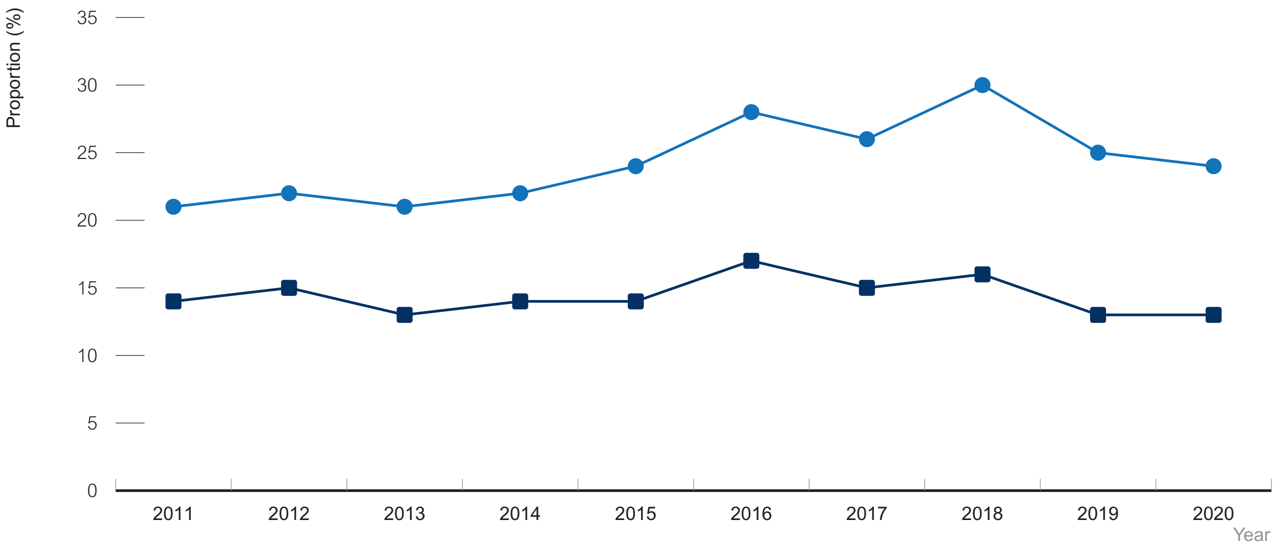
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
● Aboriginal and/or Torres Strait Islander (%)	57	56	62	64	70	53	58	53	52	51
■ Non-Indigenous (%)	52	52	52	52	55	50	47	43	44	35

Source: Australian Needle Syringe Program Surveys

Injecting drug use

The proportion of Aboriginal and/or Torres Strait Islander peoples participating in needle syringe programs who reported receptive syringe sharing increased from 21% in 2011 to 24% in 2020. This proportion was consistently higher than in non-Indigenous participants in each of the years 2011–2020, and in 2020 the proportion was 24%, compared to 13% in non-Indigenous participants (Figure 29). Receptive syringe sharing was determined 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 gender partner (even if it was cleaned)?’.

Figure 29 **Prevalence of receptive syringe sharing[a] by needle and syringe program participants, 2011–2020, by Aboriginal and/or Torres Strait Islander status**



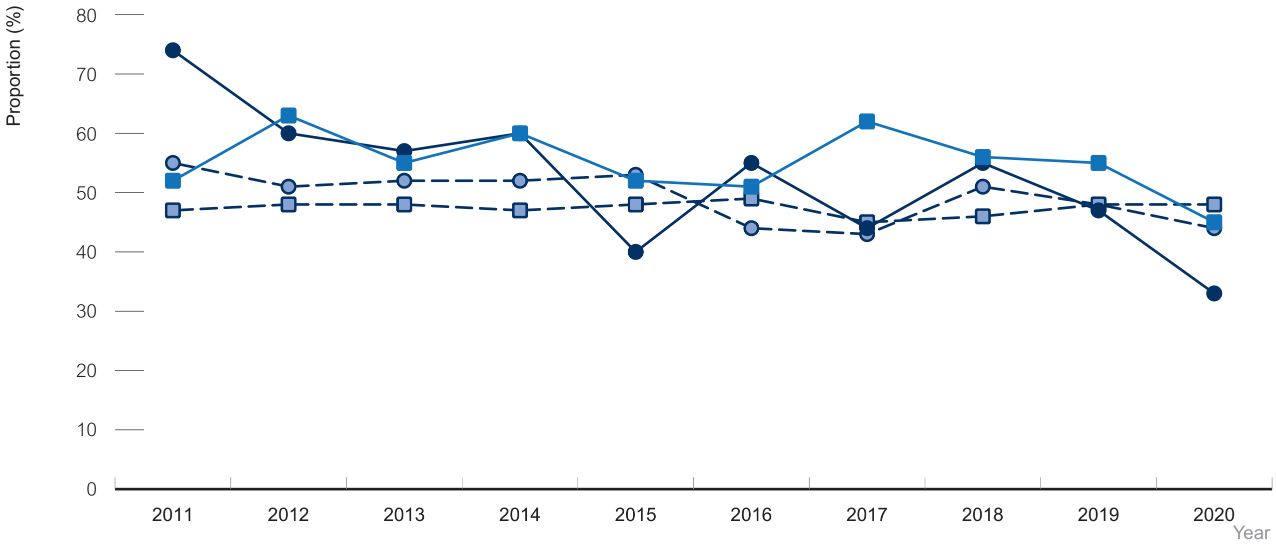
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
● Aboriginal and/or Torres Strait Islander (%)	21	22	21	22	24	28	26	30	25	24
■ Non-Indigenous (%)	14	15	13	14	14	17	15	16	13	13

a Denominator includes only those who injected in the last month.
Source: Australian Needle Syringe Program Survey

Testing

Among participants in the Australian Needle Syringe Program Survey who were hepatitis C antibody negative, the proportion of Aboriginal and/or Torres Strait Islander and non-Indigenous women who reported a hepatitis C antibody test in the past 12 months declined over the period 2011 to 2019 (from 74% to 47% and 55% to 48% respectively) (Figure 30). The proportion of Aboriginal and/or Torres Strait Islander and non-Indigenous women declined from 2019 to 2020 (47% to 33% in and 48% to 44% respectively). The proportion of Aboriginal and/or Torres Strait Islander men who were hepatitis C antibody negative and who reported a hepatitis C antibody test in the past 12 months was stable over 2011 to 2019 and declined by 18% from 2019 to 2020. Although a higher proportion of Aboriginal and/or Torres Strait Islander women and men reported a hepatitis C test in the previous 12 months compared to non-Indigenous females and males in most years, this was not the case in 2020 and may be related to the impact on testing and access to healthcare caused by the COVID-19 pandemic. (Figure 30).

Figure 30 **Proportion of people who inject drugs seen at needle and syringe programs who were hepatitis C antibody negative and reported a hepatitis C antibody test in the past 12 months, 2011–2020, by Aboriginal and/or Torres Strait Islander status**



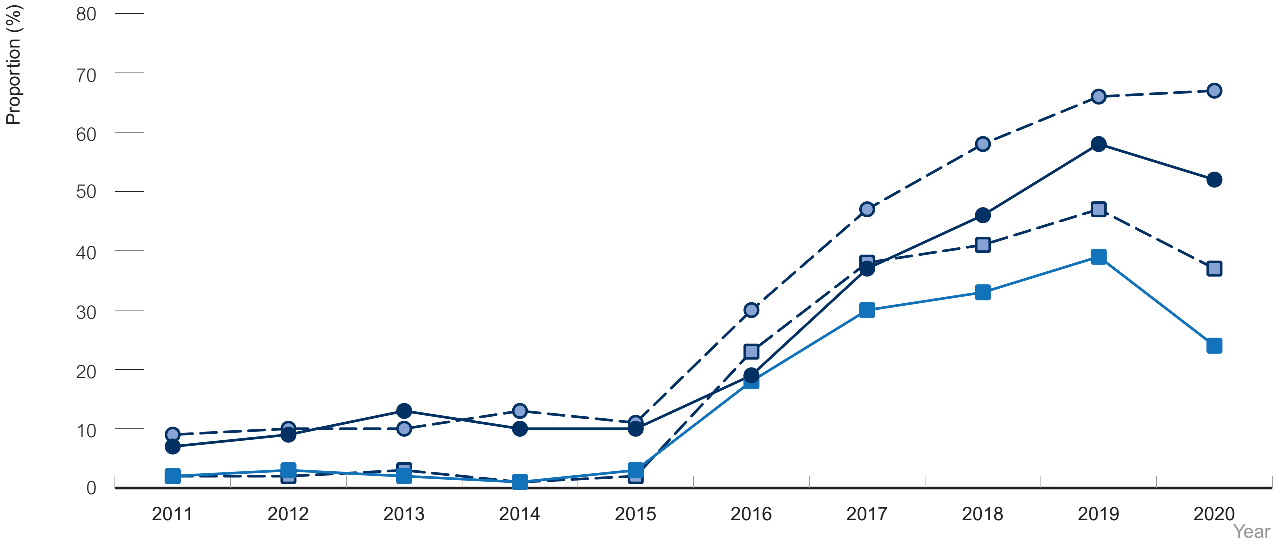
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
■ Aboriginal and/or Torres Strait Islander men (%)	52	63	55	60	52	51	62	56	55	45
■ Non-Indigenous men (%)	47	48	48	47	48	49	45	46	48	48
● Aboriginal and/or Torres Strait Islander women (%)	74	60	57	60	40	55	44	55	47	33
● Non-Indigenous women (%)	55	51	52	52	53	44	43	51	48	44

Source: Australian Needle Syringe Program Survey

Treatment

In 2020, among Aboriginal and/or Torres Strait Islander participants in the Australian Needle Syringe Program Survey, 52% reported a lifetime history of hepatitis C treatment, an increase from 7% in 2011 (Figure 31). In 2020, Aboriginal and/or Torres Strait Islander participants had lower lifetime uptake of treatment than non-Indigenous participants (52% vs 67%). In 2020, Aboriginal and/or Torres Strait Islander participants had lower uptake of treatment in the last 12 months than non-Indigenous participants (24% vs 37%). Increases in treatment uptake after 2015 reflect PBS-subsidised interferon-free direct-acting antiviral regimens becoming available in Australia in March 2016.

Figure 31 Hepatitis C antiviral therapy ever for hepatitis C antibody-positive needle syringe program participants, 2011–2020, by Aboriginal and/or Torres Strait Islander status



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
● Lifetime history of treatment, Aboriginal and/or Torres Strait Islander (%)	7	9	13	10	10	19	37	46	58	52
■ Treatment in the last 12 months, Aboriginal and/or Torres Strait Islander (%)	2	3	2	1	3	18	30	33	39	24
○ Lifetime history of treatment, non-Indigenous (%)	9	10	10	13	11	30	47	58	66	67
□ Treatment in the last 12 months, non-Indigenous (%)	2	2	3	1	2	23	38	41	47	37

Source: Australian Needle Syringe Program Survey

5 Hepatitis B

Please see p. 8 for summary.

Hepatitis B notifications

This section focuses on newly notified hepatitis B infection, which means that a person previously not known to have the infection has since been tested and now found to have the infection. 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 5106 notifications of hepatitis B infection in Australia in 2020. Of these 151 (3%) were among the Aboriginal and/or Torres Strait Islander population, 2483 (49%) were among the non-Indigenous population, and 2472 (48%) were among people whose Aboriginal and/or Torres Strait Islander status was not reported (Table 5).

Table 5 Hepatitis B notifications in Aboriginal and/or Torres Strait people by characteristic

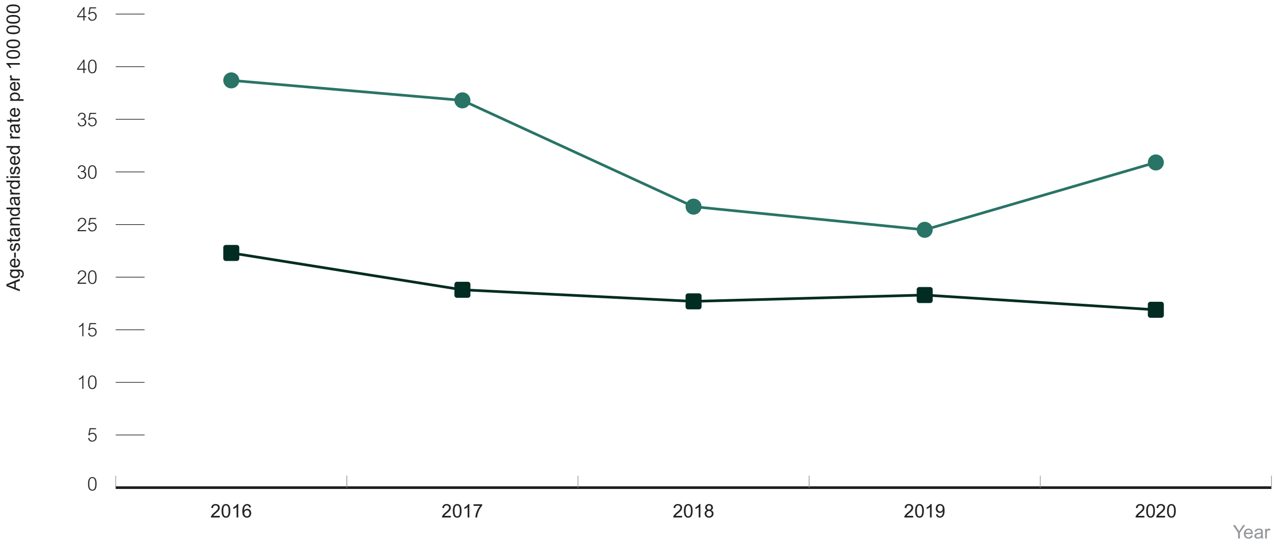
Characteristic	2016	2017	2018	2019	2020
Total cases[a]	185	166	151	138	151
Gender					
Male	98	104	97	66	75
Female	70	52	45	48	54
Median age in years	41	36	41	41	42
Newly Acquired	34	23	29	34	20
Age group					
0-14	4	5	5	3	5
15-19	6	11	9	11	7
20-24	12	20	10	8	9
25-29	5	7	4	9	7
30-34	24	14	11	14	8
35-39	15	9	17	10	20
≥40	64	62	44	45	67

a Total cases, data includes all jurisdictions, regardless of Aboriginal and/or Torres Strait Islander status reporting completeness.
Source: National Notifiable Diseases Surveillance System

In the five-year period 2016–2020, Aboriginal and/or Torres Strait Islander status was recorded at least 50% of notifications per year in the Australian Capital Territory, Queensland, Northern Territory, South Australia, Tasmania and Western Australia. Incomplete reporting of Aboriginal and/or Torres Strait Islander status can result in a misrepresentation of the true extent of the notifications in the Aboriginal and/or Torres Strait Islander population and may not reflect national trends.

In 2020, the age-standardised notification rate of B for the Aboriginal and/or Torres Strait Islander population was nearly twice as high as among the non-Indigenous population (30.9 per 100 000 vs 16.9 per 100 000) (Figure 32). The hepatitis B notification rate among Aboriginal and/or Torres Strait Islander population declines by 37% from 2016 to 2019 (38.7 per 100 000 in 2016 to 24.5 per 100 000 in 2019) and increased by 26% between 2019 to 2020 (30.9 per 100 000 in 2020) (Figure 32).

Figure 32 **Hepatitis B notification rate per 100 000 population, 2016–2020, by Aboriginal and/or Torres Strait Islander status**

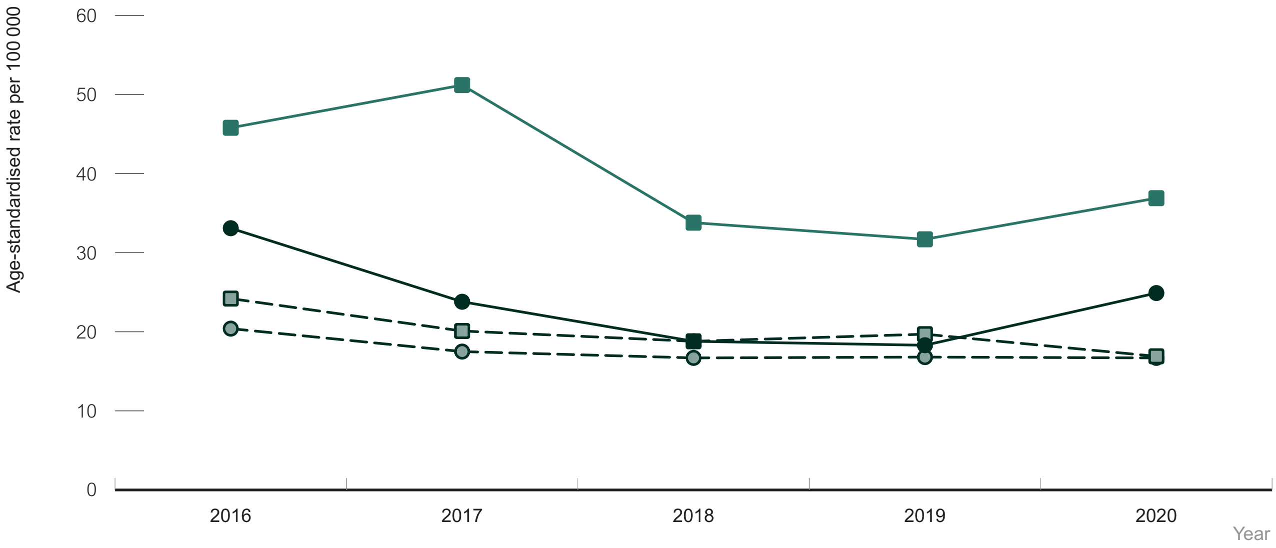


	2016	2017	2018	2019	2020
● Aboriginal and/or Torres Strait Islander	38.7	36.8	26.7	24.5	30.9
■ Non-Indigenous	22.3	18.8	17.7	18.3	16.9

Source: National Notifiable Disease Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% (Australian Capital Territory, Northern Territory, Queensland, South Australia, Tasmania and Western Australia) for each of the five years 2016–2020.

For the years 2016 to 2020, notification rates of hepatitis B infection have been consistently higher in Aboriginal and/or Torres Strait Islander males than in Aboriginal and/or Torres Strait Islander females. These rates have fluctuated, both in Aboriginal and/or Torres Strait Islander males (45.8 per 100 000 in 2016 to 36.9 per 100 000 in 2020) and females (33.1 per 100 00 in 2016 to 24.9 per 100 000 in 2020) (Figure 33).

