



UNSW  
Kirby Institute

**HIV, viral hepatitis  
and sexually transmissible  
infections in Australia  
Annual surveillance  
report 2024**



**Sexually  
Transmissible  
Infections**



**UNSW**  
SYDNEY

# HIV, viral hepatitis and sexually transmissible infections in Australia

## Annual surveillance report 2024

### Kirby Institute, UNSW Sydney

**Prepared by:**

Jonathan King  
Hamish McManus  
Jisoo Amy Kwon  
Richard Gray  
Skye McGregor

**Other contributors:**

- Australian Government Department of Health and Aged Care
- State/territory health departments
- Brynley Hull, Aditi Dey, National Centre for Immunisation Research and Surveillance
- Gladymar Perez Chacon, Hamish McManus, Cassandra Bull, Ela Naruka, Behzad Hajarizadeh, Htein Linn Aung, Heather Valerio, Gregory Dore, Lisa Maher, Bradley Mathers, Sue Heard, Curtis Chan, Kathy Petoumenos, Nicholas Medland, The Kirby Institute, UNSW Sydney
- Anh Nguyen, Jennifer MacLachlan, Nicole Romero, Benjamin Cowie, WHO Collaborating Centre for Viral Hepatitis, Victorian Infectious Diseases Reference Laboratory, The Doherty Institute
- Anna Wilkinson, Jason Asselin, Mark Stoové, Margaret Hellard, Burnet Institute
- Wing-Yee Lo, Australia and New Zealand Liver and Intestinal Transplant Registry
- Timothy Broady, Centre for Social Research in Health, UNSW Sydney
- Monica Lahra, WHO Collaborating Centre for STI and AMR Microbiology, NSW Health Pathology
- John Didlick, David Halliday, Hepatitis Australia

in collaboration with networks in surveillance for HIV, viral hepatitis and sexually transmissible infections

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**Design** il Razzo, Email: [admin@ilrazzo.com.au](mailto:admin@ilrazzo.com.au)

Kirby Institute UNSW Sydney NSW 2052

Telephone: 02 9385 0900 (International +61 2 9385 0900)

Email: [info@kirby.unsw.edu.au](mailto:info@kirby.unsw.edu.au)

# Sexually transmissible infections

We recognise communities and individuals impacted by and at risk of HIV, hepatitis B and C, and sexually transmissible infections. These people and communities are crucial stakeholders in the work we do, with invaluable contributions and lived experiences. We acknowledge and affirm their crucial role in the development of this report, and public health surveillance more broadly. This report aims to ensure that ongoing and emerging public health threats and inequities are apparent, and that high quality data are available to inform appropriate public health responses to address these issues. We also acknowledge the ongoing negative impacts stigma and societal discrimination play in perpetuating inequity, and support principles of empowerment, community ownership, and partnership.

*The years for comparison in this report are for the 10-year period from 2014 to 2023. Many indicators in the report were affected by the COVID-19-related impacts on travel and access to health care, particularly testing and treatment. These impacts are acknowledged in figures and text throughout the report.*

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# 1 Summary data

## Infectious Syphilis

### Infectious syphilis notifications

- In 2023 there were 6390 infectious syphilis notifications (infections of less than two years' duration) in Australia. The majority (5082, 80%) of these notifications were among males.
- Between 2014 and 2023, the infectious syphilis notification rate increased more than 200% from 8.8 to 24.4 per 100 000. In this period, there was a more than seven-fold increase among females and a more than two-fold increase among males.
- The national infectious syphilis notification rate in 2023 was more than three times as high among males (38.8 per 100 000) than among females (10.2 per 100 000), with variability across specific regions and jurisdictions.
- In 2023, infectious syphilis notification rates were highest among people aged 30 to 34 years (60.0 per 100 000), 25 to 29 years (55.8 per 100 000), and 20 to 24 years (39.6 per 100 000).
- The notification rate among Aboriginal and Torres Strait Islander peoples in 2023 was almost five times as high as among non-Indigenous people (101.6 per 100 000, compared to 21.1 per 100 000).
- There were 20 congenital syphilis cases in 2023, 13 among Aboriginal and Torres Strait Islander peoples and seven among non-Indigenous people. In 2023, the congenital syphilis notification rate among Aboriginal and Torres Strait Islander peoples was more than 21 times as high as among non-Indigenous people (53.3 and 2.5 per 100 000 live births, respectively).
- Of the 95 congenital syphilis cases notified between 2014 and 2023, 30 cases resulted in the death of the infant (including stillbirth). Of these, 20 deaths occurred among Aboriginal and Torres Strait Islander infants, nine occurred among non-Indigenous infants, and one case occurred in an infant for whom Aboriginal and Torres Strait Islander status was not reported.

### Testing

- Results from the GBQ+ Community Periodic Surveys show comprehensive STI testing, defined as at least four samples from separate body sites, in the past 12 months among participating gay and bisexual men increased from 40% in 2014 to 51% in 2023.
- In 2023, among gay and bisexual men attending sexual health clinics in ACCESS (Australian Collaboration for Coordinated Enhanced Sentinel Surveillance), 53% had a repeat comprehensive STI screen (includes chlamydia and gonorrhoea test at any anatomical site, syphilis, and HIV among HIV-negative men) within 13 months of a previous comprehensive screen, an increase from 40% in 2014.

### Incidence

- In 2023, the incidence of infectious syphilis among HIV-positive gay and bisexual men and HIV-negative gay and bisexual men attending sexual health clinics in ACCESS was 8.1 and 4.3 new infections per 100 person-years, respectively. Between 2014 and 2023, infectious syphilis incidence fluctuated among both HIV-positive and HIV-negative gay and bisexual men.
- Between 2014 and 2023, the incidence of infectious syphilis among women engaging in sex work attending sexual health clinics in the ACCESS network remained low and was 0.6 per 100 person-years in 2023.

# Chlamydia

## Chlamydia notifications

- In 2023, chlamydia was the most frequently notified sexually transmissible infection (STI) in Australia, with a total of 109 451 notifications. Around half (59 930, 55%) were among people aged 20 to 29 years. Half of notifications occurred among males (54 881 notifications, 50%).
- The chlamydia notification rate fluctuated between 2014 and 2023, and was 422.4 per 100 000 in 2023. Similar trends were seen among both males and females and 2023 the chlamydia notification rate was 431.1 per 100 000 females and 419.2 per 100 000 males.
- Between 2014 and 2023, chlamydia notification rates among those 15 to 19 years declined by 22% from 1305 to 1023 per 100 000. Conversely, notification rates among those aged 30 to 39 years and 40 to 49 years increased in the same period (by 60% and 76%, respectively).
- The chlamydia notification rate among Aboriginal and Torres Strait Islander peoples is based on data from six jurisdictions (the Australian Capital Territory, New South Wales, the Northern Territory, Queensland, South Australia, and Western Australia), where Aboriginal and Torres Strait Islander status was  $\geq 50\%$  complete each of the five years (2019 – 2023).
- The chlamydia notification rate among Aboriginal and Torres Strait Islander peoples declined by 13% between 2019 and 2023 from 946.5 to 820.0 per 100 000. In 2023, the chlamydia notification rate among Aboriginal and Torres Strait Islander peoples was nearly twice as high as among non-Indigenous people (820.0 vs 411.8 per 100 000).

## Testing

- The number of Medicare-rebated chlamydia tests in Australia fluctuated between 2014 and 2023, with 637 865 tests in 2023.
- The proportion of general practice attendees aged 15 to 29 years who had a Medicare-rebated chlamydia test in 2023 was 16%, with proportions steady since the start of the COVID-19 pandemic but higher than the years preceding it.
- The amount of testing in a population can influence notification trends. In 2023, the number of chlamydia notifications per 100 Medicare-rebated chlamydia tests was 11.6, up from 10.5 in 2014.

## Incidence

- In 2023, chlamydia incidence among HIV-positive gay and bisexual men (44.1 new infections per 100 person-years) was higher than among HIV-negative gay and bisexual men (28.1 per 100 person-years).
- In 2023, among men attending sexual health clinics in the ACCESS network, there was a 27% increase in chlamydia incidence among HIV-positive gay and bisexual men and 54% increase in HIV-negative gay and bisexual men since 2014.
- Among women reporting sex work attending sexual health clinics in the ACCESS network, chlamydia incidence increased by 36% between 2014 and 2023 (from 9.7 to 13.2 per 100 person-years).