Figure 33 **Hepatitis B notification rates per 100 000, 2016–2020, by Aboriginal and/or Torres Strait Islander status and gender**

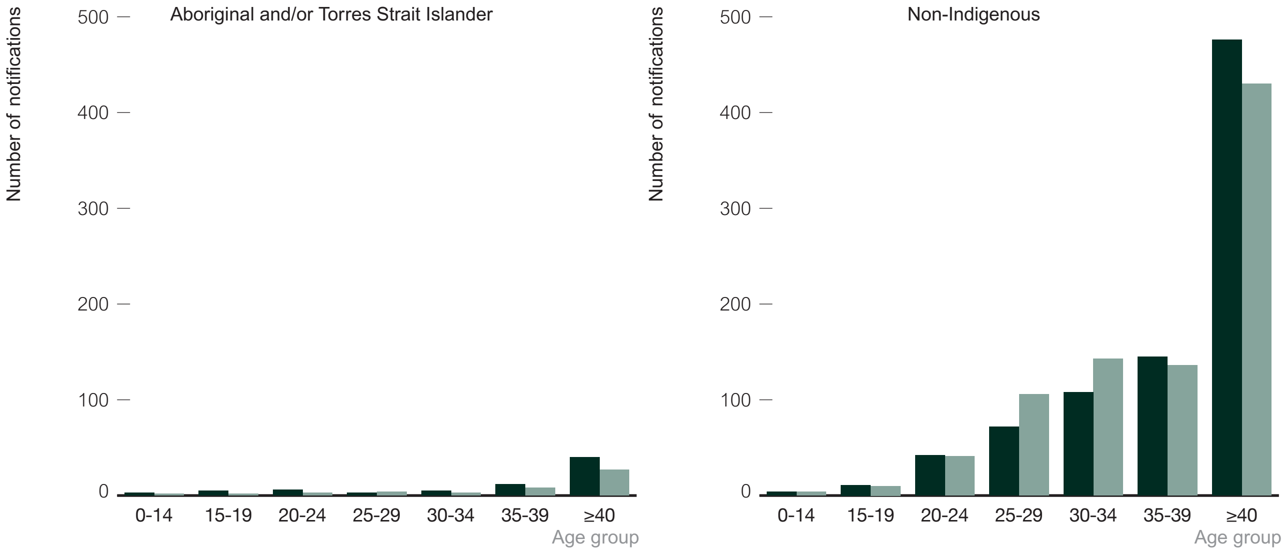


	2016	2017	2018	2019	2020
■ Aboriginal and/or Torres Strait Islander males	45.8	51.2	33.8	31.7	36.9
▣ Non-Indigenous males	24.2	20.1	18.8	19.7	16.9
● Aboriginal and/or Torres Strait Islander females	33.1	23.8	18.8	18.3	24.9
◉ Non-Indigenous females	20.4	17.5	16.7	16.8	16.7

Source: National Notifiable Disease Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% (Australian Capital Territory, Northern Territory, Queensland, South Australia, Tasmania, and Western Australia) for each of the five years 2016–2020.

In 2020, where gender and age were known, 71% of notifications of hepatitis B infection in the Aboriginal and/or Torres Strait Islander population, and 69% in the non-Indigenous population, were in those aged 35 years and over (Figure 34).

Figure 34 Number of cases of notified hepatitis B, 2020, by Aboriginal and/or Torres Strait Islander status, age group and gender

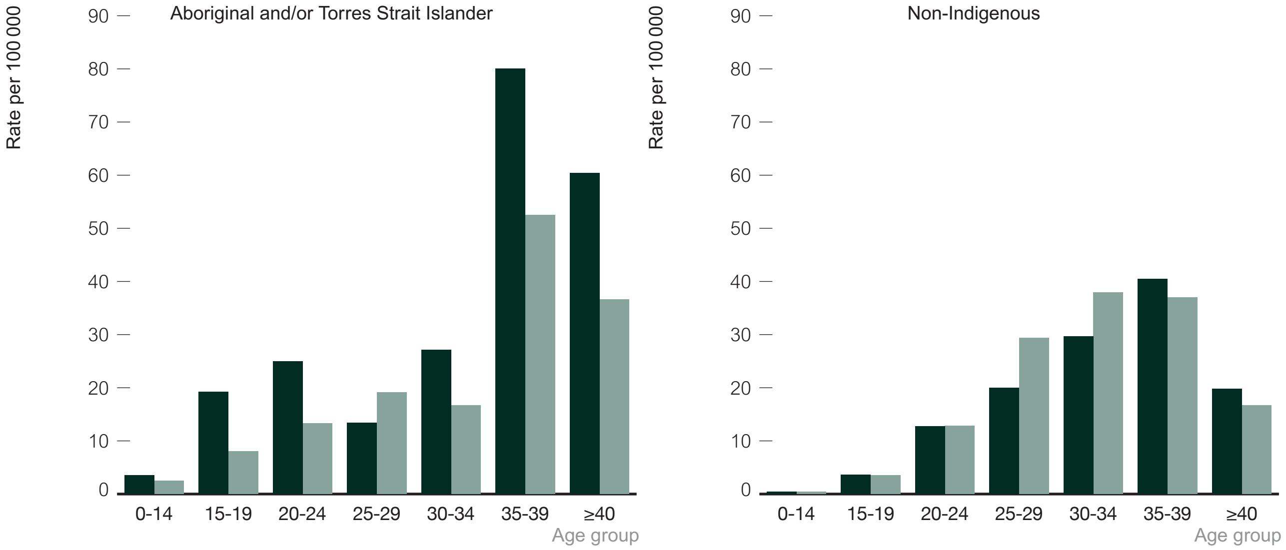


	Aboriginal and/or Torres Strait Islander							Non-Indigenous						
	0-14	15-19	20-24	25-29	30-34	35-39	≥40	0-14	15-19	20-24	25-29	30-34	35-39	≥40
■ Males	3	5	6	3	5	12	40	4	11	42	72	108	145	476
■ Females	2	2	3	4	3	8	27	4	10	41	106	143	136	430

Source: National Notifiable Disease Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% (Australian Capital Territory, Northern Territory, Queensland, South Australia, Tasmania and Western Australia) for each of the five years 2016–2020.

In 2020, hepatitis B notification rates among Aboriginal and/or Torres Strait Islander people were higher than among non-Indigenous people, particularly among men aged 35 years and over (Figure 35). However, among those aged 25-29 and 30-34, the hepatitis B notification rate was higher among non-Indigenous females than among Aboriginal and/or Torres Strait Islander females (Figure 35).

Figure 35 Hepatitis B notification rate per 100 000 population, 2020, by Aboriginal and/or Torres Strait Islander status, age group and gender

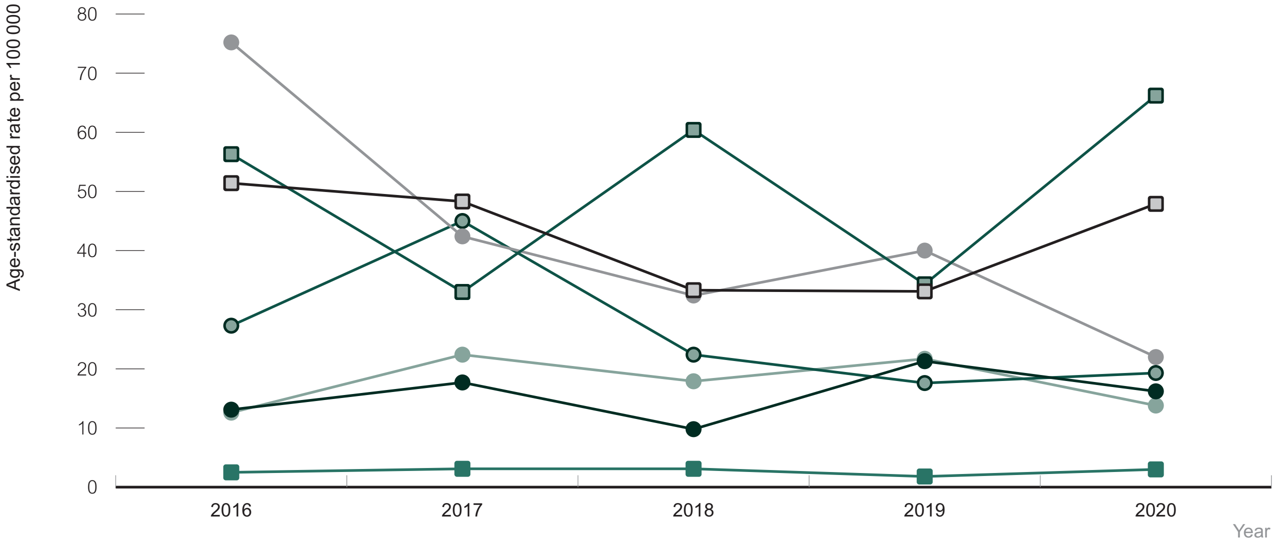


	Aboriginal and/or Torres Strait Islander							Non-Indigenous						
	0-14	15-19	20-24	25-29	30-34	35-39	≥40	0-14	15-19	20-24	25-29	30-34	35-39	≥40
■ Males	3.5	19.2	25.0	13.4	27.1	80.0	60.4	0.4	3.6	12.7	20.0	29.7	40.5	19.8
■ Females	2.5	8.0	13.3	19.1	16.7	52.5	36.6	0.4	3.5	12.8	29.4	37.9	37.0	16.7

Source: National Notifiable Disease Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% (Australian Capital Territory, Northern Territory, Queensland, South Australia, Tasmania, and Western Australia) for each of the five years 2016–2020.

The hepatitis B notification rate in Aboriginal and/or Torres Strait Islander people fluctuated from 2016 to 2020 (Figure 36). The highest rates in 2020 were among those aged 35 years and over (66.2 notifications per 100 000 for those aged 35-39 years and 47.9 per 100 000 for those aged 40 years and over), likely reflecting the impact of childhood and adolescent vaccination programs on younger groups.

Figure 36 Hepatitis B notification rate per 100 000 population, 2016–2020, in Aboriginal and/or Torres Strait Islander people, by age group

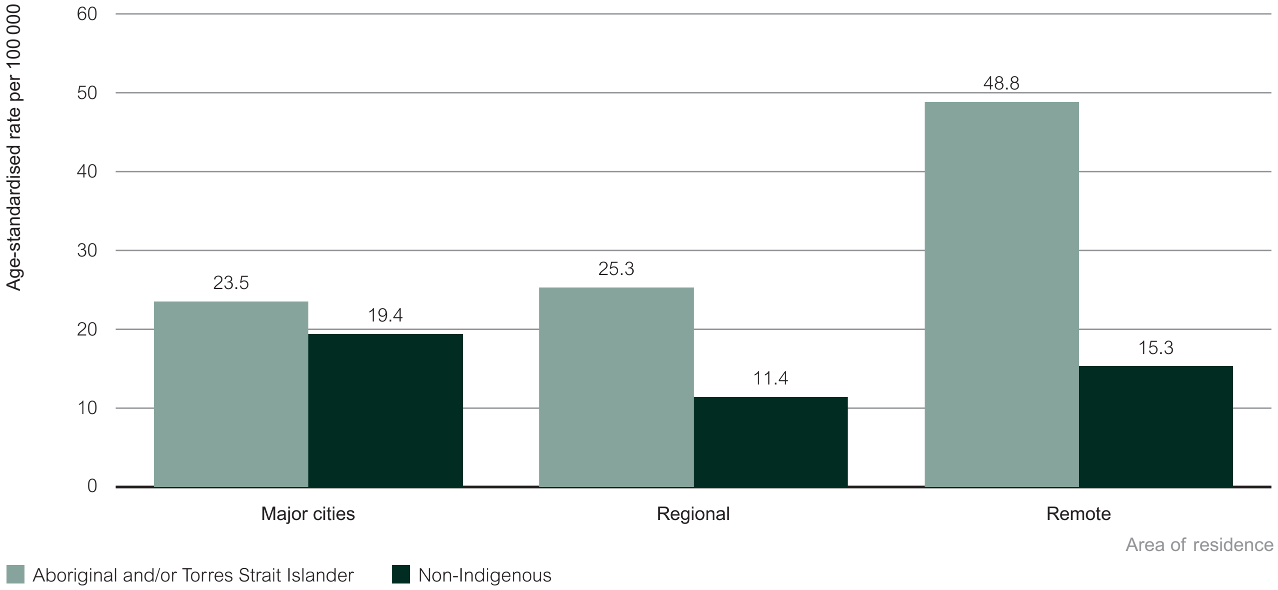


	2016	2017	2018	2019	2020
■ 0–14	2.5	3.1	3.1	1.8	3.0
● 15–19	12.6	22.4	17.9	21.7	13.8
◉ 20–24	27.3	45.0	22.4	17.6	19.3
● 25–29	13.1	17.7	9.8	21.3	16.2
● 30–34	75.2	42.4	32.4	40.0	22.0
▣ 35–39	56.3	33.0	60.4	34.3	66.2
▢ ≥40	51.4	48.3	33.3	33.1	47.9

Source: National Notifiable Disease Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% (Australian Capital Territory, Northern Territory, Queensland, South Australia, Tasmania and Western Australia) for each of the five years 2016–2020.

In 2020, the hepatitis B notification rate in the Aboriginal and/or Torres Strait Islander population was higher than in the non-Indigenous population in all areas of residence (Figure 37).

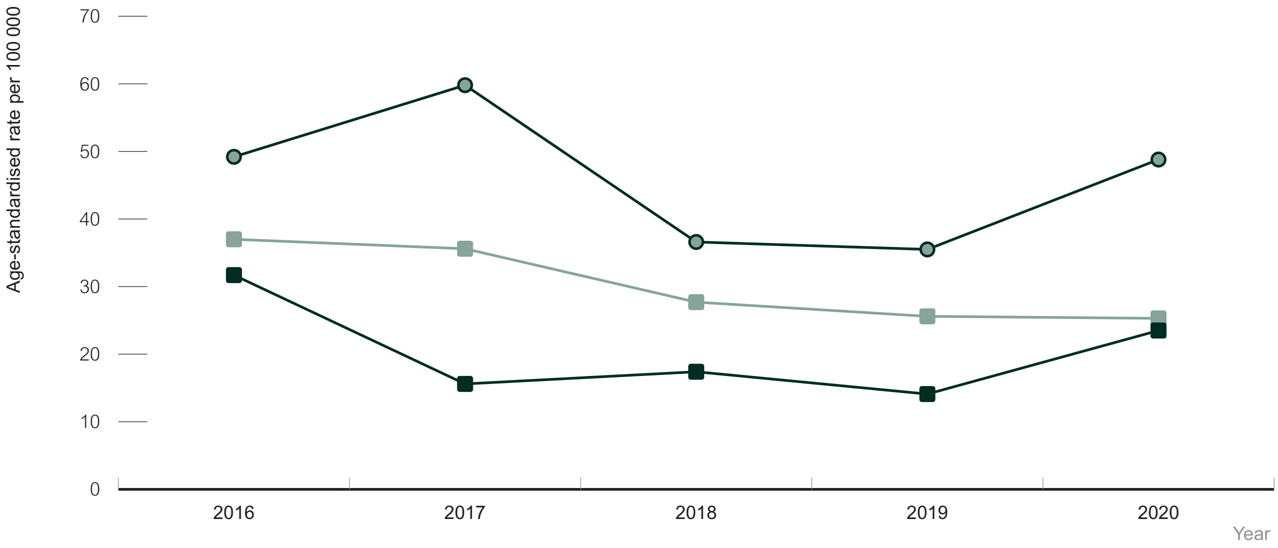
Figure 37 **Hepatitis B notification rate per 100 000 population, 2020, by Aboriginal and/or Torres Strait Islander status and area of residence**



Source: National Notifiable Disease Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% (Australian Capital Territory, Northern Territory, Queensland, South Australia, Tasmania and Western Australia) for each of the five years 2016–2020.

Over the five-year reporting period, the hepatitis B notification rates among Aboriginal and/or Torres Strait Island people remained the highest in remote areas, followed by regional areas and major cities. In 2020, the hepatitis B notification rate among Aboriginal and/or Torres Strait Islander people was 23.5 per 100 000 in major cities, 25.3 per 100 000 in regional areas and 48.8 per 100 000 in remote areas (Figure 38).

Figure 38 Hepatitis B notification rate per 100 000 population, 2016–2020, in Aboriginal and/or Torres Strait Islander people, by area of residence



	2016	2017	2018	2019	2020
■ Major cities	31.7	15.6	17.4	14.1	23.5
■ Regional	37.0	35.6	27.7	25.6	25.3
● Remote	49.2	59.8	36.6	35.5	48.8

Source: National Notifiable Disease Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% (Australian Capital Territory, Northern Territory, Queensland, South Australia, Tasmania and Western Australia) for each of the five years 2016–2020.

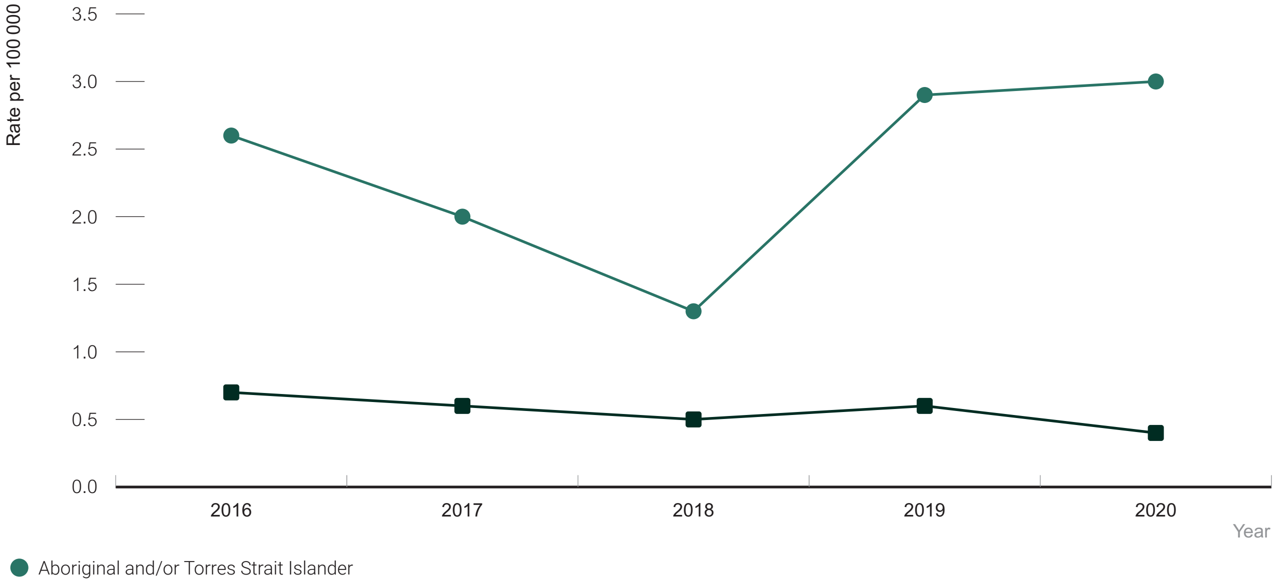
Newly acquired hepatitis B infection

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 2016–2020, information on Aboriginal and/or Torres Strait Islander status was reported for at least 50% of notifications of newly acquired hepatitis B infection in all jurisdictions. Of the 115 notifications of newly acquired hepatitis B infection in 2020, 22 (19%) were in the Aboriginal and/or Torres Strait Islander population and 89 (77%) in the non-Indigenous population, and 4 (3%) notification were missing.

In the five-year period 2016–2020 the age-standardised notification rate of newly acquired hepatitis B infection in the Aboriginal and/or Torres Strait Islander population fluctuated between 1.3 per 100 000 and 3.0 per 100 000 and was stable (between 0.4 per 100 000 and 0.7 per 100 000) in the non-Indigenous population over the same time period (Figure 39). Hepatitis B notification rates in the Aboriginal and/or Torres Strait Islander population are based on extremely small numbers and may reflect localised occurrences rather than national patterns.

Figure 39 **Newly acquired hepatitis B notification rate per 100 000 population, 2016–2020, by Aboriginal and/or Torres Strait Islander status**



	2016	2017	2018	2019	2020
● Aboriginal and/or Torres Strait Islander	2.6	2.0	1.3	2.9	3.0
■ Non-Indigenous	0.7	0.6	0.5	0.6	0.4

Source: National Notifiable Disease Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% (New South Wales, Northern Territory, Queensland, South Australia, Tasmania, Victoria and Western Australia) for each of the five years 2016–2020

Hepatitis B prevalence

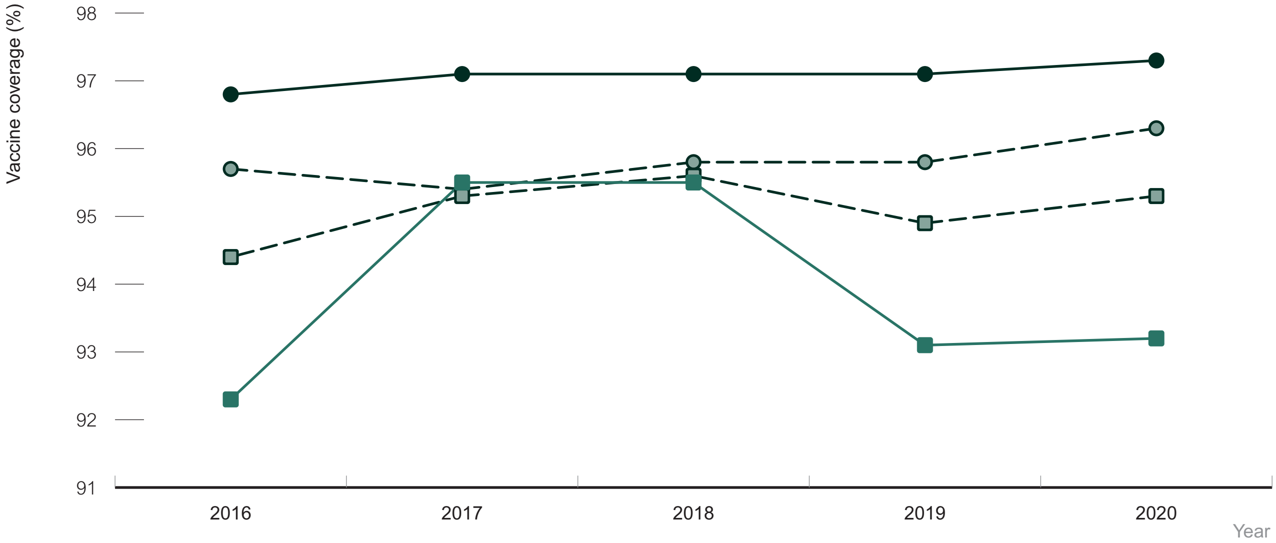
Australia has a concentrated hepatitis B epidemic among two key populations: migrants from high prevalence countries (particularly in Asia and the Pacific) and Aboriginal and/or Torres Strait Islander people. At the end of 2020, there were an estimated 16 137 Aboriginal and/or Torres Strait Islander people living with chronic hepatitis B infection, 7.3% of the total estimated number of people living with chronic hepatitis B (222 559)(1). Hepatitis B prevalence in the Aboriginal and/or Torres Strait Islander population was estimated to be 2.1% in 2020. Of the people living with chronic hepatitis B in Australia, those born in Southeast Asia [viii] (28 480, 12.8% of total estimated number of people living with chronic hepatitis B) and Northeast Asia[ix], together with Aboriginal and/or Torres people, but accounted for half of all people living with chronic hepatitis B in Australia yet represented only 10% of the Australian population.

Vaccination

In the Northern Territory in 1985, hepatitis B screening was introduced for all pregnant women as well as vaccination for infants born to mothers 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 jurisdiction of Australia, hepatitis B vaccination of all infants commenced in 2000 (11).

Over the period 2016–2020, hepatitis B vaccination coverage rates for children were high overall in 2020. For Aboriginal and/or Torres Strait Islander children, coverage was marginally lower than for non-Indigenous children at 12 months of age (at 93% to 95%). The difference was reversed at 24 months of age, with vaccination coverage of 97% in Aboriginal and/or Torres Strait Islander children and 96% in non-Indigenous children (Figure 40).

Figure 40 **Hepatitis B vaccination coverage estimates at 12 and 24 months, 2016–2020, by Aboriginal and/or Torres Strait Islander status**



	2016	2017	2018	2019	2020
■ Aboriginal and/or Torres Strait Islander at 12 months	92.3	95.5	95.5	93.1	93.2
● Aboriginal and/or Torres Strait Islander at 24 months	96.8	97.1	97.1	97.1	97.3
▣ Non-Indigenous at 12 months	94.4	95.3	95.6	94.9	95.3
◉ Non-Indigenous at 24 months	95.7	95.4	95.8	95.8	96.3

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

[viii] Mainland South-East Asia and Maritime South-East Asia(7)
[ix] Chinese Asia (includes Mongolia) and Japan and the Koreas(7)

6 Sexually transmissible infections

Please see p. 9 for summary.

Chlamydia

Chlamydia is a sexually transmissible infection caused by a specific strain of bacteria known as *Chlamydia trachomantis*. Chlamydia was the most frequently notified sexually transmissible infection in Australia in 2020, with a total of 90 516 notifications, of which 7030 (8%) were among the Aboriginal and/or Torres Strait Islander population, 34 131 (38%) were among the non-Indigenous population, and 49 355 (55%) were for people who's Aboriginal and/or Torres Strait Islander status was not reported.

Table 6 **Chlamydia notifications in Aboriginal and/or Torres Strait people by characteristic**

Characteristic	2016	2017	2018	2019	2020
Total cases[a]	7217	7335	7693	7711	7030
Gender					
Male	2562	2639	2786	2673	2481
Female	4655	4696	4907	5038	4549
Median age in years	20	21	21	21	21
Age groups					
0-14	247	221	244	248	184
15-19	2475	2428	2406	2224	2037
20-24	1926	2057	2112	2003	1875
25-29	1026	1003	1094	1175	1066
30-39	745	725	820	920	895
≥40	243	252	306	348	343

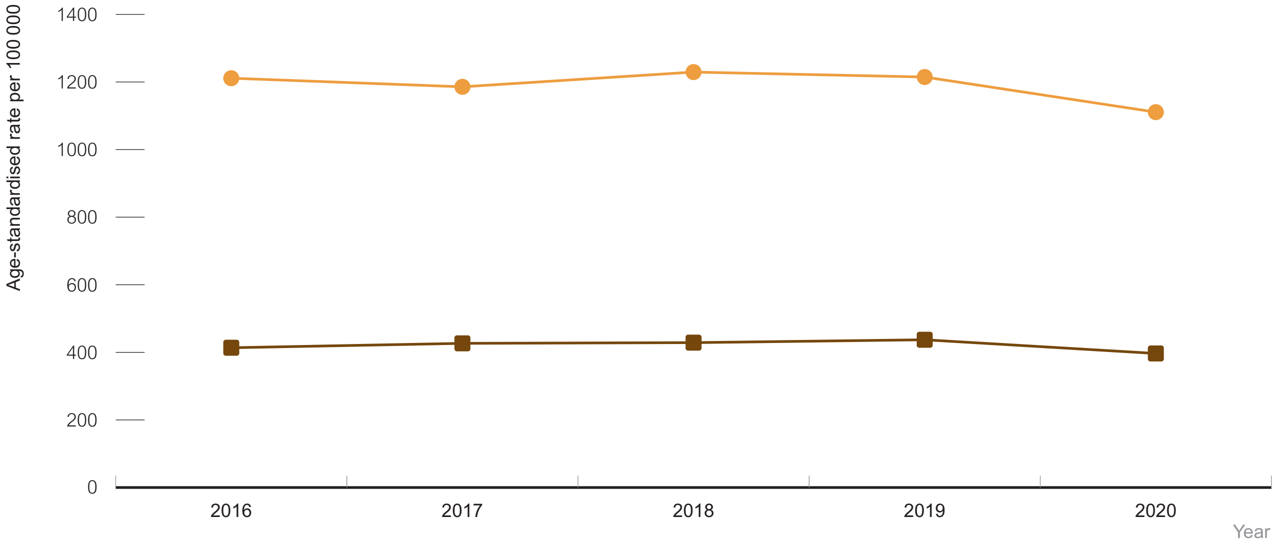
a Total cases data includes all jurisdictions, regardless of Aboriginal and/or Torres Strait Islander status reporting completeness.

Source National Notifiable Diseases Surveillance System

Notification rates are based on data from five jurisdictions (Australian Capital Territory, Northern Territory, Queensland, South Australia, and Western Australia), where Aboriginal and/or Torres Strait Islander status was at least 50% complete for chlamydia notifications for each of the five years (2016–2020). Incomplete reporting of Aboriginal and/or Torres Strait Islander status can result in a misrepresentation of the true extent of the notifications in the Aboriginal and/or Torres Strait Islander population and may not reflect national trends.

The chlamydia notification rate for the Aboriginal and/or Torres Strait Islander population in 2020 of 1110.8 per 100 000 population was nearly three times that of the non-Indigenous population at 396.7 per 100 000 population (Figure 41). The decrease in the chlamydia notification rate in the Aboriginal and/or Torres Strait Islander population and non-Indigenous population between 2019 and 2020 may be attributed to changes in testing patterns due to impact of COVID-19 and should be interpreted with caution.

Figure 41 Chlamydia notification rate per 100 00 population, 2016–2020, by Aboriginal and/or Torres Strait Islander status

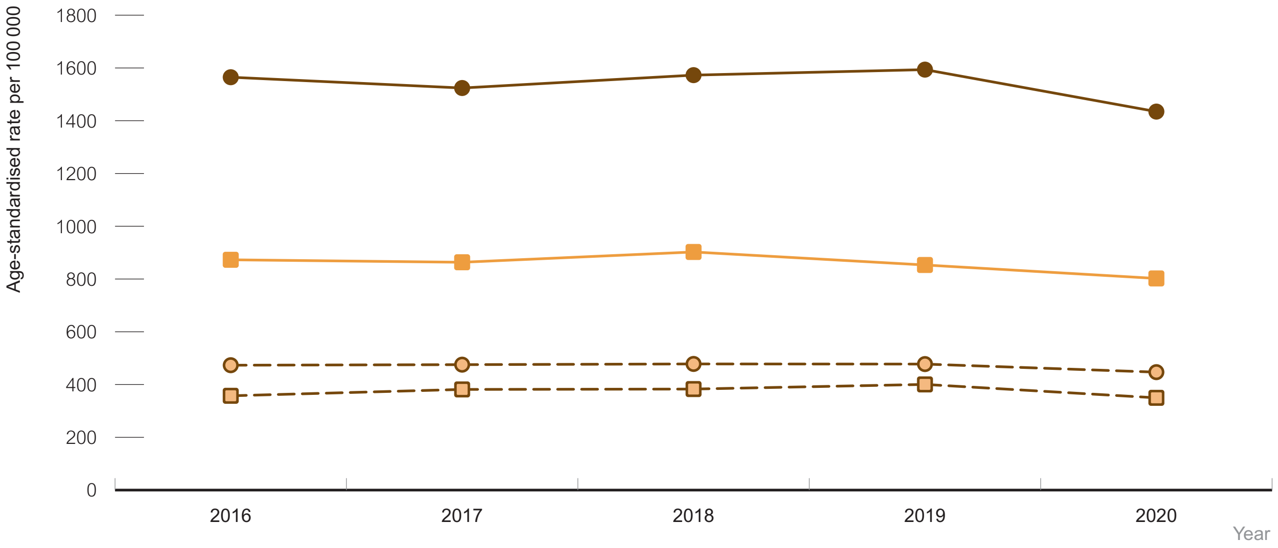


■ Non-Indigenous	413.6	426.6	428.7	437.2	396.7
● Aboriginal and/or Torres Strait Islander	1211.2	1185.7	1229.3	1214.7	1110.8

Source: National Notifiable Diseases Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% (Australian Capital Territory, Northern Territory, Queensland, South Australia and Western Australia) for each of the five years 2016–2020.

Between 2016 and 2019 the chlamydia notification rate for the Aboriginal and/or Torres Strait Islander population was highest among Aboriginal and/or Torres Strait Islander females, at 1564.9 per 100 000 in 2016 and 1593.7 per 100 000 in 2019 and declined to 1434.6 per 100 000 in 2020. In 2020, the chlamydia notification rate was three times as high in Aboriginal and/or Torres Strait Islander females as in non-Indigenous females (1434.6 per 100 000 vs 447 per 100 000) and almost twice as high in Aboriginal and/or Torres Strait Islander males as in non-Indigenous males (802.2 per 100 000 vs 349.7 per 100 000) (Figure 42).

Figure 42 **Figure 42 Chlamydia notification rates per 100 000 population, 2016–2020, by Aboriginal and/or Torres Strait Islander status and gender**

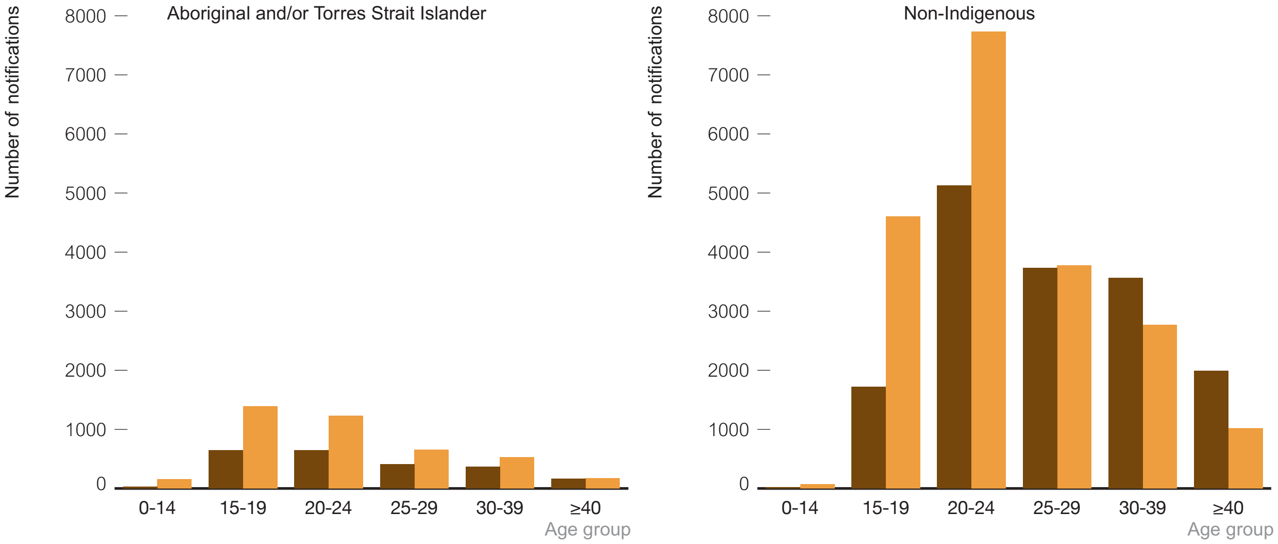


■ Aboriginal and/or Torres Strait Islander males	872.9	863.5	902.5	853.2	802.2
● Aboriginal and/or Torres Strait Islander females	1564.9	1524	1572.8	1593.7	1434.6
□ Non-Indigenous males	357.4	381.5	382.9	400.5	349.7
○ Non-Indigenous females	473.3	475.4	478.1	477.6	447

Source: National Notifiable Diseases Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% (Australian Capital Territory, Northern Territory, Queensland, South Australia, and Western Australia) for each of the five years 2016–2020.

Chlamydia is notified predominantly among young people. In 2020, 78% of chlamydia notifications were in the 15–29 age group in the Aboriginal and/or Torres Strait Islander population, as were 74% of notifications in the non-Indigenous population. In 2020, of the chlamydia notifications in the Aboriginal and/or Torres Strait Islander population, 2270 were among males and 4130 among females, providing a male-to-female ratio of 0.5:1 compared to 0.8:1 in the non-Indigenous population (Figure 43).