## Testing and care cascade

- In 2023, there were an estimated 103 300 new chlamydia infections in women aged 15–29 years. Of those, 43 820 (42%) were diagnosed, an estimated 39 830 (93%) received treatment, and 10 280 (13%) had a retest between six weeks and six months after diagnosis.

# Gonorrhoea

## Gonorrhoea notifications

- In 2023 there were 40 029 gonorrhoea notifications in Australia, with over two-thirds of all notifications in males (27 677, 69%).
- Between 2014 and 2023 there was a 127% increase in the gonorrhoea notification rate (from 67.9 to 153.9 per 100 000).
- Similar trends were observed among males and females. The gonorrhoea notification rate has been higher among males than females in each year since 2014 and was 212.4 per 100 000 males and 96.2 per 100 000 females in 2023.
- The gonorrhoea notification rate among Aboriginal and Torres Strait Islander peoples is based on data from seven jurisdictions (the Australian Capital Territory, New South Wales, the Northern Territory, Queensland, South Australia, Tasmania, and Western Australia) where Aboriginal and Torres Strait Islander status was ≥50% complete for each of the five years (2019 – 2023).
- The gonorrhoea notification rate among Aboriginal and Torres Strait Islander peoples in 2023 was more than four times as high as among non-Indigenous people (541.0 per 100 000 and 134.9 per 100 000, respectively).

## Testing

- Between 2014 and 2023, the number of gonorrhoea notifications per 100 Medicare-rebated gonorrhoea tests increased by 121% (from 1.4 to 3.1), with increases in both males (89%) and females (180%). These data suggest that the increases observed in notifications cannot be fully explained by more testing. The ratio was higher in males than in females for each reported year.

## Incidence

- In 2023, among men attending sexual health clinics in the ACCESS network, the gonorrhoea incidence rate among HIV-positive gay and bisexual men (36.4 per 100 person-years) was higher than among HIV-negative gay and bisexual men (25.7 new infections per 100 person-years).
- Among women reporting sex work attending sexual health clinics in the ACCESS network, the incidence of gonorrhoea increased by 89%, from 4.8 per 100 person-years in 2014, to 10.6 per 100 person-years in 2023.

## Other sexually transmissible infections

- Among non-Indigenous females aged under 21 years attending sexual health clinics for the first time, the proportion diagnosed with genital warts fell from 11.5% in 2006 to 0.0% in 2023.
- Among non-Indigenous Australian-born heterosexual males under 21 years attending sexual health clinics for the first time, the proportion diagnosed with genital warts has fallen from 9.8% in 2006 to 0.0% in 2023.
- Among Aboriginal and Torres Strait Islander females aged under 21 years, the proportion diagnosed with genital warts at first visit declined from 4.1% in 2006 to 0.0% in 2023.
- Among Aboriginal and Torres Strait Islander males aged under 21 years, the proportion diagnosed with genital warts at first declined from 5.0% in 2006 to 0.0% in 2023.
- Australia is on track to eliminate donovanosis, which was once a regularly diagnosed STI among remote Aboriginal communities. Since 2014 there has only been one case notified, in 2014.

## 2 Interpretation

In 2023, there were increases in new chlamydia, gonorrhoea, and infectious syphilis diagnoses, highlighting the need for greater testing coverage and for testing to be routinely offered to sexually active adolescents and young adults. Increased efforts to support partner notification and treatment of sexual partners are also needed to reduce the incidence of STIs.

Based on the interpretation of the ratio of diagnoses by sex, gonorrhoea, and infectious syphilis were diagnosed more frequently in the past five years among gay, bisexual and other men who have sex with men. Explanations for this trend among men who have sex with men include more comprehensive screening and greater availability and awareness of highly effective HIV prevention strategies and in turn a decrease in the use of condoms and greater sexual mixing. Efforts to improve health promotion, testing and treatment among men who have sex with men need to be enhanced. Furthermore, it should be acknowledged that sexual identity is not in itself a risk factor, and it is important not to conflate this with inherent risk. Stigma, lack of access to appropriate health care, and discrimination that gay, bisexual, and other men who have sex with men experience are often at the core of poor health outcomes for these communities.

Gonorrhoea and infectious syphilis diagnosis rates among women in urban areas are rising significantly. It is crucial to provide well-promoted, accessible, and culturally appropriate testing services and prevention options specifically for women in these settings.

The number of Medicare-rebated tests for chlamydia and gonorrhoea among both men and women remains below the numbers reported before the start of the COVID-19 pandemic. This trend highlights the need for health promotion, enhanced testing, and partner notifications. In gay and bisexual men, the rise in chlamydia and gonorrhoea incidence in recent years highlights the need for a renewed focus on prevention strategies.

Among Aboriginal and Torres Strait Islander peoples, STI diagnosis rates remain higher than among non-Indigenous people, with infectious syphilis rates almost five times as high, gonorrhoea rates more than four times as high, and chlamydia rates almost twice as high. The increases in infectious syphilis among young Aboriginal and 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 and co-designed health promotion, testing and treatment strategies.

# Sexually transmissible infections

## 3 Infectious Syphilis

See page 4 for summary.

### 3.1 Infectious syphilis notifications

An expanded infectious syphilis national case definition was implemented in July 2015 which includes a new subcategory of 'probable' infectious syphilis to capture infectious syphilis cases in people without a prior testing history, particularly young people aged 15–19 years. The probable infectious syphilis cases are included in the number of infectious syphilis notifications for the years 2015 – 2023

There were 6390 infectious syphilis notifications (infections of less than two years' duration) in Australia in 2023. In 2023, 5082 (80%) infectious syphilis notifications were among males, 3269 (51%) were among people aged 25 to 39 years, and 4832 (76%) were among people residing in major cities. Also in 2023, 1022 (16%) notifications were among Aboriginal and Torres Strait Islander peoples, 4766 (75%) were among non-Indigenous people and 602 (9%) notifications did not have Aboriginal and Torres Strait Islander status reported (Table 1).

In 2023, around half (53%) of notifications of infectious syphilis among Aboriginal and Torres Strait Islander peoples were male compared with the majority (85%) among non-Indigenous people suggesting greater transmission attributed to male-to-male sex among non-Indigenous people. See [Bloodborne viral and sexually transmissible infections in Aboriginal and Torres Strait Islander people: annual surveillance report 2024](#) for further details <sup>(1)</sup>.

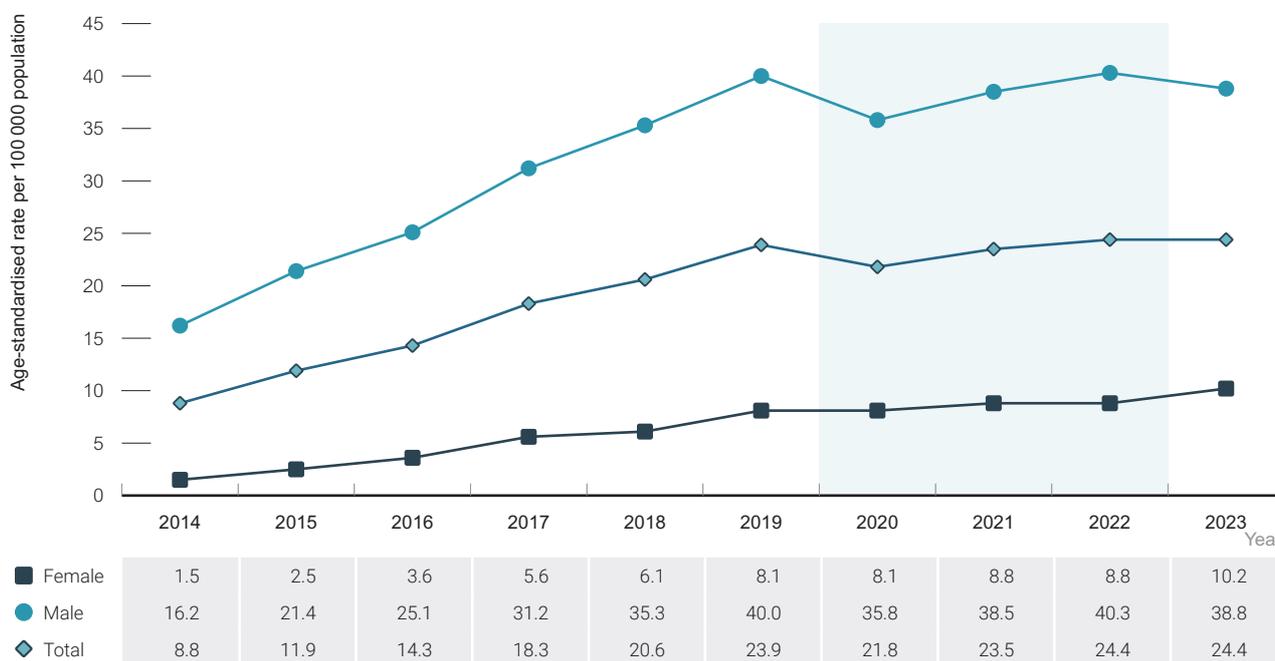
**Table 1** Characteristics of syphilis notifications, 2014 – 2023