Figure 43 Number of notifications of chlamydia in 2020, by Aboriginal and/or Torres Strait Islander status, gender and age group

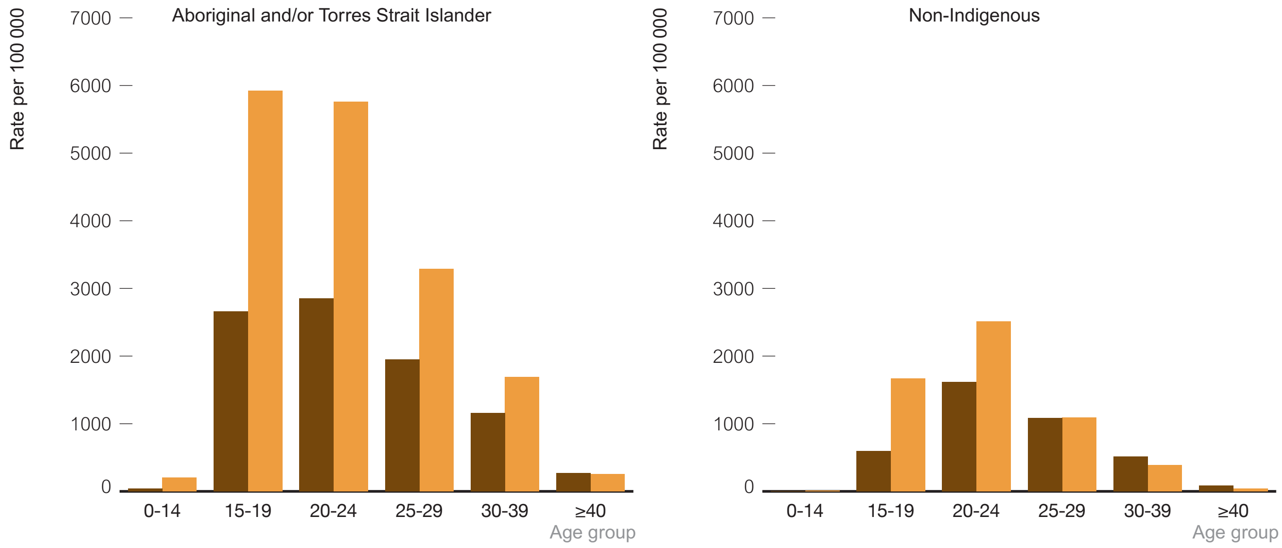


	Aboriginal and/or Torres Strait Islander 0-14	15-19	20-24	25-29	30-39	≥40	Non-Indigenous 0-14	15-19	20-24	25-29	30-39	≥40
🟫 Males	30	650	644	413	367	166	17	1721	5127	3732	3562	1989
🟧 Females	154	1387	1231	653	528	177	73	4607	7728	3771	2771	1017

Source: National Notifiable Diseases Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% (Australian Capital Territory, Northern Territory, Queensland, South Australia and Western Australia) for each of the five years 2016–2020.

The chlamydia notification rate for males aged 15 to 19 years was five times as high among Aboriginal and/or Torres Strait Islander males than among non-Indigenous males (2656.0 per 100 000 vs 592.2 per 100 000), and a little less than twice as high among those aged 25 to 29 years (1951.4 per 100 000 vs 1087.0 per 100 000) (Figure 44). The chlamydia notification rate for females aged 15 to 19 years was four times as high among Aboriginal and/or Torres Strait Islander females than among non-Indigenous females (5919.5 per 100 000 vs 1669.3 per 100 000), and three times as high among those aged 25 to 29 years (3291.8 per 100 000 vs 1039.9 per 100 000) (Figure 44). Notification rates were highest in Aboriginal and/or Torres Strait Islander females, particularly among those aged 15 to 19 years (5919.5 per 100 000 population in 2020) and in 20 to 24 years (5755.6 per 100 000), which may reflect differences in health-seeking behaviour.

Figure 44 **Chlamydia notification rate per 100 000 population, 2020, by Aboriginal and/or Torres Strait Islander status, gender and age group**

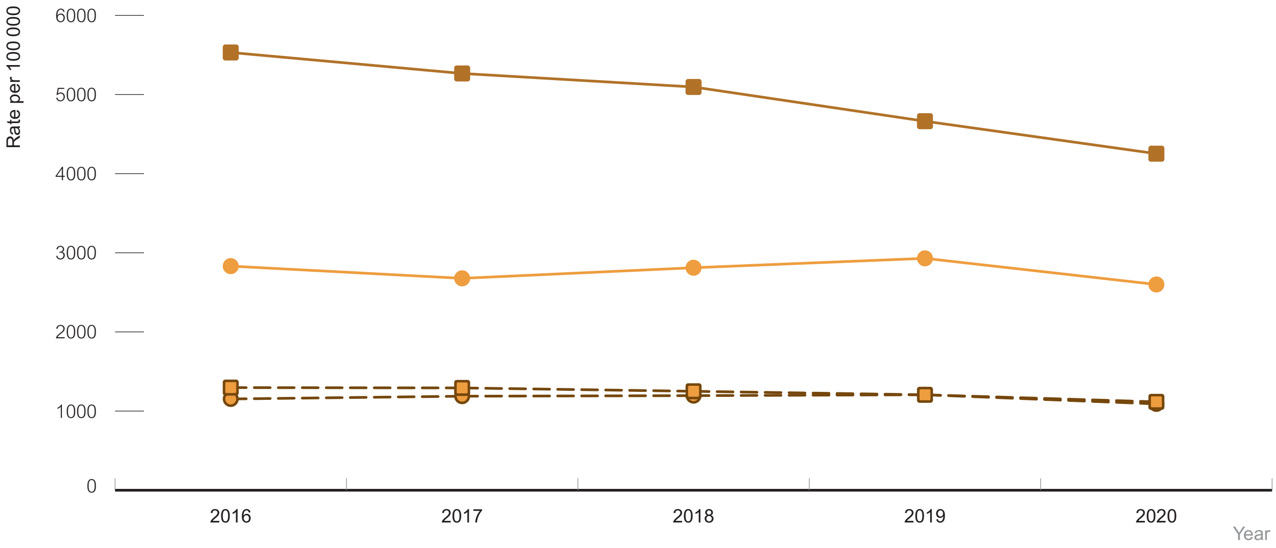


	Aboriginal and/or Torres Strait Islander						Non-Indigenous					
	0-14	15-19	20-24	25-29	30-39	≥40	0-14	15-19	20-24	25-29	30-39	≥40
■ Males	37.5	2656.0	2852.0	1951.4	1156.7	268.8	1.8	592.2	1618.1	1087	514.8	87.0
■ Females	201.2	5919.5	5755.6	3291.8	1692.9	256.6	8.3	1669.3	2511.7	1093.9	388.0	41.9

Source: National Notifiable Diseases Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% (Australian Capital Territory, Northern Territory, Queensland, South Australia and Western Australia) for each of the five years 2016–2020.

The chlamydia notification rate among Aboriginal and/or Torres Strait Islander people aged 15 to 19 years declined by 16% from 5531.0 per 100 000 in 2016 to 4662.7 per 100 000 in 2019 and then declined to 4252.3 per 100 000 in 2020. Among Aboriginal and/or Torres Strait Islander people aged 25 to 29 years, notification rates fluctuated in the same period and were 2599.9 per 100 000 in 2020. (Figure 45). The rates in the non-Indigenous population aged 15 to19 years have declined by 14% from 1296.8 per 100 000 in 2016 to 1116.8 per 100 000 in 2020.

Figure 45 Chlamydia notification rate per 100 000 population in Aboriginal and/or Torres Strait Islander people, 2016–2020, by age group

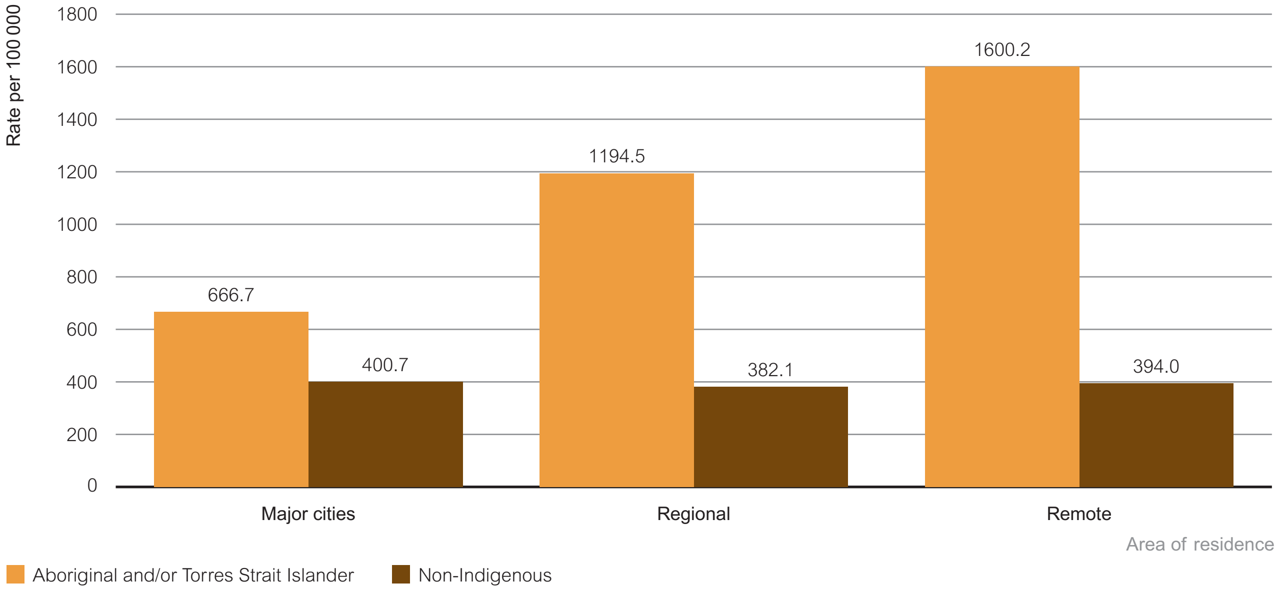


	2016	2017	2018	2019	2020
■ Aboriginal and/or Torres Strait Islander people aged 15-19	5531	5265.8	5095.1	4662.7	4252.3
● Aboriginal and/or Torres Strait Islander aged 25-29	2831.7	2677.3	2811.3	2929.9	2599.9
□ Non-Indigenous people aged 15-19	1296.8	1292.7	1250.3	1205.9	1116.8
○ Non-Indigenous people aged 25-29	1153.1	1188.1	1195.1	1206.5	1090.7

Source: National Notifiable Diseases Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% (Australian Capital Territory, Northern Territory, Queensland, South Australia and Western Australia) for each of the five years 2016–2020

In 2020, the chlamydia notification rate in the Aboriginal and/or Torres Strait Islander population compared to the non-Indigenous population was almost twice as high in major cities, three times as high in regional centres, and four times as high in remote areas (Figure 46).

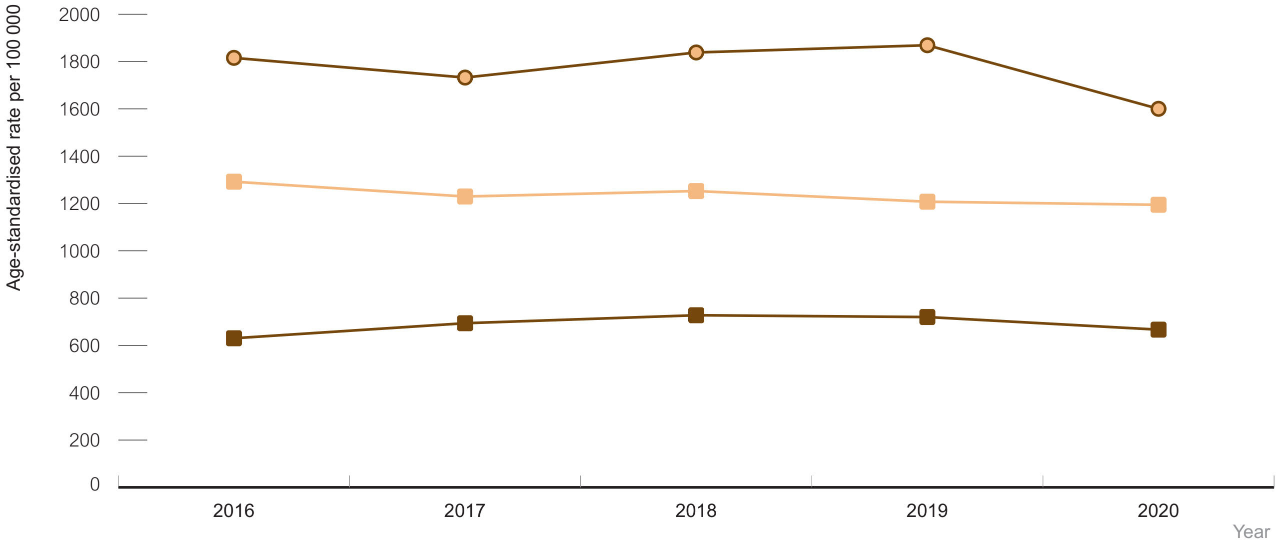
Figure 46 **Chlamydia notification rate per 100 000 population, 2020, by Aboriginal and/or Torres Strait Islander status and area of residence**



Source: National Notifiable Diseases Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% (Australian Capital Territory, Northern Territory, Queensland, South Australia and Western Australia) for each of the five years 2016–2020.

Between 2016 and 2020, chlamydia notification rates in Aboriginal and/or Torres Strait Islander people living in regional areas decreased by 8 % from 1292.1 per 100 000 to 1194.5 per 100 000 people. Rates among Aboriginal and/or Torres Strait Islander people residing in major cities increased by 6% (630.3 per 100 000 in 2016 to 666.7 per 100 000 in 2020), with a 7% decrease since 2019 (720.0 per 100 000 to 666.7 per 100 000) (Figure 47).

Figure 47 Chlamydia notification rate in the Aboriginal and/or Torres Strait Islander population per 100 000 population, 2016–2020, by area of residence



	2016	2017	2018	2019	2020
■ Major cities	630.3	693.9	727.6	720.0	666.7
■ Regional	1292.1	1229.5	1252.6	1207.5	1194.5
○ Remote	1815.6	1732.3	1838.4	1869.0	1600.2

Source: National Notifiable Diseases Surveillance System; includes jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% (Australian Capital Territory, Northern Territory, Queensland, South Australia and Western Australia) for each of the five years 2016–2020.

Gonorrhoea

Gonorrhoea is a sexually transmissible infection caused by the bacterium *Neisseria gonorrhoea.* There were 29 497 gonorrhoea notifications in Australia in 2020, an increase of 19% from 23 856 notifications in 2016. Of these, 4237 (14%) were among Aboriginal and/or Torres Strait Islander people, 16 034 (54%) were in the non-Indigenous population, and 9226 (31%) were in people who's Aboriginal and/or Torres Strait Islander status was not reported.

The ratio of male to female notifications in the Aboriginal and/or Torres Strait Islander population in 2020 was 0.8:1 compared with 2.8:1 in the non-Indigenous population (Data not shown).

Table 7 Gonorrhoea notifications in Aboriginal and/or Torres Strait Islanders people by characteristic

	Year of gonorrhoea notification				
	2016	2017	2018	2019	2020
Characteristic					
Total cases[a]	3810	4155	4667	4051	4237
Gender					
Male	1772	1930	2120	1847	1942
Female	2037	2224	2544	2202	2295
Age group					
0-14	219	162	164	148	124
15-19	1202	1237	1204	1005	1044
20-24	865	1061	1120	994	978
25-29	614	716	866	771	833
30-39	623	711	940	811	904
≥40	287	268	373	322	354

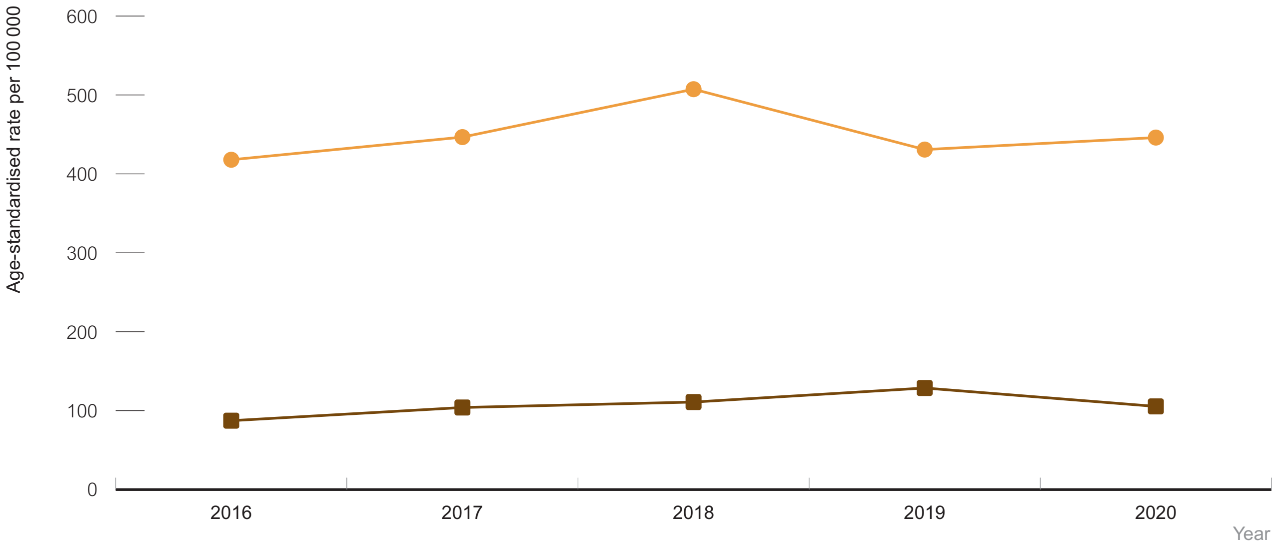
a Total cases data includes all jurisdictions, regardless of the Aboriginal and/or Torres Strait Islander status completeness

Source: National Notifiable Diseases Surveillance System

In the period 2016–2020, Aboriginal and/or Torres Strait Islander status was at least 50% complete in each year in the Australian Capital Territory, Northern Territory, Queensland, South Australia, Tasmania, Victoria and Western Australia, and New South Wales. Therefore, this section includes notification data from all jurisdictions.