Characteristic	Year of diagnosis									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Total cases</b>	2020	2776	3375	4399	5050	5904	5354	5762	6172	6390
<b>Gender</b>										
Female	161	287	415	654	735	969	959	1041	1086	1301
Male	1859	2488	2954	3732	4305	4920	4380	4708	5062	5082
Not reported	0	1	6	13	10	15	15	13	24	7
<b>Age group</b>										
0–14	11	17	17	24	9	33	18	15	12	12
15–19	99	145	176	242	224	301	288	266	210	223
20–24	245	407	428	568	678	707	618	617	644	702
25–29	298	463	613	814	929	1084	940	991	1082	1101
30–34	299	433	538	730	825	1054	967	1148	1200	1210
35–39	260	318	433	545	663	813	772	886	958	958
40+	808	993	1170	1476	1722	1912	1751	1839	2066	2184
<b>Median age at diagnosis</b>										
Female	23	25	26	27	28	27	28	28	29	30
Male	36	35	35	34	35	35	35	35	35	35
Overall	35	34	34	33	34	33	34	34	34	34
<b>Remoteness</b>										
Major cities	1527	1849	2393	3195	3801	4469	4067	4402	4744	4832
Regional	230	366	513	713	681	709	671	615	769	899
Remote	111	259	280	365	436	568	487	571	463	459
Not reported	152	302	189	126	132	158	129	174	196	200
<b>Aboriginal and Torres Strait Islander status</b>										
Aboriginal and/or Torres Strait Islander	254	466	552	804	814	1051	919	990	1003	1022
Non-Indigenous	1663	2140	2607	3398	4017	4604	4194	4425	4559	4766
Not reported	103	170	216	197	219	249	241	347	610	602
<b>Congenital syphilis</b>										
Aboriginal and/or Torres Strait Islander	2	2	1	5	4	1	8	9	9	13
Non-Indigenous	0	2	1	3	4	3	9	6	5	7
Not reported	0	0	0	0	0	0	0	0	1	0
Overall	2	4	2	8	8	4	17	15	15	20
<b>State/Territory</b>										
ACT	18	14	13	33	54	66	56	39	39	30
NSW	745	738	871	1105	1505	1935	1745	1829	1983	2028
NT	72	206	231	322	350	342	270	214	217	222
QLD	395	574	684	1080	1125	1132	995	1060	1093	1375
SA	29	122	86	161	202	162	133	250	290	320
TAS	14	15	6	12	9	8	9	9	33	67
VIC	654	944	1148	1363	1373	1688	1426	1517	1714	1664
WA	93	163	336	323	432	571	720	844	803	684

Source: Australian National Notifiable Diseases Surveillance System.

Between 2014 and 2023, the infectious syphilis notification rate increased more than 200% from 8.8 to 24.4 per 100 000. Similar trends were seen among both males and females. Notification rates have remained higher among males than females for every year since 2014, and in 2023, rates were 38.8 and 10.2 per 100 000, respectively (Figure 1).

**Figure 1 Infectious syphilis notification rate per 100 000 population by sex, 2014 – 2023**



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Australian National Notifiable Diseases Surveillance System.



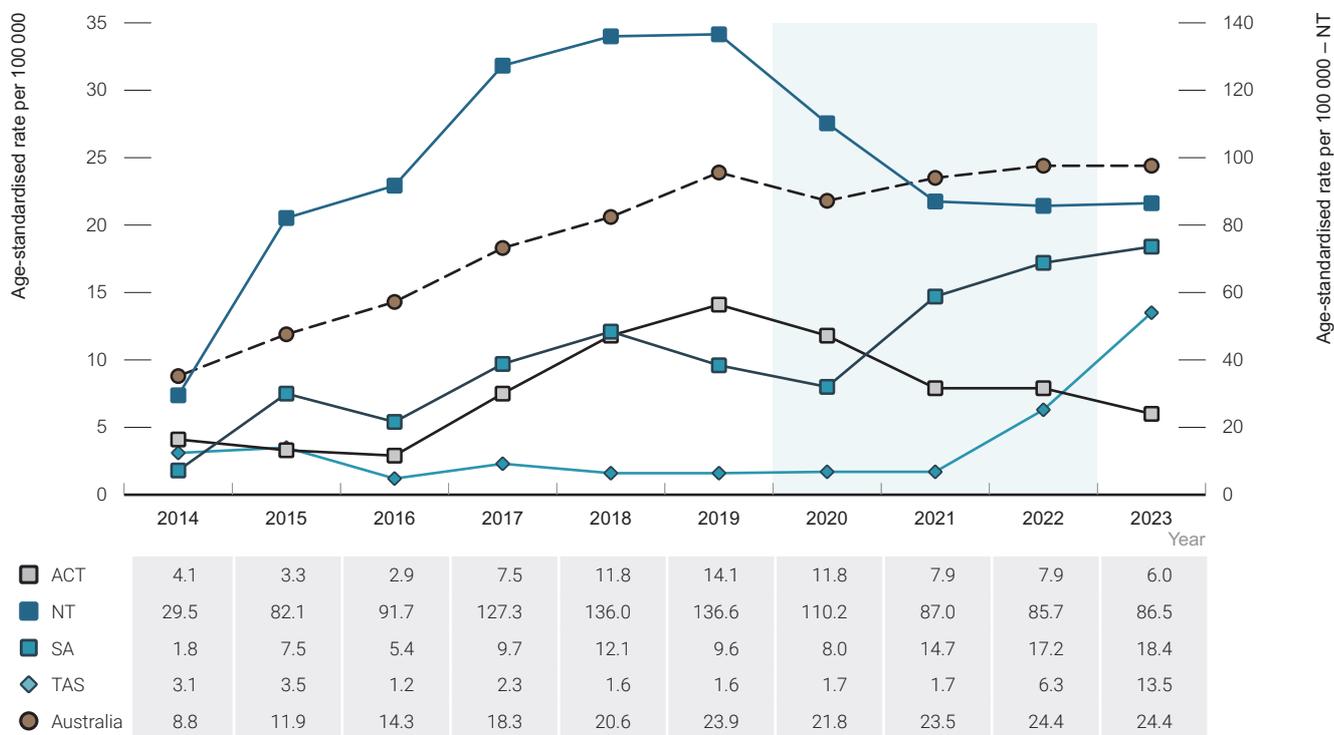
### What does this mean?

Infectious syphilis diagnosis rates increased considerably between 2014 and 2023. Each year in this period, men were diagnosed with infectious syphilis more often than women, with variations by region and jurisdiction.

In 2023, infectious syphilis notification rates were highest among people aged 30 to 34 years (60.0 per 100 000), 25 to 29 years (55.8 per 100 000), and 20 to 24 years (39.6 per 100 000). Among males in 2023, the notification rates of infectious syphilis were highest in those aged 30 to 34 years (100.1 per 100 000), 25 to 29 years (83.9 per 100 000) and 35 to 39 years (82.2 per 100 000). For females, notification rates were highest among those aged 20 to 24 years (29.1 per 100 000), 25 to 29 years (26.9 per 100 000), and 30 to 34 years (20.4 per 100 000). Breakdowns of infectious syphilis notification rates by age and sex can be found on the [Kirby Institute data site](#).

By state and territory in 2023, infectious syphilis notification rates were highest in the Northern Territory (86.5 per 100 000) and Queensland (26.1 per 100 000) (Figure 2).

**Figure 2** Infectious syphilis notification rate per 100 000 population by state/territory, 2014 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Australian National Notifiable Diseases Surveillance System.