The gonorrhoea notification rate for the Aboriginal and/or Torres Strait Islander population in 2020 was more than four times that of the non-Indigenous population (446.0 per 100 000 population and 105.4 per 100 000 population, respectively). Since 2016, the gonorrhoea notification rate in the Aboriginal and/or Torres Strait Islander population has increased by 3% in 2019 (from 417.9 per 100 000 to 430.8 per 100 000 population) and then declined by 3.5% in 2020 (446.0 per 100 000 in 2020)(Figure 48).

Figure 48 Gonorrhoea notification rate per 100 000 population, 2016–2020, by Aboriginal and/or Torres Strait Islander status

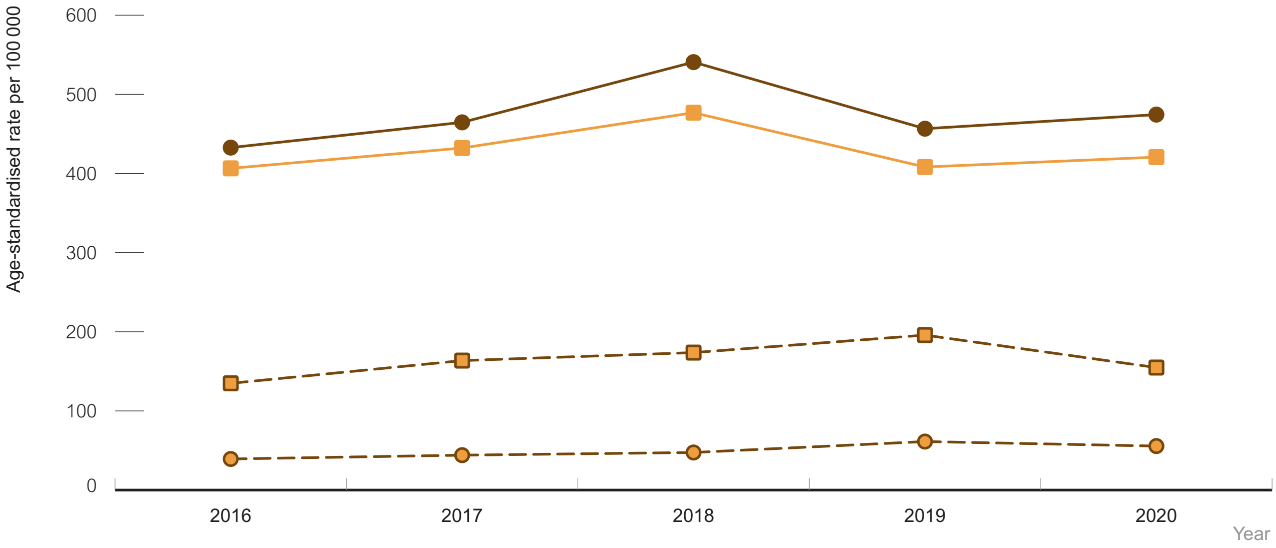


	2016	2017	2018	2019	2020
■ Non-Indigenous	87.3	104.0	110.9	128.7	105.4
● Aboriginal and/or Torres Strait Islander	417.9	446.6	507.3	430.8	446.0

Source: National Notifiable Diseases Surveillance System; includes all eight jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% for each of the five years 2016–2020.

The gonorrhoea notification rate for Aboriginal and/or Torres Strait Islander females in 2020 was more than eight times that of non-Indigenous females (474.4 per 100 000 vs 55.6 per 100 000) (Figure 49). The gonorrhoea notification rate for Aboriginal and/or Torres Strait Islander males in 2020 was more than twice that of non-Indigenous males (420.7 per 100 000 vs 154.8 per 100 000) (Figure 49). The gonorrhoea notification rates in both males and females have increased from 2019 to 2020 (from 408.2 per 100 000 in 2019 to 420.7 per 100 000 among males and from 456.6 per 100 000 in 2019 to 474.4 per 100 000 in 2020).

Figure 49 Gonorrhoea notification rate per 100 000 population, 2016–2020, by Aboriginal and/or Torres Strait Islander status and gender

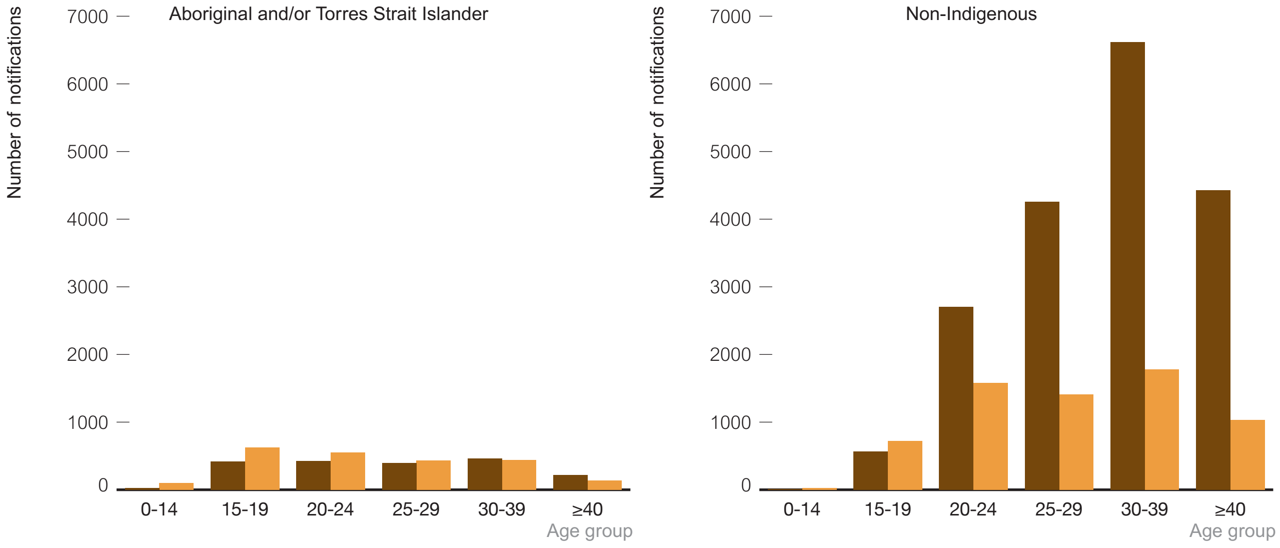


	2016	2017	2018	2019	2020
■ Aboriginal and/or Torres Strait Islander males	406.5	432.2	476.8	408.2	420.7
● Aboriginal and/or Torres Strait Islander females	432.7	464.6	540.7	456.6	474.4
□ Non-Indigenous males	134.9	163.6	173.7	195.8	154.8
○ Non-Indigenous females	39.3	44.1	47.5	61.3	55.6

Source: National Notifiable Diseases Surveillance System; includes all eight jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% for each of the five years 2016–2020.

Differences in age at notification exist between the Aboriginal and/or Torres Strait Islander population and the non-Indigenous population. In 2020, 25% of gonorrhoea notifications among Aboriginal and/or Torres Strait Islander people were in people aged 15 to 19 years, compared with 5% in the non-Indigenous population (Figure 50).

Figure 50 Number of gonorrhoea notifications, 2020, by Aboriginal and/or Torres Strait Islander status, gender and age group



Aboriginal and/or Torres Strait Islander

	0-14	15-19	20-24	25-29	30-39	≥40
Males	26	418	424	398	461	215
Females	98	626	554	435	443	139

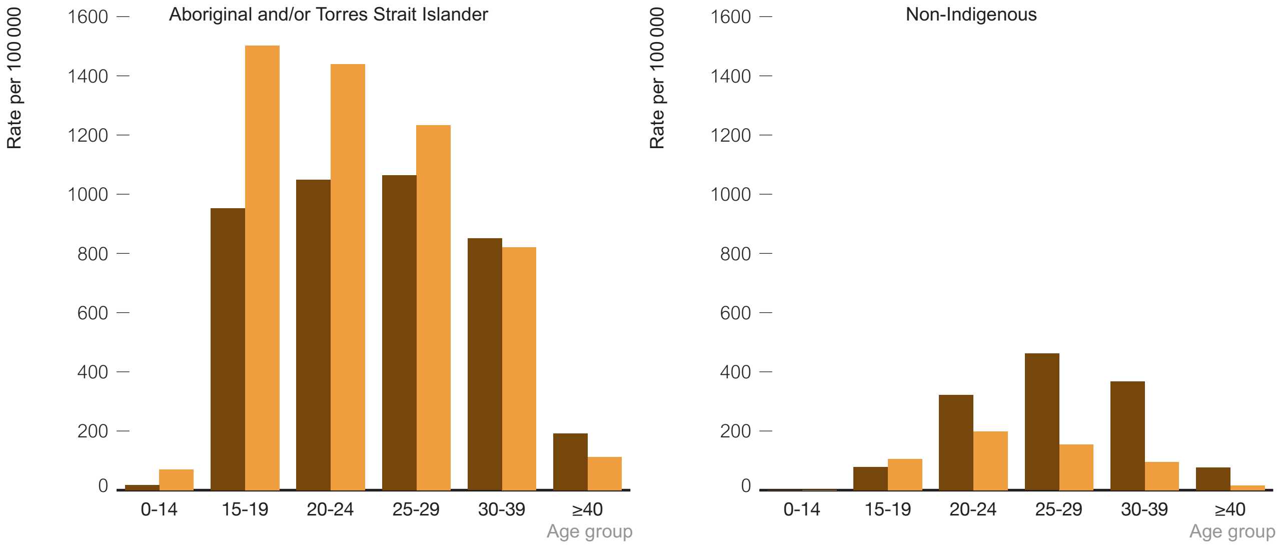
Non-Indigenous

	0-14	15-19	20-24	25-29	30-39	≥40
Males	13	567	2701	4261	6614	4429
Females	23	722	1577	1407	1776	1029

Source: National Notifiable Diseases Surveillance System; includes all eight jurisdictions with Aboriginal and/or Torres Strait Islander status completeness≥50% for each of the five years 2016–2020.

In 2020, among Aboriginal and/or Torres Strait Islander people, there were 1942 gonorrhoea notifications in males and 2295 among females, giving a male-to-female ratio of 0.8:1 (Table 7). This suggests that transmission is predominantly through heterosexual contact. The male-to-female ratio among the non-Indigenous population was 2.8:1, suggests that transmission occurred predominantly through sex between males. Notification rates in the Aboriginal and/or Torres Strait Islander population were significantly higher than in the non-Indigenous population across all age groups for both males and females (Figure 51).

Figure 51 Gonorrhoea notification rate per 100 000 population, 2020, by Aboriginal and/or Torres Strait Islander status, gender and age group



Aboriginal and/or Torres Strait Islander

	0-14	15-19	20-24	25-29	30-39	≥40
Males	17.9	953.2	1049.9	1064.7	850.5	192.4
Females	70.8	1502.7	1439.6	1233.0	820.2	112.7

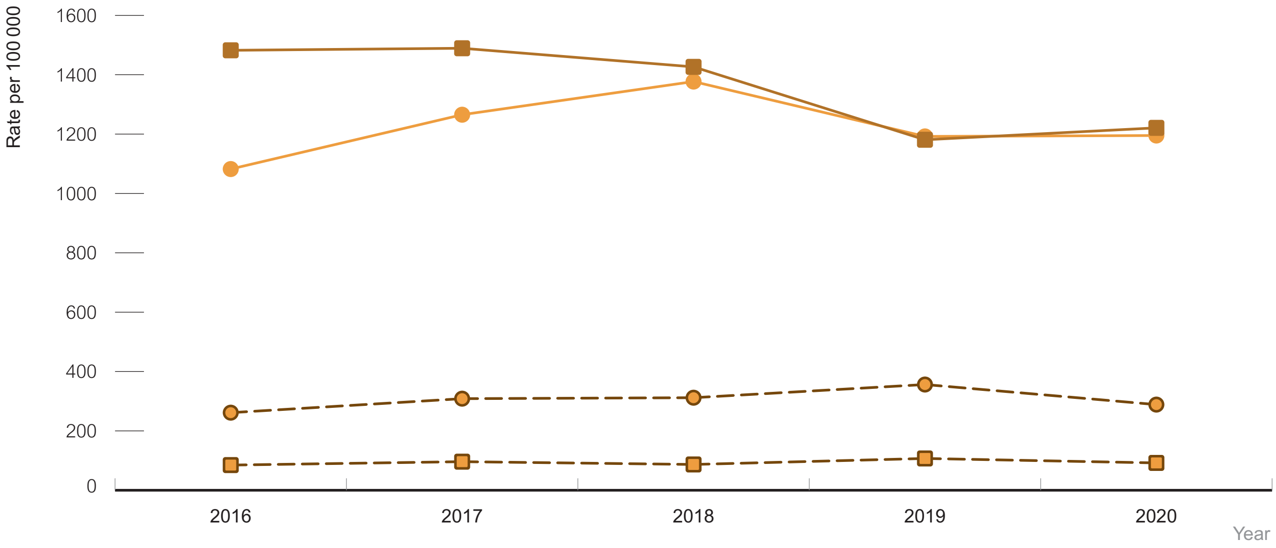
Non-Indigenous

	0-14	15-19	20-24	25-29	30-39	≥40
Males	0.6	78.5	322.0	461.6	367.0	77.7
Females	1.1	105.8	198.8	154.6	96.2	16.8

Source: National Notifiable Diseases Surveillance System; includes all eight jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% for each of the five years 2016–2020.

The gonorrhoea notification rate among Aboriginal and/or Torres Strait Islander people aged 15 to 19 years declined by 20% from 1482.3 per 100 000 in 2016 to 1180.9 per 100 00 in 2019 and increased to 1221.0 per 100 000 in 2020. Among those aged 20 to 29 years, the gonorrhoea notification rate fluctuated between 1082.2 per 100 000 (in 2016) and 1377.0 per 100 000 (in 2018) and was 1195.2 per 100 000 in 2020 (Figure 52). Among the non-Indigenous population, of the gonorrhoea notification rate increased from 84.8 per 100 000 in 2016 to 107.1 per 100 000 in 2019 and declined to 92.1 per 100 000 in 2020 among 15–19-year-old population. The gonorrhoea rate increased from 261.4 per 100 000 in 2016 to 356.2 per 100 000 in 2019 and then declined to 288.6 per 100 000 in 2020 among the 20–29-year-old nonindigenous population. (Figure 52)

Figure 52 Gonorrhoea notification rate per 100 000 population, 2016–2020, by Aboriginal and/or Torres Strait Islander status age group



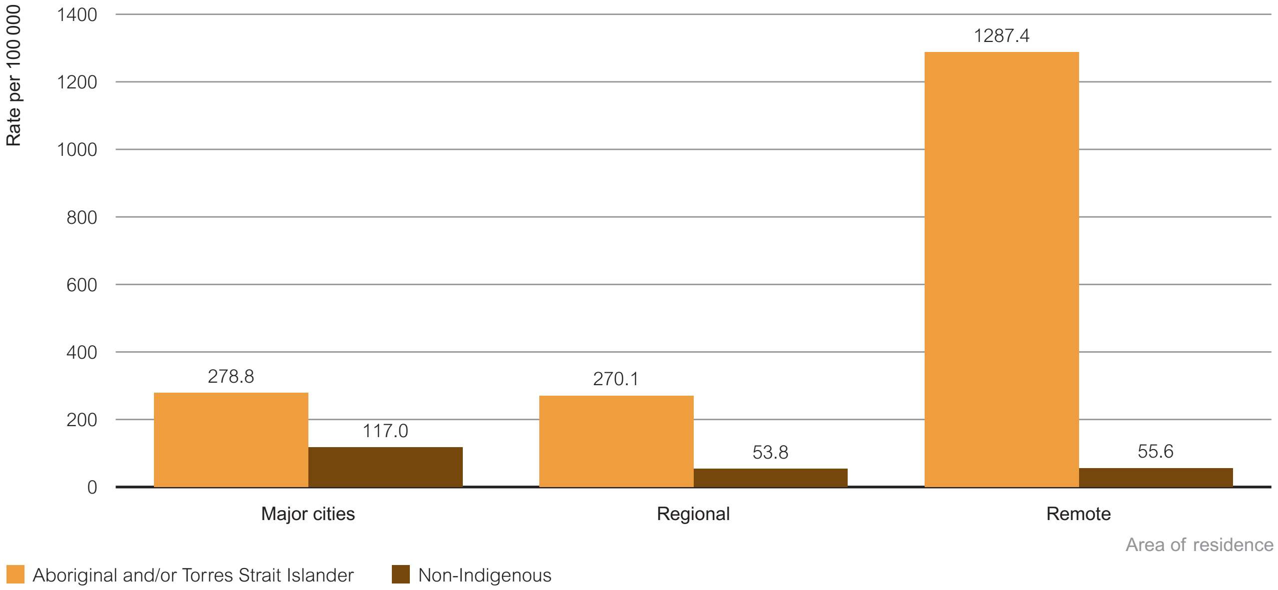
	2016	2017	2018	2019	2020
■ Aboriginal and/or Torres Strait Islander people aged 15-19	1482.3	1489.2	1426.5	1180.9	1221.0
● Aboriginal and/or Torres Strait Islander people aged 20-29	1082.2	1265.3	1377.0	1192.2	1195.2
□ Non-Indigenous people aged 15-19	84.8	96.3	86.9	107.1	92.1
○ Non-Indigenous people aged 20-29	261.4	308.6	311.8	356.2	288.6

Source: National Notifiable Diseases Surveillance System; includes all eight jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% for each of the five years 2016–2020.

In 2020, the gonorrhoea notification rate in the Aboriginal and/or Torres Strait Islander population resident in major cities, was more than twice as high as compared to the non-Indigenous population (278.8 per 100 00 vs 117.0 per 100 000), almost five times as high in regional areas (270.1 per 100 000 vs 53.8 per 100 000) and 23 times as high in remote areas (1287.0 per 100 000 vs 55.6 per 100 000) (Figure 53).