Between 2014 and 2023, the infectious syphilis notification rate among Aboriginal and Torres Strait Islander peoples increased more than three-fold from 31.0 to 101.6 per 100 000. In 2023, the infectious syphilis notification rate was almost five times as high as among non-Indigenous people at 21.1 per 100 000 (Figure 3).

In 2023, 16% of infectious syphilis notifications among Aboriginal and Torres Strait Islander peoples were among people aged 15 to 19 years, compared to 2% among non-Indigenous people. A larger than expected increase in the number of people identifying as Aboriginal and/or Torres Strait Islander was *reported in the 2021 census*. This increase influenced the Australian Bureau of Statistics' population projections for Aboriginal and Torres Strait Islander people and means that trends before and after 2021 should be interpreted with caution. See *Bloodborne viral and sexually transmissible infections in Aboriginal and Torres Strait Islander people: annual surveillance report 2024* for further details <sup>(1)</sup>.

**Figure 3 Infectious syphilis notification rate per 100 000 population by Aboriginal and Torres Strait Islander status, 2014 – 2023**



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

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

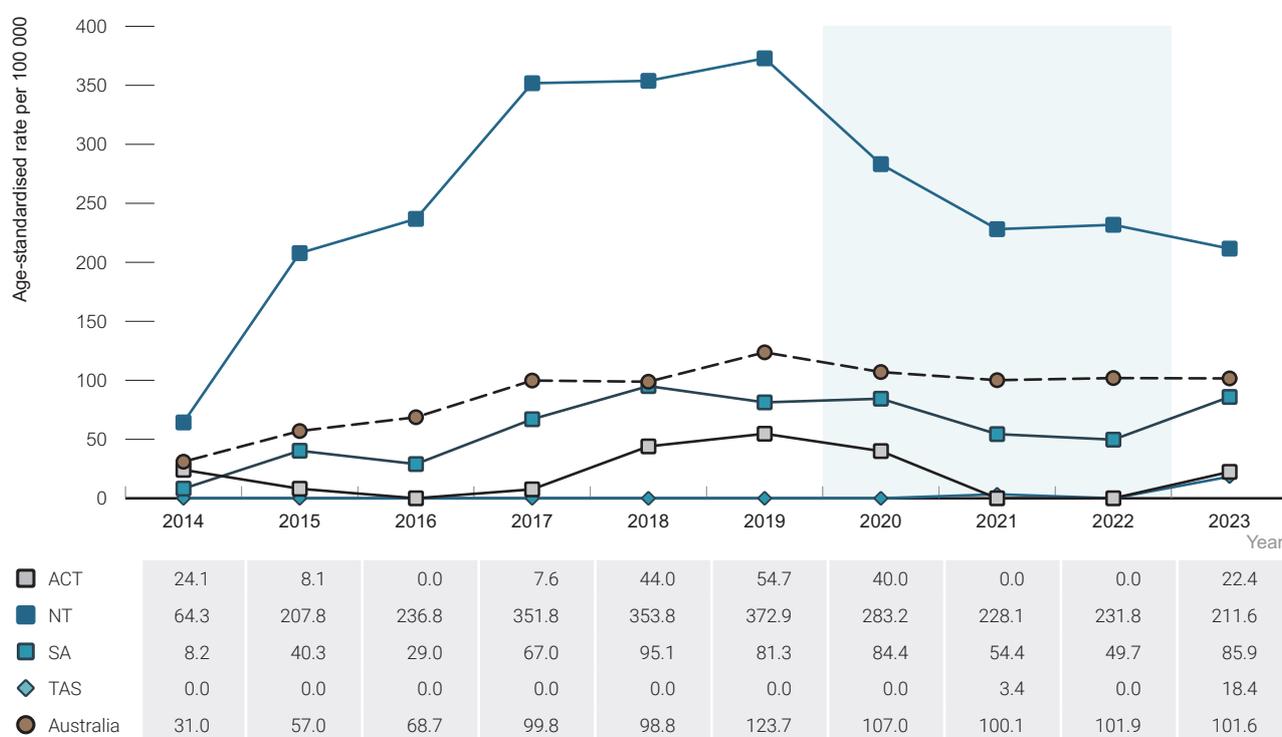
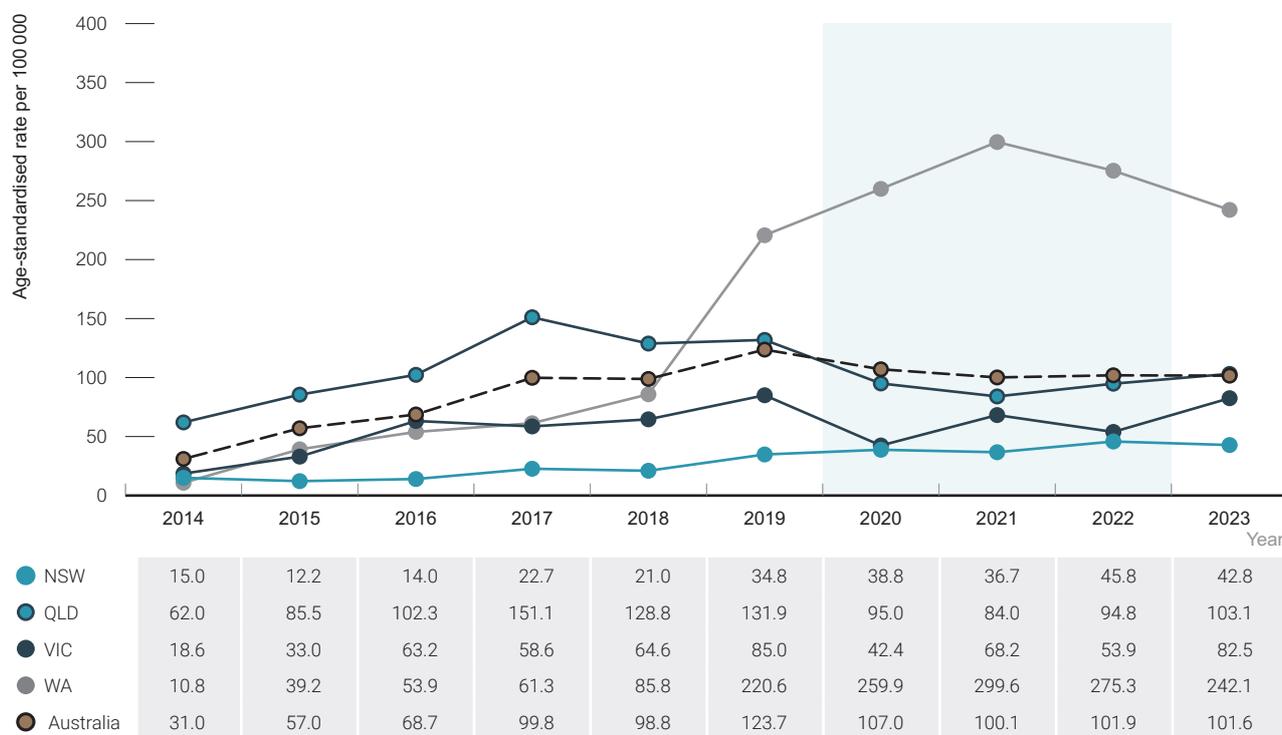


### What does this mean?

Although infectious syphilis rates among Aboriginal and Torres Strait Islander peoples have increased since 2014, rates have remained stable since 2020.

In 2023, infectious syphilis notification rates among Aboriginal and Torres Strait Islander peoples were highest in Western Australia (242.1 per 100 000) and the Northern Territory (211.6 per 100 000) (Figure 4).

**Figure 4 Infectious syphilis notification rate per 100 000 population among Aboriginal and Torres Strait Islander peoples by state/territory, 2014 – 2023**



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

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

## 3.2 Congenital syphilis

Between 2014 and 2023 there were 95 cases of congenital syphilis notified in Australia. Of those, 54 (57%) were among Aboriginal and Torres Strait Islander peoples. Of the 20 congenital syphilis cases notified in 2023, 13 were among Aboriginal and Torres Strait Islander infants and seven were among non-Indigenous infants (Table 1). In 2023, the congenital syphilis notification rate among Aboriginal and Torres Strait Islander infants was 53.3 per 100 000 live births, which is above the target of 50 per 100 000 live births, set by the World Health Organization as part of guidance for the elimination of vertical transmission of HIV and syphilis <sup>(2)</sup>. In 2023, the congenital syphilis notification rate among Aboriginal and Torres Strait Islander infants was more than 21 times as high as among non-Indigenous infants (2.5 per 100 000) (Figure 5).