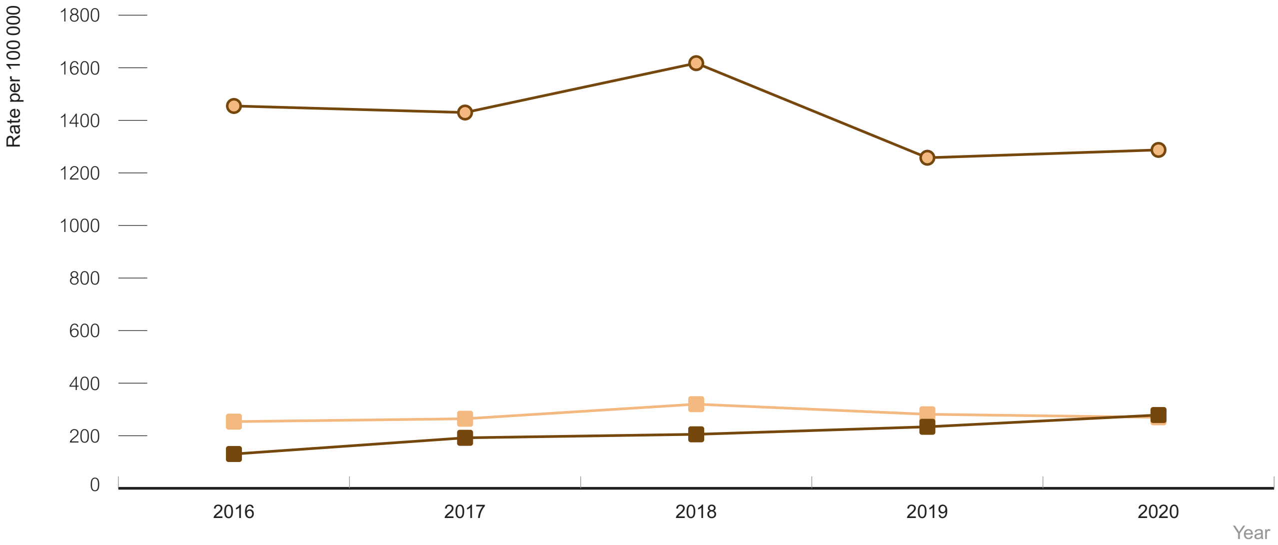
Since 2016, there were declines in the gonorrhoea notification rate in the Aboriginal and/or Torres Strait Islander population in remote areas (from 1454.6 per 100 000 in 2016 to 1287.4 per 100 000 in 2020), with increase in rates in major cities (from 130.5 per 100 000 in 2016 to 278.8 per 100 000 in 2020) and regional areas (from 253.7 per 100 000 in 2016 to 270.1 per 100 000 in 2020) (Figure 54).

Figure 53 Gonorrhoea notification rate per 100 000 population, 2020, by Aboriginal and/or Torres Strait Islander status and area of residence



Source: National Notifiable Diseases Surveillance System; includes all eight jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% for each of the five years 2016–2020.

Figure 54 Gonorrhoea notification rate in the Aboriginal and/or Torres Strait Islander population per 100 000 population, 2016–2020, by area of residence



	2016	2017	2018	2019	2020
■ Major cities	130.5	192.1	205.4	234.0	278.8
■ Regional	253.7	264.6	320.1	281.6	270.1
○ Remote	1454.6	1429.7	1617.5	1257.6	1287.4

Source: National Notifiable Diseases Surveillance System; includes all eight jurisdictions with Aboriginal and/or Torres Strait Islander status completeness ≥50% for each of the five years 2016–2020.

Syphilis

Infectious syphilis

Syphilis is a sexually transmitted 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 (12). 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 in 2015, 2016 and 2020. Since 2011, there has been a resurgence of infectious syphilis notification in regional and remote communities of the northern and central Australia.

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/or Torres Strait Islander status in every year between 2011–2020 (completeness 80%). For this reason, infectious syphilis data are presented for 10 years.

Nationally, the number of infectious syphilis notifications has almost quadrupled since 2011 from 1332 notifications in 2011 to 5248 notifications in 2020. In 2020, 4012 (76%) were among the non-Indigenous population, 883 (17%) notifications were among the Aboriginal and/or Torres Strait Islander population and 353 (7%) cases did not have Aboriginal and Torres Strait Islander status reported (Table 8). In 2020, 23% of infectious syphilis notifications among the Aboriginal and/or Torres Strait Islander population were in people aged 15–19, compared with 2% among the non-Indigenous population (Table 8).

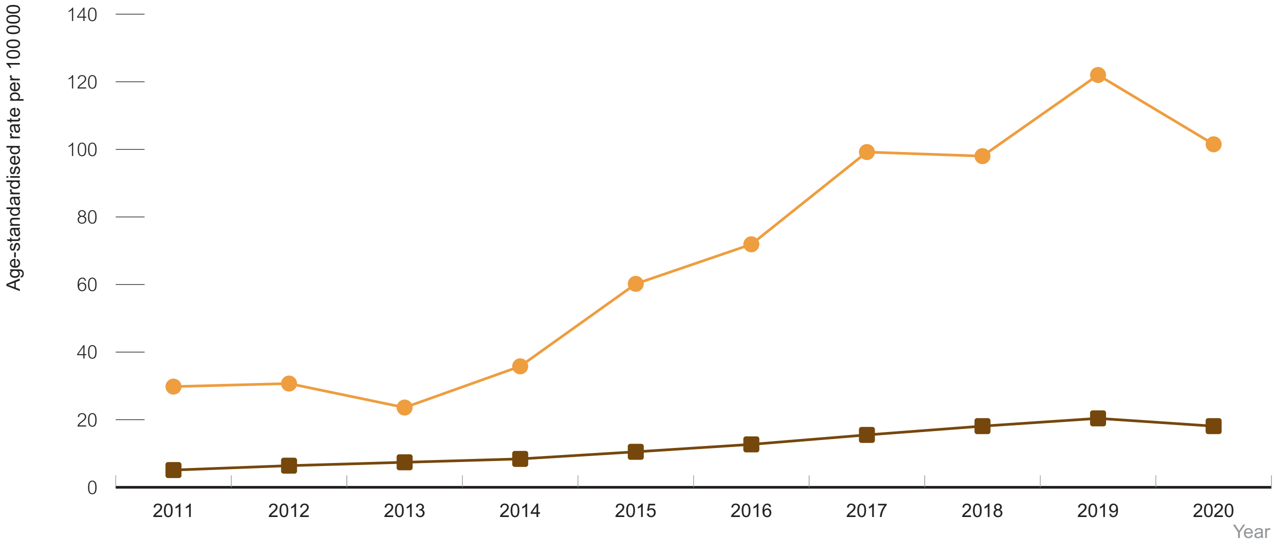
Table 8 Infectious syphilis notifications in Aboriginal and/or Torres Strait Islanders people by characteristic

	Year of infectious syphilis notification									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Characteristic										
Total cases[a]	227	218	181	276	484	566	796	807	1033	883
Gender										
Male	118	119	104	153	271	307	403	417	508	434
Female	109	99	77	123	213	259	393	390	524	449
Age group										
0-14	11	5	8	11	17	17	23	7	29	16
15-19	72	49	42	73	112	113	149	137	215	201
20-24	39	50	44	57	122	94	152	173	184	149
25-29	29	23	13	38	70	117	131	149	169	136
30-39	36	38	39	46	90	121	192	184	240	213
≥40	40	53	35	51	73	104	149	157	196	168
Congenital syphilis cases	3	0	3	0	1	1	5	4	1	8

a includes data from all jurisdictions due to high reporting of Aboriginal and/or Torres Strait Islander status in each of the ten years.
Source: National Notifiable Diseases Surveillance System.

In 2020, the age-standardised infectious syphilis notification rate in the Aboriginal and/or Torres Strait Islander population was almost six times as high as that of the non-Indigenous population (101.5 per 100 000 vs 18.1 per 100 000 population). Among the Aboriginal and/or Torres Strait Islander population, the infectious syphilis notification rate for has increased by 241% since 2011 (29.8 per 100 000 in 2011) (Figure 55).

Figure 55 Infectious syphilis notification rate per 100 000 population, 2011–2020, by Aboriginal and/or Torres Strait Islander status

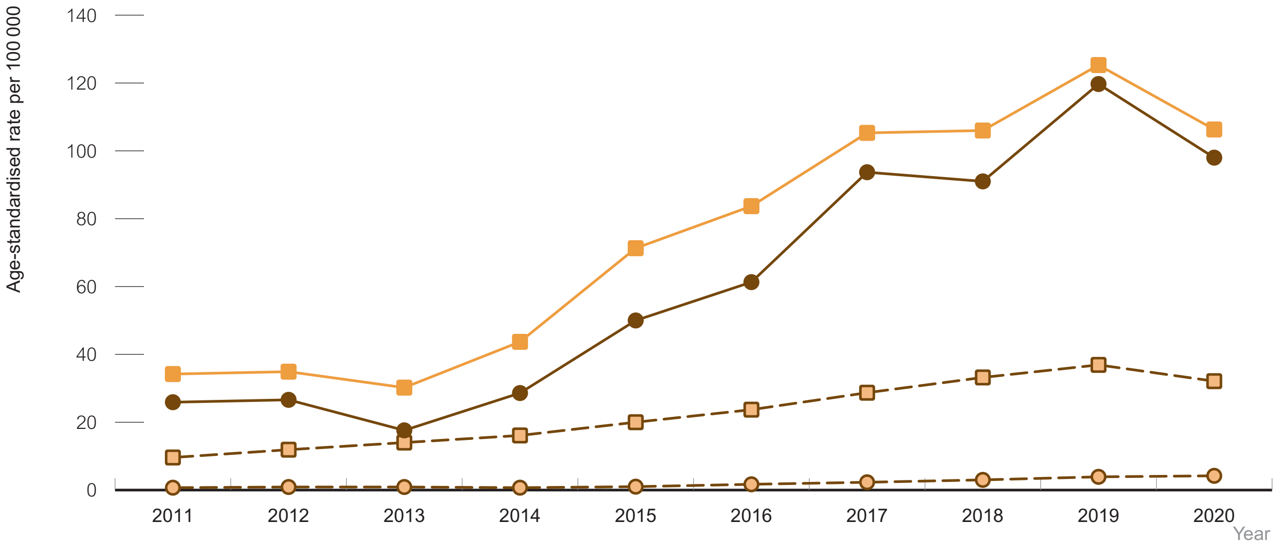


● Aboriginal and/or Torres Strait Islander	29.8	30.7	23.6	35.8	60.2	71.9	99.2	98.0	122.0	101.5
■ Non-Indigenous	5.1	6.4	7.4	8.4	10.5	12.7	15.5	18.1	20.4	18.1

Source: National Notifiable Diseases Surveillance System; includes all jurisdictions as Aboriginal and/or Torres Strait Islander status was ≥80% in each of the 10 years presented.

The infectious syphilis notification rate in 2020 was more than three times greater in Aboriginal and/or Torres Strait Islander males (106.2 per 100 000 vs 32.1 per 100 000) and more than 23 times greater in Aboriginal and/or Torres Strait Islander females (98.0 per 100 000 vs 4.2 per 100 000) as in their non-Indigenous counterparts (Figure 56).

Figure 56 Infectious syphilis notification rate per 100 000 population, 2011–2020, by Aboriginal and/or Torres Strait Islander status and gender

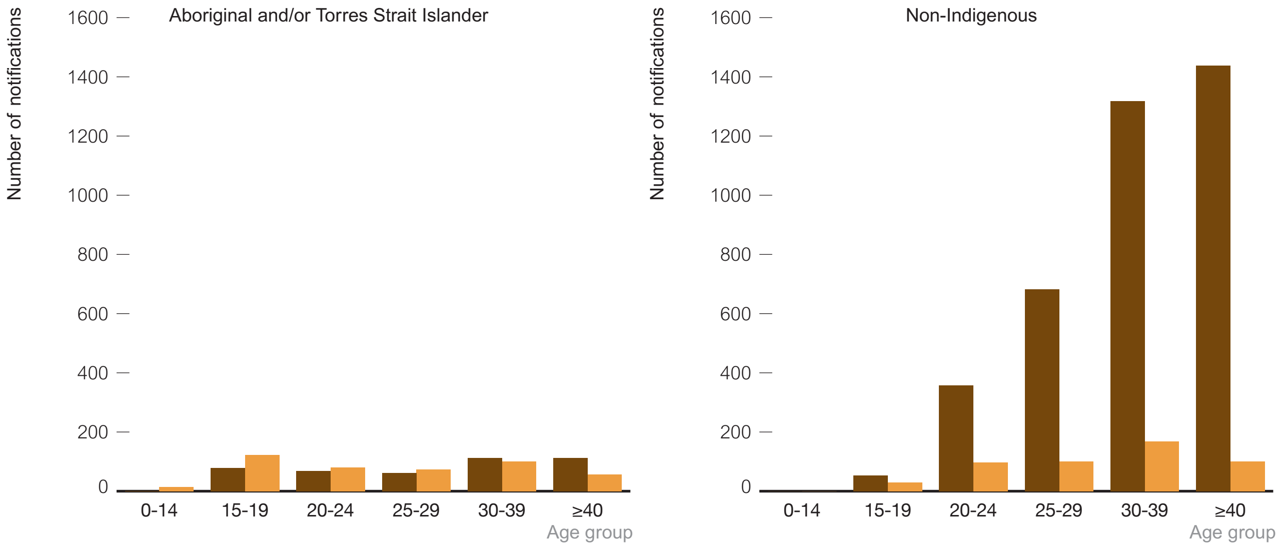


■ Aboriginal and/or Torres Strait Islander males	34.2	34.9	30.2	43.7	71.3	83.7	105.3	106.0	125.3	106.3
● Aboriginal and/or Torres Strait Islander females	25.9	26.6	17.6	28.6	50.0	61.3	93.7	91.0	119.7	98.0
☐ Non-Indigenous males	9.6	11.9	14.0	16.1	20.0	23.7	28.7	33.2	36.9	32.1
○ Non-Indigenous females	0.7	0.9	0.9	0.7	1.0	1.7	2.3	3.0	3.9	4.2

Source: National Notifiable Diseases Surveillance System; includes all jurisdictions as Aboriginal and/or Torres Strait Islander status was ≥80% in each of the 10 years presented.

In 2020, around half of infectious syphilis notifications in the Aboriginal and/or Torres Strait Islander population were among males, compared with 88% in the non-Indigenous male population (Figure 57). Male-to-female ratios close to one indicate transmission of infectious syphilis among the Aboriginal and/or Torres Strait Islander population was predominantly through heterosexual contact and through male-to-male sex among the non-Indigenous population. Although notification rates have increased among non-Indigenous females, rates are relatively low in comparison when compared with Aboriginal and/or Torres Strait Islander females.

Figure 57 **Number of infectious syphilis notifications, 2020, by Aboriginal and/or Torres Strait Islander status, gender and age group**

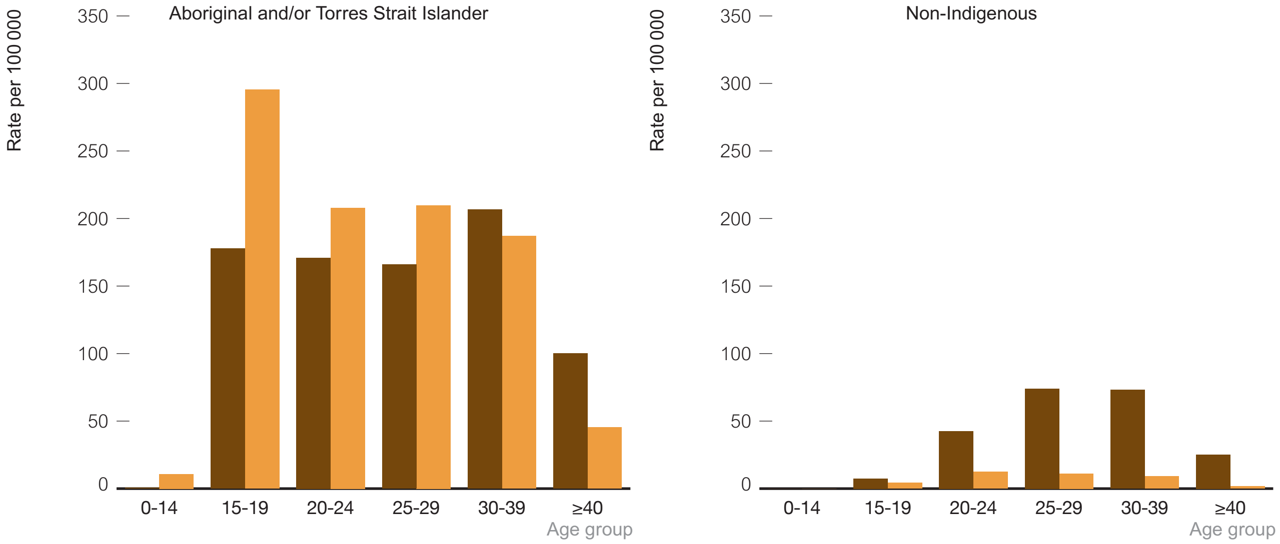


	Aboriginal and/or Torres Strait Islander 0-14	15-19	20-24	25-29	30-39	≥40	Non-Indigenous 0-14	15-19	20-24	25-29	30-39	≥40
■ Males	1	78	69	62	112	112	0	54	357	683	1318	1438
■ Females	15	123	80	74	101	56	0	29	98	101	168	100

Source: National Notifiable Diseases Surveillance System; includes all jurisdictions as Aboriginal and/or Torres Strait Islander status was ≥80% in each of the 10 years presented.

In 2020, the infectious syphilis notification rate in males was highest in the 30–39 age group for both Aboriginal and/or Torres Strait Islander and non-Indigenous males (206.6 per 100 000 and 73.1 per 100 000 respectively). For Aboriginal and/or Torres Strait Islander females, the infectious syphilis notification rate was highest in the 15–19 age group (295.3 per 100 000); among non-Indigenous females the rate was highest in the 20–24 age group (12.4 per 100 000) (Figure 58).