Of the 95 congenital syphilis cases notified between 2014 and 2023, 30 cases resulted in the death of the infant (including stillbirth). Of these, 20 deaths occurred among Aboriginal and Torres Strait Islander infants, nine occurred among non-Indigenous infants, and one death occurred among infants for whom Aboriginal and Torres Strait Islander status was not reported (Figure 6). See *Bloodborne viral and sexually transmissible infections in Aboriginal and Torres Strait Islander people: annual surveillance report 2024* for further details <sup>(1)</sup>.

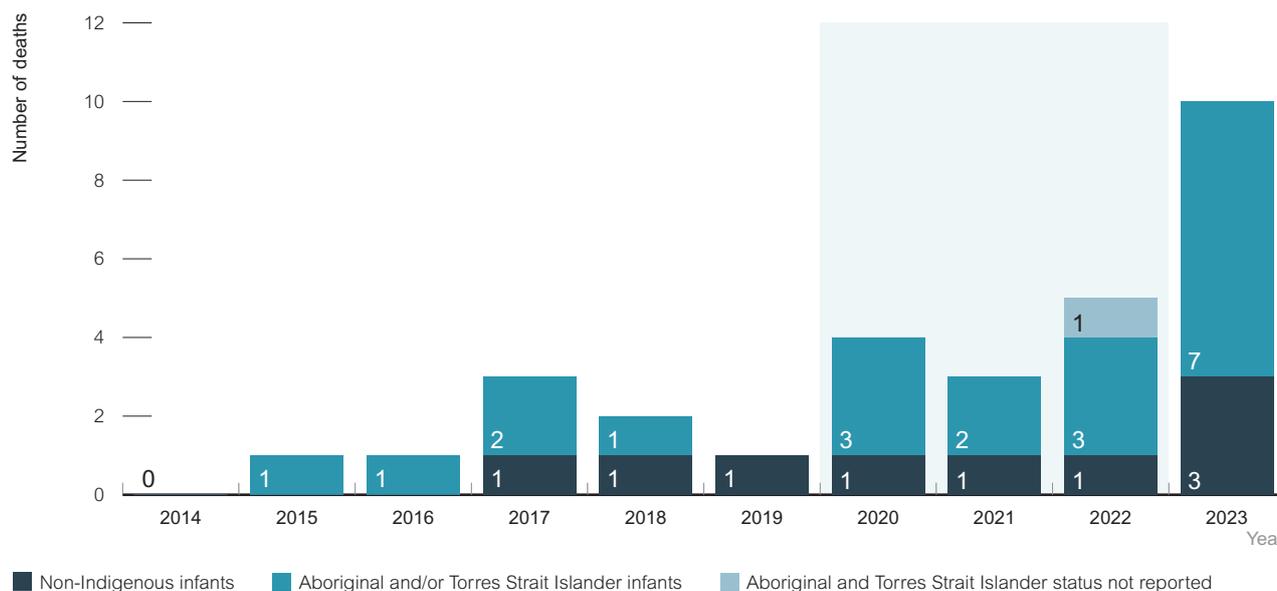
**Figure 5** Congenital syphilis rate per 100 000 live births by Aboriginal and Torres Strait Islander status<sup>a</sup>, 2014 – 2023



Notes: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.  
 a Non-Indigenous includes notifications where Aboriginal and Torres Strait Islander status was not reported.

Source: Australian National Notifiable Diseases Surveillance System.

**Figure 6** Number of deaths attributed to congenital syphilis by Aboriginal and Torres Strait Islander status, 2014 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Australian National Notifiable Diseases Surveillance System.

### 3.3 Syphilis testing

Clinical guidelines recommend at least annual STI testing for all sexually active gay and bisexual men, increasing to every three months for men with higher risk behaviour, and at each monitoring visit for HIV-positive gay and bisexual men <sup>(3)</sup>.

For other sexually active people aged 15 to 29 years, annual opportunistic syphilis testing is recommended, with more frequent testing recommended in areas of high prevalence <sup>(3)</sup>. Repeat syphilis testing is also recommended as part of routine antenatal screening, at the first antenatal visit, early in the third trimester (28–32 weeks), and at the time of birth. Guidelines may vary by local area, particularly in areas with a declared outbreak.

The number of syphilis tests per year among gay and bisexual men can give an indication of adherence to recommendations in the clinical guidelines <sup>(3)</sup>. The average number of syphilis tests per year among gay and bisexual men attending sexual health clinics and high-caseload general practice clinics in ACCESS (Australian Collaboration for Coordinated Enhanced Sentinel Surveillance) fluctuated between 2014 and 2023 and was 1.5 tests per year in 2024 (Figure 7). Among HIV-positive gay and bisexual men, the average number of syphilis tests declined from 1.9 tests per year in 2014 to 1.6 tests per year in 2023. Among HIV-negative gay and bisexual men in the same period, the average number of syphilis tests fluctuated and was 1.5 tests per year in 2023.

**Figure 7** Average number of syphilis tests per year among gay and bisexual men by HIV status, 2014 – 2023

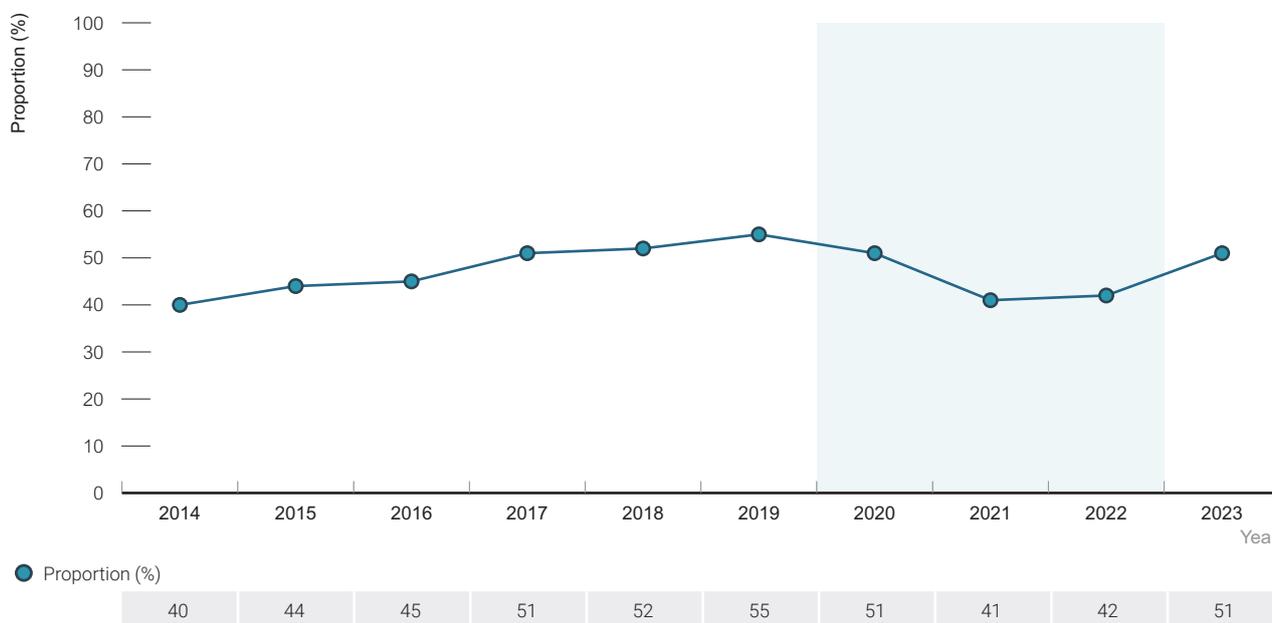


Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: ACCESS (Australian Collaboration for Coordinated Enhanced Sentinel Surveillance).

In 2023, the GBQ+ Community Periodic Surveys reported that 51% of participating gay and bisexual men completed comprehensive STI testing (at least four samples collected) in the 12 months prior to the survey. This proportion fluctuated between 40% and 55% over the reporting period and was 51% in 2023 (Figure 8). For more information, see [Annual reports of trends in behaviour](#) <sup>(4)</sup>.

**Figure 8** Gay and bisexual men reporting comprehensive STI testing in the 12 months prior to the survey, 2014 – 2023



Notes: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022. Comprehensive testing is defined as the collection of samples of at least four of the following: anal swab, throat swab, penile swab, urine, blood, among men tested for STI in the previous 12 months.

Source: GBQ+ Community Periodic Surveys.

## Repeat comprehensive testing

In 2023, among gay and bisexual men attending sexual health clinics in ACCESS, 53% had a repeat comprehensive STI screen (includes chlamydia and gonorrhoea test on any anatomical site, syphilis and HIV among HIV-negative men) within 13 months of a previous comprehensive screen, an increase from 40% in 2014 (Figure 9). Trends over time in the proportion with repeat comprehensive screening was similar between HIV-positive and HIV-negative gay and bisexual men between 2014 and 2023. Among women reporting sex work attending sexual health clinics in ACCESS, the proportion who had a repeat comprehensive STI screen fluctuated and was 58% in 2023 (Figure 9).

**Figure 9 Repeat comprehensive STI screen within 13 months of a test among gay and bisexual men by HIV-status and women reporting sex work, 2014 – 2023**



Notes: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022. Repeat screening pertains to prospective 13-month period. A comprehensive screen is defined as a test for chlamydia and gonorrhoea (any anatomical site), syphilis and HIV (among HIV-negative men).

Source: ACCESS (Australian Collaboration for Coordinated Enhanced Sentinel Surveillance).

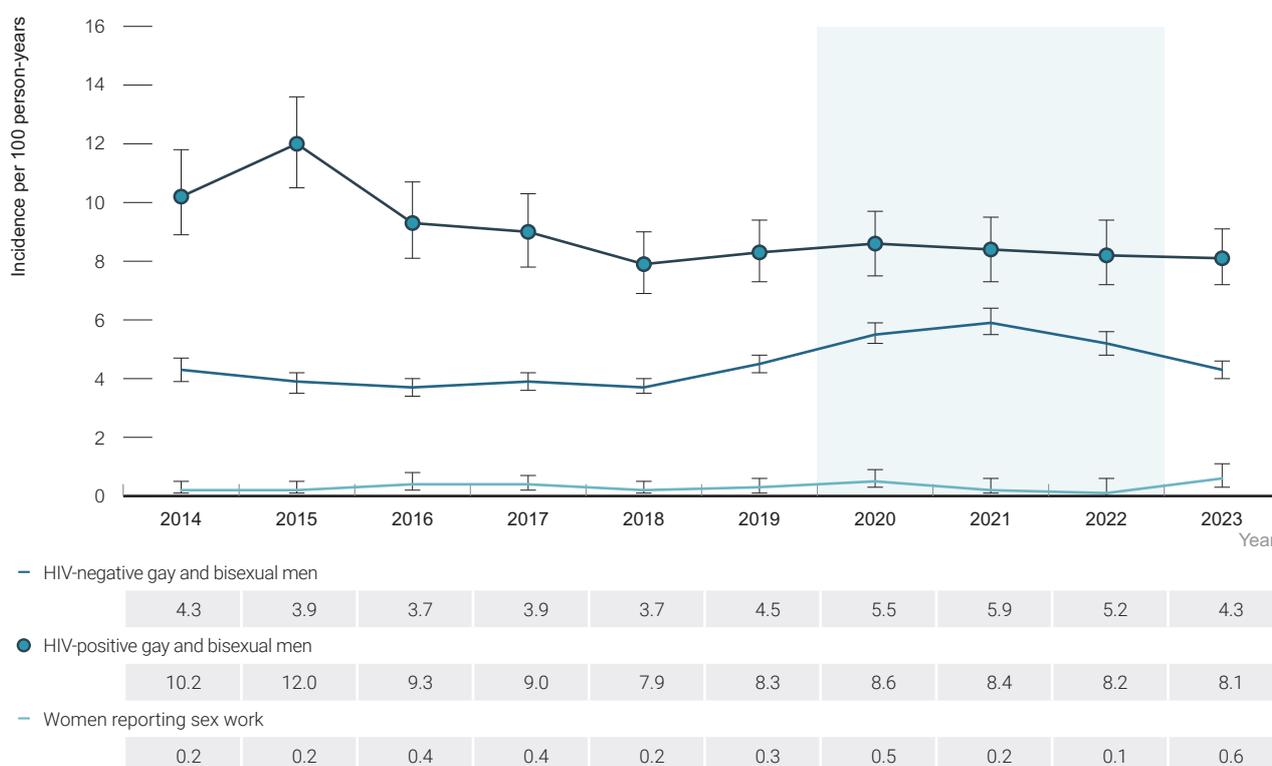
### 3.4 Infectious syphilis incidence

Infectious syphilis incidence is an important indicator of new transmissions, reflecting the impact of current prevention programs, whereas prevalence reflects the burden of disease. Infectious syphilis incidence is calculated by dividing the number of incident infections (negative test followed by a syphilis diagnosis) among people undergoing repeat syphilis testing at sexual health services by the person's time at risk (determined by the time between repeat syphilis tests) <sup>(5)</sup>. These incidence estimates represent people attending sexual health clinics and may not be generalisable to broader priority populations.

In 2023, the incidence of infectious syphilis among HIV-positive gay and bisexual men attending sexual health clinics was 8.1 new infections per 100 person-years, compared with 4.3 per 100 person-years among HIV-negative gay and bisexual men. Between 2014 and 2023, infectious syphilis incidence fluctuated among HIV-negative and HIV-positive gay and bisexual men (Figure 10). Caution should be taken with interpreting between-year trends as confidence intervals overlap, indicating between-year differences are not statistically significant.

In 2023, the infectious syphilis incidence rate among women reporting sex work was 0.6 per 100 person-years, up from 0.2 per 100 person-years in 2014 (Figure 10). Small numbers of women reporting sex work included in incidence calculations mean that this trend should be interpreted with caution.

**Figure 10** Infectious syphilis incidence in sexual health clinic attendees by select population, 2014 – 2024



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: ACCESS (Australian Collaboration for Coordinated Enhanced Sentinel Surveillance).

### 3.5 Syphilis diagnosis and care cascade

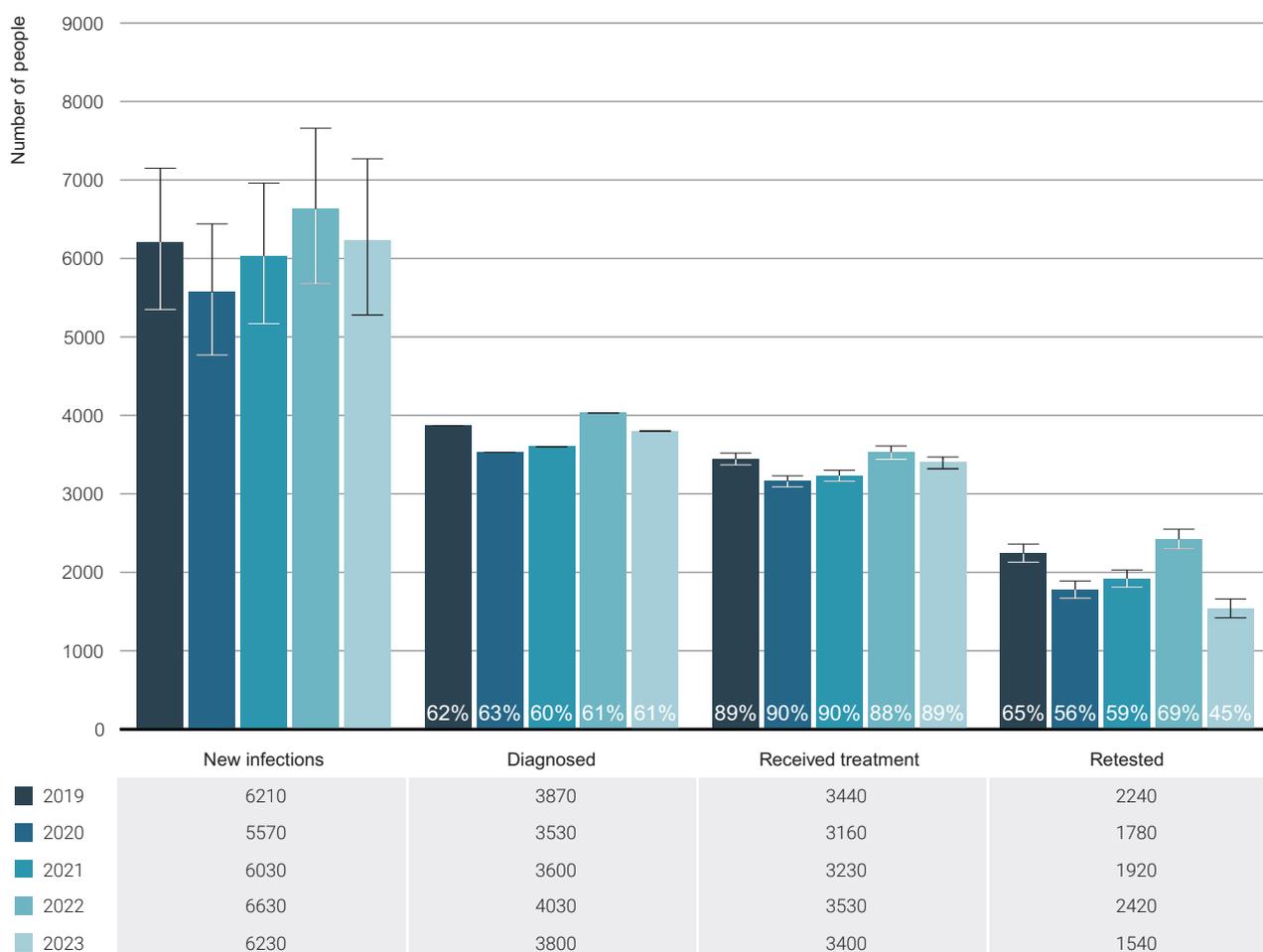
This report includes the syphilis diagnosis and care cascade for gay and bisexual men, which estimates the number of gay and bisexual men with infectious syphilis infections in Australia, and the number and proportion who were diagnosed, received treatment and had a retest at around three months after treatment, as recommended in clinical guidelines <sup>(3)</sup>.