Figure 58 Infectious syphilis notification rate per 100 000 population, 2020, by Aboriginal and/or Torres Strait Islander status and age group

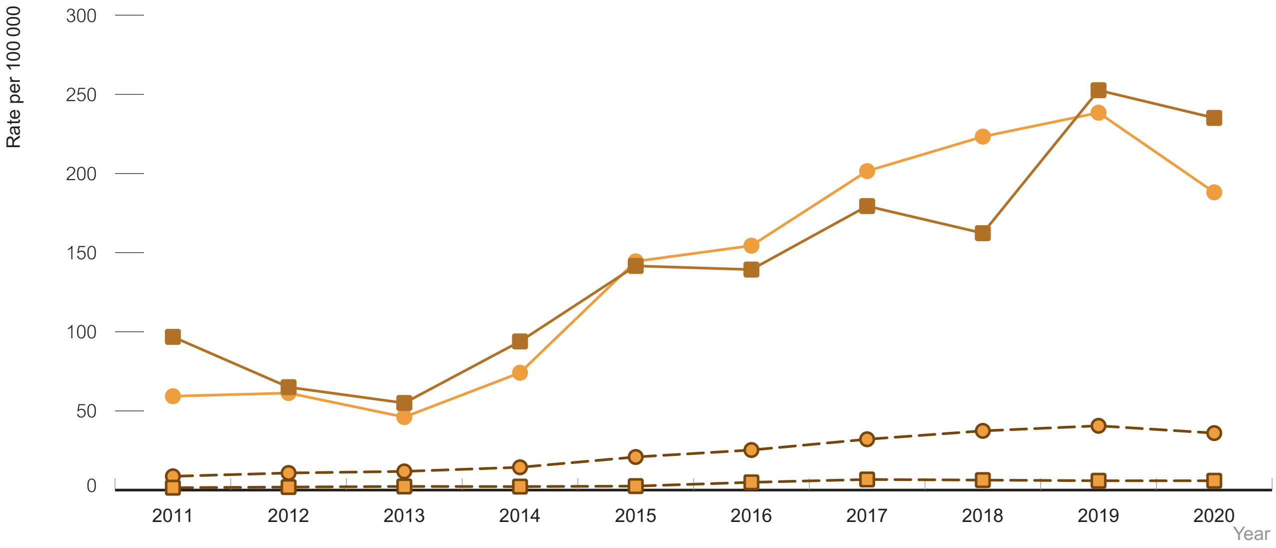


🟫 Males	0.7	177.9	170.9	165.9	206.6	100.2	0.0	7.5	42.6	74.0	73.1	25.2
🟧 Females	10.8	295.3	207.9	209.8	187.0	45.4	0.0	4.3	12.4	11.1	9.1	1.6

Source: National Notifiable Diseases Surveillance System; includes all jurisdictions as Aboriginal and/or Torres Strait Islander status was ≥80% in each of the 10 years presented.

Between 2016 and 2019, infectious syphilis notification rates have increased sharply in Aboriginal and/or Torres Strait Islander people aged 15–19 and 20–29 (81% and 54% respectively) (Figure 59). Infectious syphilis notification rates have declined by 7% among the Aboriginal and/or Torres Strait Islander population aged 15–19 between 2019 and 2020 (from 252.6 per 100 000 in 2019 to 235.1 per 100 000 in 2020) and by 21% among aged 20–29 (238.4 per 100 000 in 2019 to 188.1 per 100 000 in 2020). In all years, the notification rate was higher in both age groups in the Aboriginal and/or Torres Strait Islander population than in the non-Indigenous population.

Figure 59 Infectious syphilis notification rate per 100 000 population in Aboriginal and/or Torres Strait Islander people, 2011–2020, by age group

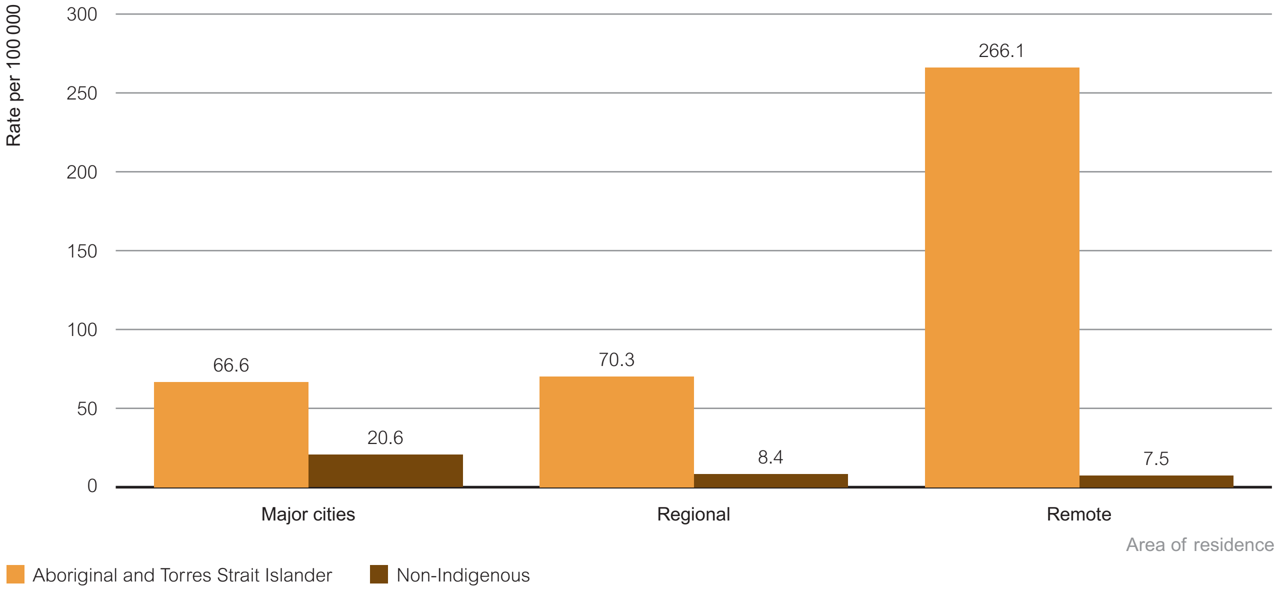


	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
■ Aboriginal and/or Torres Strait Islander people aged 15-19	96.8	65	55	93.9	141.6	139.3	179.4	162.3	252.6	235.1
● Aboriginal and/or Torres Strait Islander people aged 20-29	59.3	61.3	46.1	74.1	144.5	154.4	201.5	223.3	238.4	188.1
□ Non-Indigenous people aged 15-19	1.5	1.9	2.3	2.2	2.5	4.9	6.7	6.3	5.9	5.9
○ Non-Indigenous people aged 20-29	8.7	10.8	11.8	14.4	20.9	25.3	32.1	37.4	40.6	36.0

Source National Notifiable Diseases Surveillance System; includes all jurisdictions as Aboriginal and/or Torres Strait Islander status was ≥80% in each of the 10 years presented.

In 2020, the infectious syphilis notification rate among the Aboriginal and/or Torres Strait Islander population in major cities was more than three times as high as among the non-Indigenous population (66.6 per 100 00 vs 20.6 per 100 000), increasing to more than eight times in regional areas (70.3 per 100 000 vs 8.4 per 100 000), and 36 times in remote areas (266.1 per 100 000 vs 7.5 per 100 000) (Figure 60).

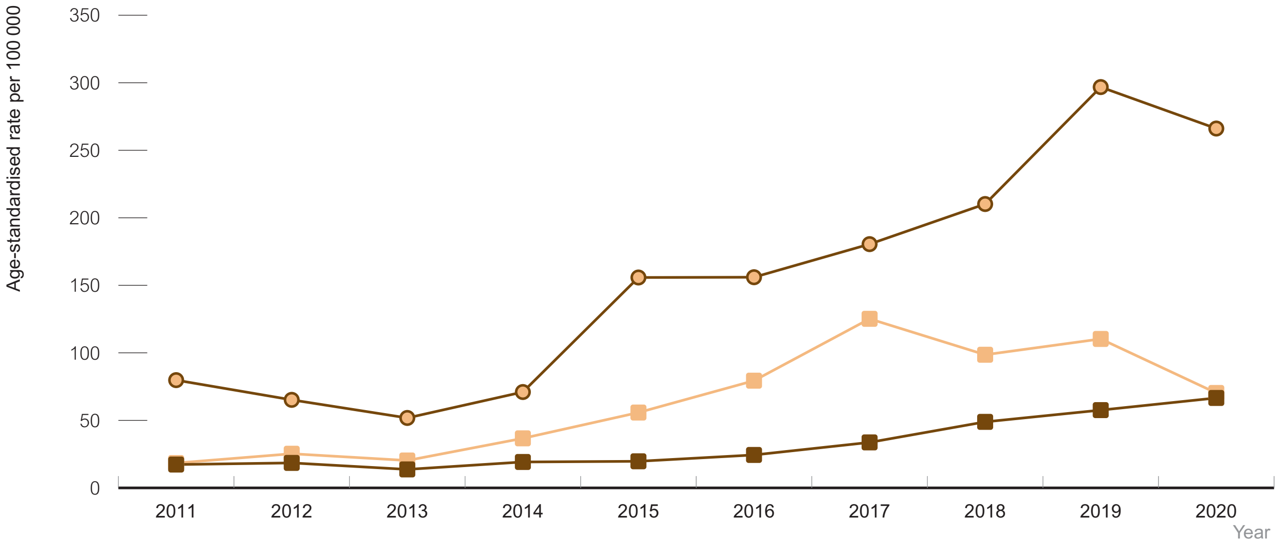
Figure 60 Infectious syphilis notification rate per 100 000 population, 2020, by Aboriginal and/or Torres Strait Islander status and area of residence



Source: National Notifiable Diseases Surveillance System; includes all jurisdictions as Aboriginal and/or Torres Strait Islander status was ≥80% in each of the 10 years presented.

Infectious syphilis notification rates among Aboriginal and/or Torres Strait Islander people in all areas of residence increased between 2011 and 2019, however between 2019 and 2020 rates have decreased for regional and remote areas. Between 2019 and 2020, rates increased by 16% in major cities and declined by 36% in regional areas and 10% decrease in remote areas (Figure 61).

Figure 61 Infectious syphilis notification rate per 100 000 population, 2011–2020, by area of residence



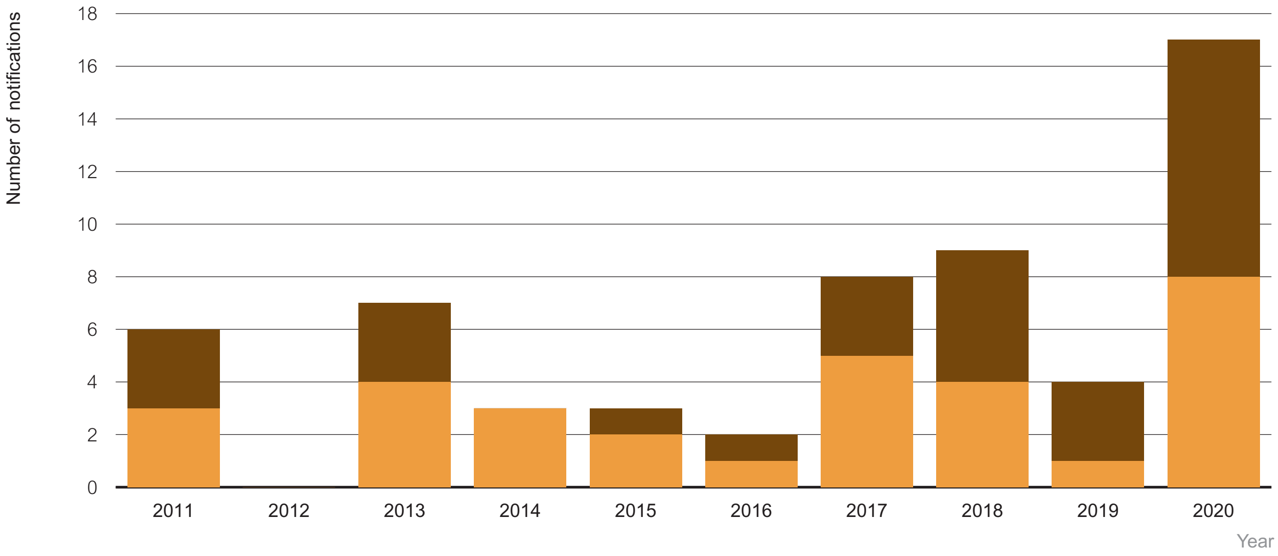
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
■ Major cities	17.3	18.5	13.7	19.2	19.7	24.4	33.7	48.9	57.6	66.6
■ Regional	18.4	25.3	20.3	36.7	55.8	79.4	125.2	98.6	110.3	70.3
○ Remote	79.8	65.2	51.8	71.0	155.8	156.0	180.5	210.2	296.8	266.1

Source: National Notifiable Diseases Surveillance System; includes all jurisdictions as Aboriginal and/or Torres Strait Islander status was ≥80% in each of the 10 years presented.

Congenital syphilis

Syphilis is caused by the bacterium *Treponema pallidum*, which causes congenital syphilis when passed from mother to child during foetal development or at birth. Between 2011 and 2020, over half (31) of the 60 congenital syphilis notifications were among Aboriginal and/or Torres Strait Islander infants, with 8 notifications in 2020 (Figure 62). The notification rate of congenital syphilis among the Aboriginal and/or Torres Strait Islander population was 36.3 per 100 000 live births in 2020 in comparison with 2.8 per 100 000 in the non-Indigenous population (Figure 63). Note that caution should be taken in interpretation of these rates due to the small number of notifications.

Figure 62 **Number of congenital syphilis cases, 2011–2020, by Aboriginal and/or Torres Strait Islander status[a]**

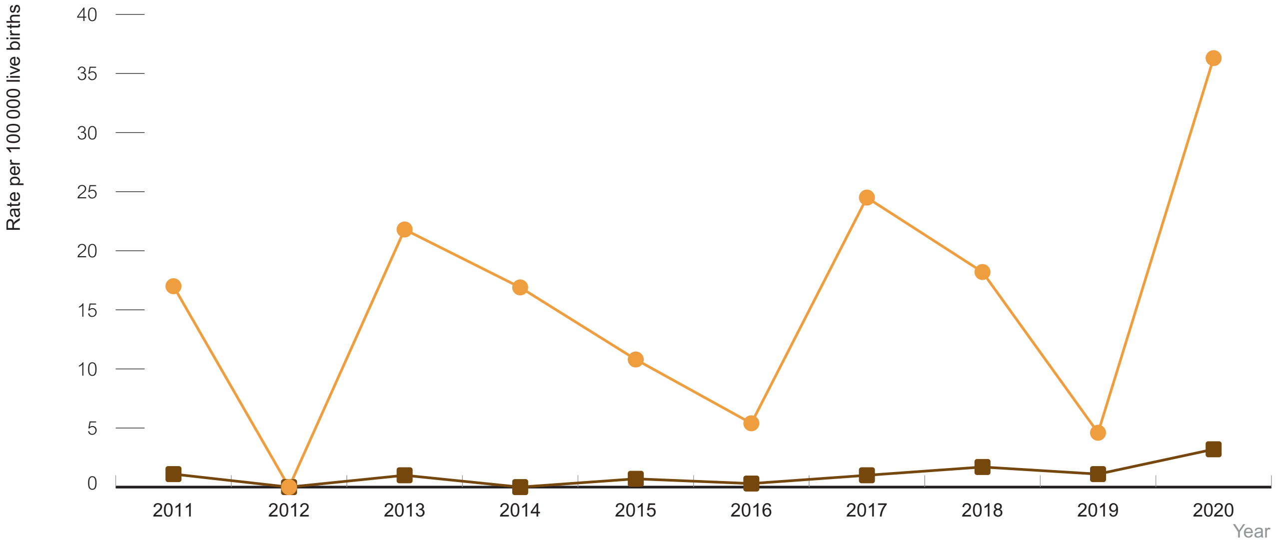


	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
🟧 Aboriginal and/or Torres Strait Islander	3	0	4	3	2	1	5	4	1	8
🟫 Non-Indigenous	3	0	3	0	1	1	3	5	3	9

a Includes notifications in non-indigenous where Aboriginal and/or Torres Strait Islander status was not reported.

Source: National Notifiable Diseases Surveillance System; includes all jurisdictions as Aboriginal and/or Torres Strait Islander status was ≥50% in each of the 10 years present

Figure 63 Congenital syphilis rate per 100 000 live births, 2011–2020, by Aboriginal and/or Torres Strait Islander status[a]



● Aboriginal and/or Torres Strait Islander births	17.0	0.0	21.8	16.9	10.8	5.4	24.5	18.2	4.6	36.3
■ Non-Indigenous births	1.1	0.0	1.0	0.0	0.7	0.3	1.0	1.7	1.1	3.2

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

Source: National Notifiable Diseases Surveillance System; includes all jurisdictions as Aboriginal and/or Torres Strait Islander status was ≥50% in each of the 10 years presented.

Bacterial STIs in people under 16 years

The occurrence of STIs among young Aboriginal and/or Torres Strait Islander people is a sensitive issue. The occurrence of chlamydia, gonorrhoea and infectious syphilis among people aged 16 years or younger is described on the basis of cases notified to the National Notifiable Diseases Surveillance System and is summarised only for those jurisdictions in which Aboriginal and/or Torres Strait Islander status was reported for at least 50% of notifications in each year over the past five years.