These estimates are used to support improvement in the delivery of services to gay and bisexual men infected with syphilis across the entire continuum of care—from diagnosis of infection and uptake of treatment to retesting. As infectious syphilis is concentrated largely among urban gay and bisexual men and in young people living in remote Aboriginal and Torres Strait Island communities, these populations are the focus of the cascades. Further data are needed to prepare data for an infectious syphilis cascade for young people living in remote Aboriginal and Torres Strait Island communities, which will be explored in future reports.

Using available data and accounting for uncertainties, the proportions of gay and bisexual men in each stage of the cascade in Australia were estimated. Methods and the associated uncertainties are described in detail in the [Methodology](#). The cascade focuses on gay and bisexual men, as guidelines recommend regular testing in this group and a significant proportion of infectious syphilis notifications occur in this group.

In 2023, there were an estimated 6230 new syphilis infections among gay and bisexual men, similar to 6210 new infections in 2019. Of new infections in 2023, an estimated 61% (3800) were diagnosed. Of those diagnosed in 2023, 89% (3400) received treatment. Of those who received treatment in 2023, only 45% (1540) had a retest between six weeks and six months after diagnosis, down from 65% (2240) in 2019 (Figure 11).

**Figure 11** The syphilis diagnosis and care cascade in gay and bisexual men, 2019 – 2023



Source: See [Methodology](#) for further details of mathematical modelling used to generate estimates.

# 4 Chlamydia

See page 5 for summary.

## 4.1 Chlamydia notifications

Chlamydia (*Chlamydia trachomatis* infection) remains the most frequently notified STI in Australia with 109 451 notifications reported in 2023. Of these, equal proportions were diagnosed among females and males (54 205, 50% and 54 881, 50% respectively), and around half (59 930, 52%) were among people aged 20 to 29 years. Just under three quarters (79 059, 72%) were among people residing in major cities (Table 2). Of all chlamydia notifications reported in 2023, 8557 (8%) were among Aboriginal and Torres Strait Islander peoples, 49 414 (45%) were among non-Indigenous people, and 51 480 (47%) were among people for whom Aboriginal and Torres Strait Islander status was not reported (Table 2). See [Bloodborne viral and sexually transmissible infections in Aboriginal and Torres Strait Islander people: annual surveillance report 2024](#) for further details <sup>(1)</sup>.

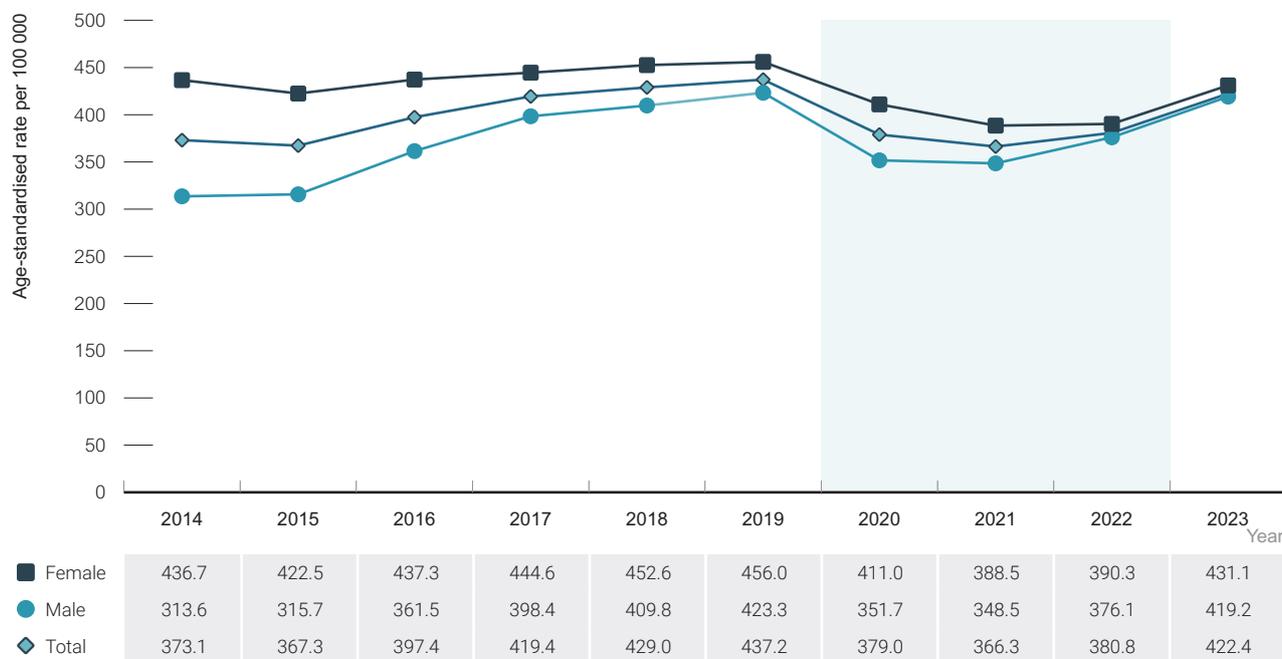
**Table 2** Characteristics of chlamydia notifications, 2014 – 2023