From 2016 to 2020, a total of 2514 cases of chlamydia, 962 cases of gonorrhoea and 109 cases of infectious syphilis were reported among Aboriginal and/or Torres Strait Islander people aged under 16 years. In the same period, 2226 cases of chlamydia, 186 cases of gonorrhoea and 14 cases of infectious syphilis were reported among non-Indigenous people aged under 16 years. Within the Aboriginal and/or Torres Strait Island population, the majority of these notifications (96% for chlamydia, 93% for gonorrhoea and 94% for infectious syphilis) were among people aged 13 to 15 years (data not shown). A similar pattern of notification occurred among the non-Indigenous young population, where 98% of chlamydia, 81% of gonorrhoea and 100% of infectious syphilis notifications among the under-16s were in people aged 13 to 15 years (data not shown). The majority of notifications of STIs in the young Aboriginal and/or Torres Strait Islander population occurred in areas with a known high prevalence of STIs, and where screening for STIs is routinely carried out a significant proportion of these notifications are the result of earlier sexual debut and/or sex with same-aged peers and therefore should not be interpreted as being related to child sexual assault/abuse perpetuated by an adult. (13, 14)

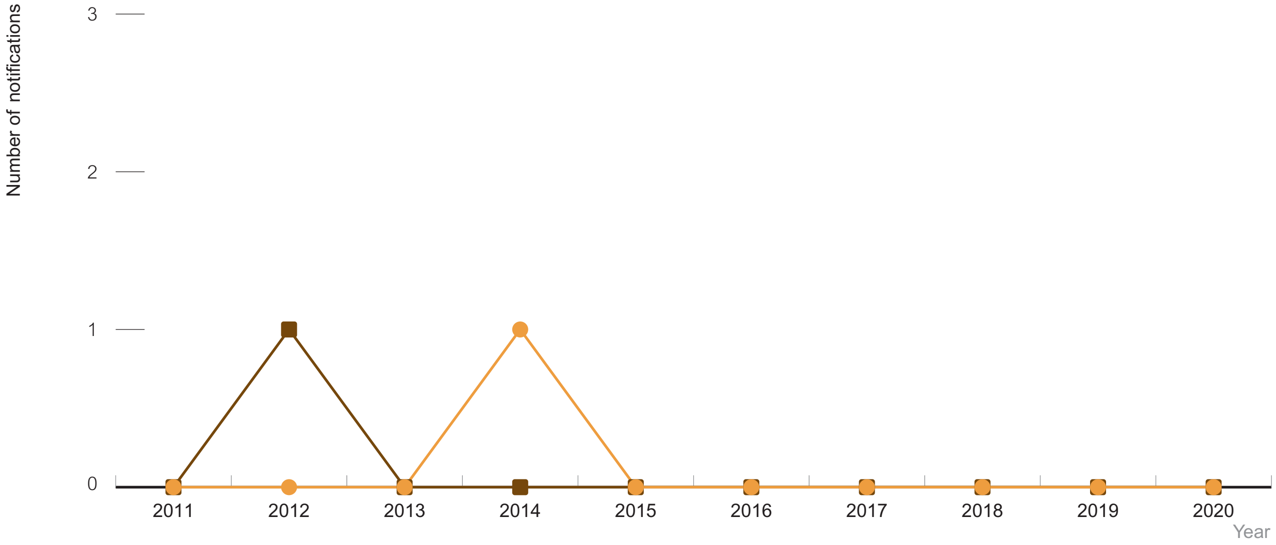
Donovanosis

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.

Between 2011 and 2020 there have been only three notifications of donovanosis nationally, one in 2012, one in 2014 and one in 2016; two of these notifications were among Aboriginal and/or Torres Strait Islander people (status of third notification in 2016 wasn't reported).

The decline in the annual number of notifications of donovanosis from two in 2008 to none in 2020 may be attributed to improved case ascertainment and treatment (Figure 64). There were no notifications of donovanosis in New South Wales, South Australia, Tasmania, Queensland, Victoria or the Northern Territory in the past five years. In Western Australia there were two notifications in this period, one in 2012 and one in 2016 (data not shown).

Figure 64 Number of notifications of donovanosis infections, 2011–2020, by Aboriginal and/or Torres Strait Islander status



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
● Aboriginal and/or Torres Strait islander	0	0	0	1	0	0	0	0	0	0
■ Non-Indigenous[a]	0	1	0	0	0	0	0	0	0	0

a Includes notifications where Aboriginal and/or Torres Strait Islander status was not reported.
Source: National Notifiable Diseases Surveillance System

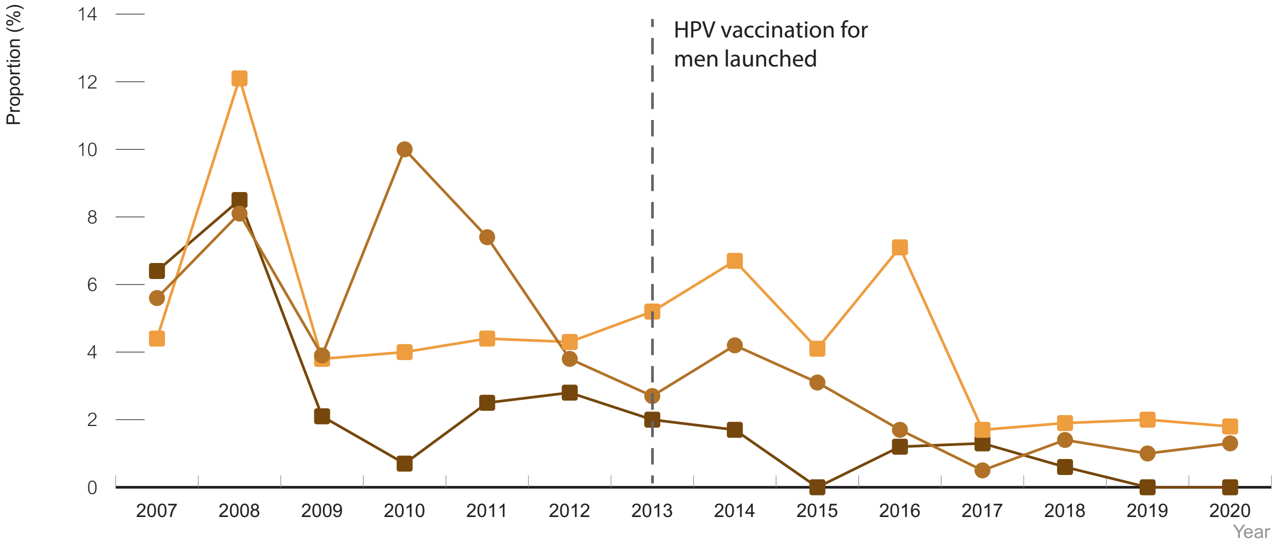
Human papillomavirus

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 quadrivalent HPV vaccine (types 16, 18, 6 and 11) is provided free in schools to all students aged 12–13 years under the National HPV Vaccination Program. The program began in 2007 for girls and was extended to include boys in 2013. 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 (15). Data on HPV vaccination coverage is currently not available by Aboriginal and/or Torres Strait Islander status but will be available in the future.

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 2021* (1) for further detail). Information available from 44 sexual health clinics included in the Genital Warts Surveillance Network indicates a considerable reduction in the proportion of both Aboriginal and/or Torres Strait Islander males and females under 30 notified with genital warts at their first visit since 2007 (Figure 65 and Figure 66).

Among Aboriginal and Torres Strait Islander males there was an 100% reduction in genital warts diagnoses at first visit to clinics in the ACCESS network among those aged under 21 years from 6.4% in 2007. Among Aboriginal and Torres Strait Islander males aged 21 to 29 years, there was a 54% reduction from 4.4% in 2007 to 2% in 2019 and 10% reduction to 1.8% in 2020 (an 65% reduction since 2013 when male vaccination was introduced) (Figure 65). Among Aboriginal and Torres Strait Islander females, there was also a 100% reduction in genital warts diagnoses at first visit among those under 21 years from 6.5% in 2007 to 0% in 2019 and 0% in 2020. Among those aged 21 to 29 years there was an 84% reduction from 6.3% in 2007 to 1% in 2019 and increased to 1.1% in 2020 (Figure 66). The reduction in genital warts diagnoses in Aboriginal and/or Torres Strait Islander females reflect the catch-up campaign in 2007–2009 for all females aged up to 26 years.

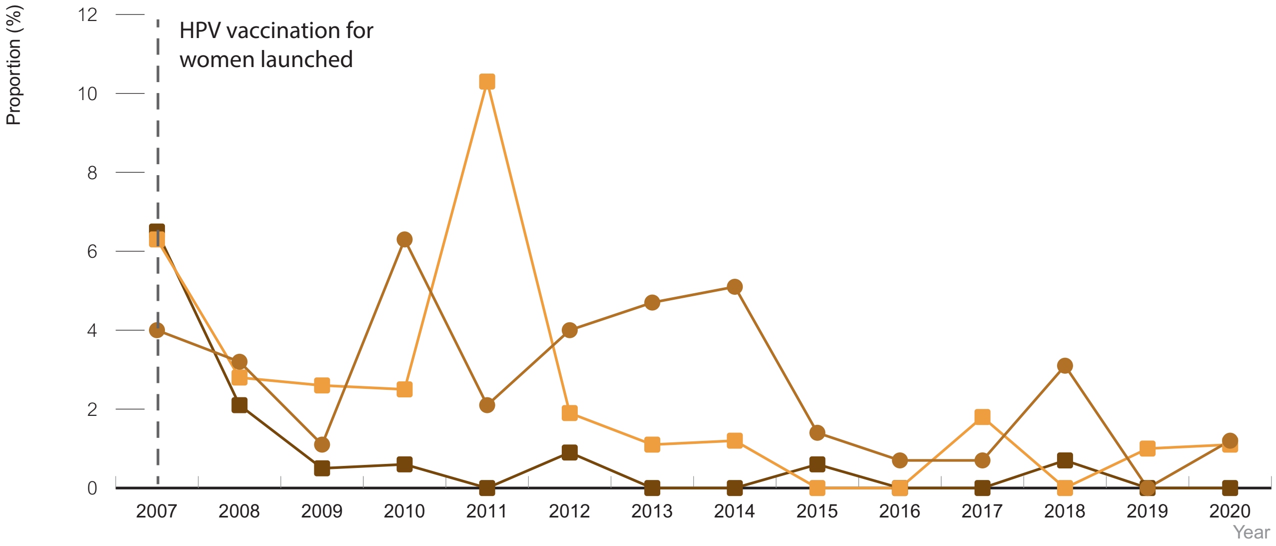
Figure 65 Proportion of Aboriginal and/or Torres Strait Islander males notified with genital warts at first visit at sexual health clinics, 2011–2020, by age group



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
■ <21 years (%)	6.4	8.5	2.1	0.7	2.5	2.8	2.0	1.7	0.0	1.2	1.3	0.6	0.0	0.0
■ 21–29 years (%)	4.4	12.1	3.8	4.0	4.4	4.3	5.2	6.7	4.1	7.1	1.7	1.9	2.0	1.8
● ≥30 years (%)	5.6	8.1	3.9	10.0	7.4	3.8	2.7	4.2	3.1	1.7	0.5	1.4	1.0	1.3

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

Figure 66 Proportion of Aboriginal and/or Torres Strait Islander females notified with genital warts at first visit at sexual health clinics, 2011–2020, by age group



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
■ <21 years (%)	6.5	2.1	0.5	0.6	0.0	0.9	0.0	0.0	0.6	0.0	0.0	0.7	0.0	0.0
■ 21–29 years (%)	6.3	2.8	2.6	2.5	10.3	1.9	1.1	1.2	0.0	0.0	1.8	0.0	1.0	1.1
● ≥30 years (%)	4.0	3.2	1.1	6.3	2.1	4	4.7	5.1	1.4	0.7	0.7	3.1	0.0	1.2

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

Acknowledgments

Groups and committees involved in the development of the Surveillance Report, as well as the individuals and organisations that provided data for inclusion in this report, are listed below. The Aboriginal and/or Torres Strait Islander report was initially developed by Professor James Ward.

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- Associate Professor James Ward, South Australian Health and Medical Research Institute, Adelaide, SA
- Professor Rebecca Guy, Professor John Kaldor, Dr Skye McGregor (Chair) , Mr Jonathan King, Ms Ela Naruka (Secretariat), Mr Nicolas Legrand, The Kirby Institute, UNSW Sydney, Sydney, NSW

Annual Surveillance Report 2020 Advisory Committee

- Ms Amy Bright, Office of Health Protection, Australian Government Department of Health, Canberra, ACT
- Mr Aaron Cogle, National Association of People with HIV Australia, Sydney, NSW
- Ms Jules Kim, Scarlet Alliance, Sydney, NSW
- Mr Scott McGill, Australasian Society for HIV, Viral Hepatitis and Sexual Health Medicine, Sydney, NSW
- Ms Jennifer MacLachlan, WHO Regional Reference Laboratory for Hepatitis B, Victorian Infectious Diseases Reference Laboratory, The Doherty Institute, Melbourne, VIC
- Dr Limin Mao, Centre for Social Research in Health, UNSW Sydney, Sydney, NSW
- Dr Jeanne Ellard, Australian Federation of AIDS Organisations, Sydney, NSW
- Ms John Didlick, Hepatitis Australia, Canberra, ACT
- Ms Carrie Fowlie Hepatitis Australia, Canberra, ACT
- Dr Charlotte Bell, Australasian Chapter of Sexual Health Medicine, Sydney, NSW; SA Health, Adelaide, SA
- Mr Jake Docker, Australian Injecting & Illicit Drug Users League, Canberra, ACT
- Ms Jane Costello, Positive Life NSW, NSW
- Professor Rebecca Guy (Chair), Professor Basil Donovan, Professor Lisa Maher, Professor John Kaldor, Dr Jennifer Iversen, Dr Benjamin Bavinton, Dr Skye McGregor, Dr Hamish McManus, Mr Jonathan King, Ms Ela Naruka, The Kirby Institute, UNSW Sydney, Sydney, NSW

Aboriginal and/or Torres Strait Islander Reference Group

- Mr Robert Monaghan (Chair), Kirby Institute, UNSW Sydney, Sydney, NSW
- Michelle Cutmore, Registered Nurse, Hunter New England Local Health District; NSW
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- Derek Nannup, Aboriginal Health Council of Western Australia, WA
- Amanda-Collins Clinch, Aboriginal health council of Western Australia, WA
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- Jackie Thomas, Kirby Institute, UNSW Sydney, Sydney, NSW
- Natasha Tatipata, Centre for Disease Control, Public Health Unit, Top End Health Service, NT
- Troy Combo, Burnet Institute, Vic
- Professor Rebecca Guy, Dr Skye McGregor, Mr Jonathan King, Ms Ela Naruka The Kirby Institute, UNSW Sydney, Sydney, NSW

ACCESS (Australian Collaboration for Coordinated Enhanced Sentinel Surveillance)

- Canberra Sexual Health Centre, Canberra; Interchange General 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; 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; 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; a[TEST], Darlinghurst; a[TEST], Newtown; Bungendore Medical Centre, Bungendore; East Sydney Doctors, Darlinghurst; Fountain Street General Practice, Alexandria; Macleay Street Medical, Potts Point; UNSW Health Service, Kensington; Taylor Square Private Clinic, Surry Hills; Dr Doong Practice, Burwood; Kildare Road Medical Centre, Blacktown; Waterloo Medical Centre, Waterloo; Holdsworth House Medical Practice, Darlinghurst; Family Planning NSW; 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; QLD
- Clinic 275 Sexual Health, Adelaide; O’Brien Street General Practice, Adelaide; Rapido Testing Service, Shine SA, 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; Centre Clinic, St Kilda; Frankston Health, Frankston; Cohealth (formerly known as North Yarra Community Health), Collingwood; North Richmond Community Health, Richmond; Bendigo Community Health Clinic, Bendigo; EACH Social and Community Health, Melbourne; Dandenong Superclinic, Dandenong; Prahran Market Clinic, Prahran; Northside Clinic, North Fitzroy; Family Planning Victoria, Melbourne; Clarinda Medical Centre, Clarinda; The Alfred Hospital, Melbourne; VIC
- Fremantle Hospital Sexual Health Clinic, Fremantle; M Clinic, Perth; GP on Beaufort, Mount Lawley; WA

Collaboration of Australian Needle Syringe Programs

- Directions ACT, Canberra; ACT
- 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; NSW
- Northern Territory AIDS and Hepatitis C Council, Alice Springs, Darwin and Palmerston; NT
- 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; QLD
- 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; SA
- Anglicare NSP Service, Hobart and Glenorchy; Clarence Community Health Centre, Clarence; Burnie NSP Service, Burnie; TAS
- 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: VIC.
- Hepatitis WA, Perth: WA AIDS Council Mobile Exchange, Perth; Western Australia Substance Users Association, Perth and South Coast; WA.
- St Vincent’s Centre for Applied Medical Research and NSW State Reference Laboratory for HIV at St Vincent’s Hospital, Sydney, NSW

Genital Warts Surveillance Network

- Canberra Sexual Health Centre, Canberra; ACT
- Liverpool Sexual Health Clinic, Liverpool; Coffs Harbour Sexual Health Clinic, Coffs Harbour; Grafton Sexual Health Clinic, Grafton; Albury Sexual Health Clinic, Albury; 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; a[TEST], Darlinghurst; a[TEST], Newtown; NSW
- Alice Springs Clinic 34, Alice Springs; Darwin Clinic 34, 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, Mt Isa; Palm Island Sexual Health Clinic, Palm Island; QLD
- Clinic 275 Sexual Health, 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 Clinic, Geelong; VIC
- Fremantle Hospital Sexual Health Clinic, Fremantle; 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 Blood Service, Melbourne, VIC
- Centre for Social Research in Health, UNSW Sydney, Sydney, NSW
- Communicable Diseases Network Australia, Canberra, ACT
- Hepatitis Australia, Canberra, ACT
- Macfarlane 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
- WHO Regional Reference Laboratory for Hepatitis B, Victorian Infectious Diseases Reference Laboratory, The Doherty Institute, Melbourne, VIC

State/Territory Health Departments

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- Jana Sisnowski, Communicable Disease Control Branch, SA Health, Government of South Australia, Adelaide SA
- Jon Moore, Department of Health and Human Services, Tasmanian Government, Hobart, TAS
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- Carolien Giele, Byron Minas, Kellie Mitchell, Communicable Disease Control Directorate, WA Department of Health, Government of Western Australia, Perth, WA

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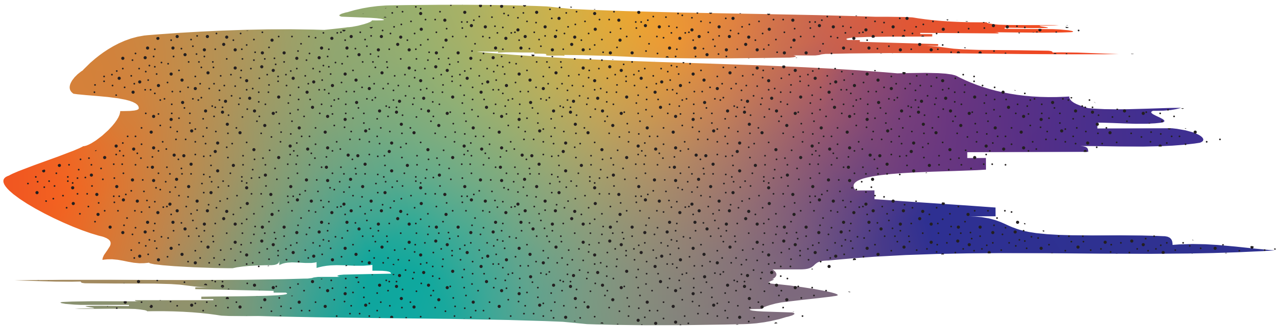
Cover Artwork Narrative & Description

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