Characteristic	Year of diagnosis									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Total cases</b>	86 788	86 398	94 725	101 214	104 851	107 384	91 439	87 366	94 356	109 451
<b>Gender</b>										
Female	49 708	48 719	51 087	52 530	54 024	54 545	48 139	44 826	46 836	54 205
Male	37 027	37 627	43 410	48 447	50 632	52 503	43 075	42 330	47 199	54 881
Not reported	53	52	228	237	195	336	225	210	321	365
<b>Age group</b>										
0–14	687	511	537	475	469	459	369	335	330	392
15–19	19 185	17 496	17 640	17 694	17 422	16 730	14 794	14 859	15 423	16 762
20–24	31 676	30 694	32 566	34 139	34 745	34 851	30 282	28 122	30 042	34 235
25–29	17 136	17 789	20 126	21 898	22 808	23 380	19 941	18 258	19 373	22 695
30–34	7 828	8 717	10 179	11 437	12 243	13 082	10 999	10 893	11 835	14 073
35–39	3 823	4 246	5 209	5 865	6 775	7 559	6 342	6 235	7 046	8 460
40+	6 447	6 929	8 452	9 684	10 377	11 313	8 699	8 658	10 297	12 825
Not reported	6	16	16	22	12	10	13	6	10	9
<b>Median age at diagnosis</b>										
Female	22	22	22	22	23	23	23	23	23	23
Male	25	25	26	26	27	27	27	27	28	28
Overall	23	23	24	24	24	25	25	25	25	25
<b>Remoteness</b>										
Major cities	58 688	59 521	66 437	72 884	75 781	77 268	66 367	62 824	67 766	79 059
Regional	21 901	20 950	21 719	21 655	22 175	22 363	19 753	19 708	20 958	23 036
Remote	4 464	4 242	4 271	4 114	4 402	4 309	3 813	3 873	4 126	4 985
Not reported	1 735	1 685	2 298	2 561	2 493	3 444	1 506	961	1 506	2 371
<b>Aboriginal and Torres Strait Islander status</b>										
Aboriginal and/or Torres Strait Islander	7 643	7 597	7 828	8 038	8 467	8 548	7 854	7 637	7 810	8 557
Non-Indigenous	34 593	34 604	38 057	41 493	44 051	48 417	42 190	40 425	40 701	49 414
Not reported	44 552	44 197	48 840	51 683	52 333	50 419	41 395	39 304	45 845	51 480
<b>State/Territory</b>										
ACT	1 197	1 266	1 362	1 462	1 577	1 640	1 443	1 338	1 454	1 544
NSW	22 886	22 550	25 976	28 949	31 059	32 605	27 076	25 089	25 835	31 237
NT	2 997	2 737	2 630	2 667	2 780	3 054	2 645	2 632	2 576	3 014
QLD	21 139	21 185	22 915	23 942	23 810	24 292	22 523	22 903	23 359	26 031
SA	5 495	5 384	5 487	5 915	6 267	6 430	5 645	5 507	5 617	6 380
TAS	1 776	1 665	1 688	1 584	1 563	1 533	1 291	1 452	1 653	1 739
VIC	19 956	20 441	22 856	25 198	26 274	26 271	20 033	17 507	22 816	26 657
WA	11 342	11 170	11 811	11 497	11 521	11 559	10 783	10 938	11 046	12 849

Source: Australian National Notifiable Diseases Surveillance System.

The chlamydia notification rate fluctuated between 2014 and 2023, and was 422.4 per 100 000 in 2023. Similar trends were seen among both males and females (Figure 20). The chlamydia notification rate was higher among females than males every year from 2014 to 2023 however the difference between males and females reduced towards the end of this period. In 2023 the chlamydia notification rate was 431.1 per 100 000 females and 419.2 per 100 000 males. The decline in the notification rate between 2019 and 2022 was likely due to a decrease in testing rates related to the COVID-19 pandemic and may not be reflective of the trend in new chlamydia infections.

**Figure 12 Chlamydia notification rate per 100 000 population by sex, 2014 – 2023**



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Australian National Notifiable Diseases Surveillance System.



### What does this mean?

Among women, chlamydia diagnosis rates in 2023 are about the same as they were in 2014. Among men, diagnosis rates have increased since 2014. The rates dropped between 2019 and 2021, probably because of the COVID-19 pandemic.

The trends in chlamydia notification rates varied by age group. Between 2014 and 2023, among those 15 to 19 years the chlamydia notification rate declined by 22% from 1305 to 1023 per 100 000. Conversely, notification rates among those aged 30 to 39 years and 40 to 49 years increased in the same period (60% and 76%, respectively). Among those aged 20 to 29 years, the chlamydia notification rate fluctuated and was 1 521 per 100 000 in 2023. Similar patterns were seen among males and females. Breakdowns of chlamydia notification rates by age and sex can be found on the [Kirby Institute data site](#).

By state and territory, in 2023, the chlamydia notification rate was highest in the Northern Territory, at 1125.2 per 100 000. The chlamydia notification rate fluctuated between 2014 and 2023 in every state and territory (Figure 13).

**Figure 13 Chlamydia notification rate per 100 000 population by state/territory, 2014 – 2023**



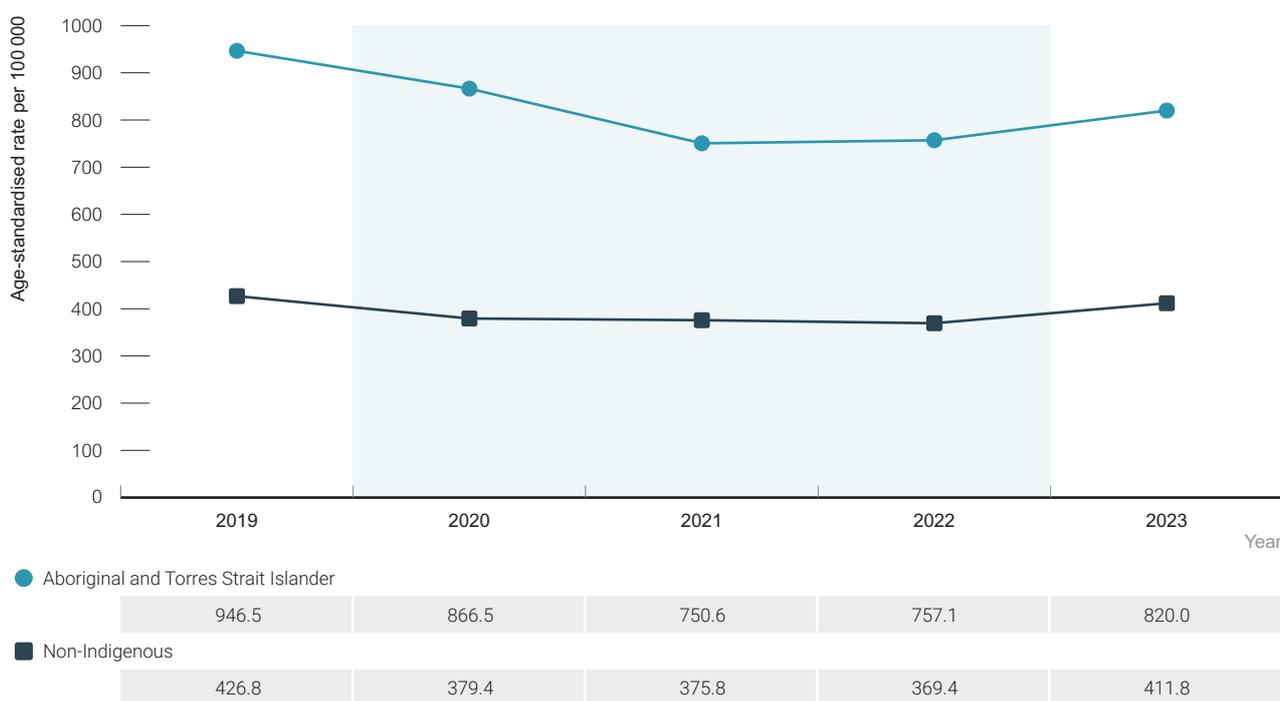
Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Australian National Notifiable Diseases Surveillance System.

The chlamydia notification rate among Aboriginal and Torres Strait Islander peoples is based on data from six jurisdictions (the Australian Capital Territory, New South Wales, the Northern Territory, Queensland, South Australia, and Western Australia), where Aboriginal and Torres Strait Islander status was  $\geq 50\%$  complete each of the past five years (2019 – 2023).

The chlamydia notification rate among Aboriginal and Torres Strait Islander peoples declined between 2019 and 2023 from 946.5 to 820.0 per 100 000. In 2023, the chlamydia notification rate among Aboriginal and Torres Strait Islander peoples was close to twice as high as among non-Indigenous people (820.0 vs 411.8 per 100 000) (Figure 14). A larger than expected increase in the number of people identifying as Aboriginal and/or Torres Strait Islander was *reported in the 2021 census*. This increase influenced the Australian Bureau of Statistics' population projections for Aboriginal and Torres Strait Islander people and means that trends before and after 2021 should be interpreted with caution. See *Bloodborne viral and sexually transmissible infections in Aboriginal and Torres Strait Islander people: annual surveillance report 2024* for further details <sup>(1)</sup>.

**Figure 14** Chlamydia notification rate per 100 000 population by Aboriginal and Torres Strait Islander status, 2019 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

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



### What does this mean?

Between 2019 and 2023, chlamydia diagnosis rates among Aboriginal and Torres Strait Islander peoples remained at least twice as high as among non-Indigenous people.

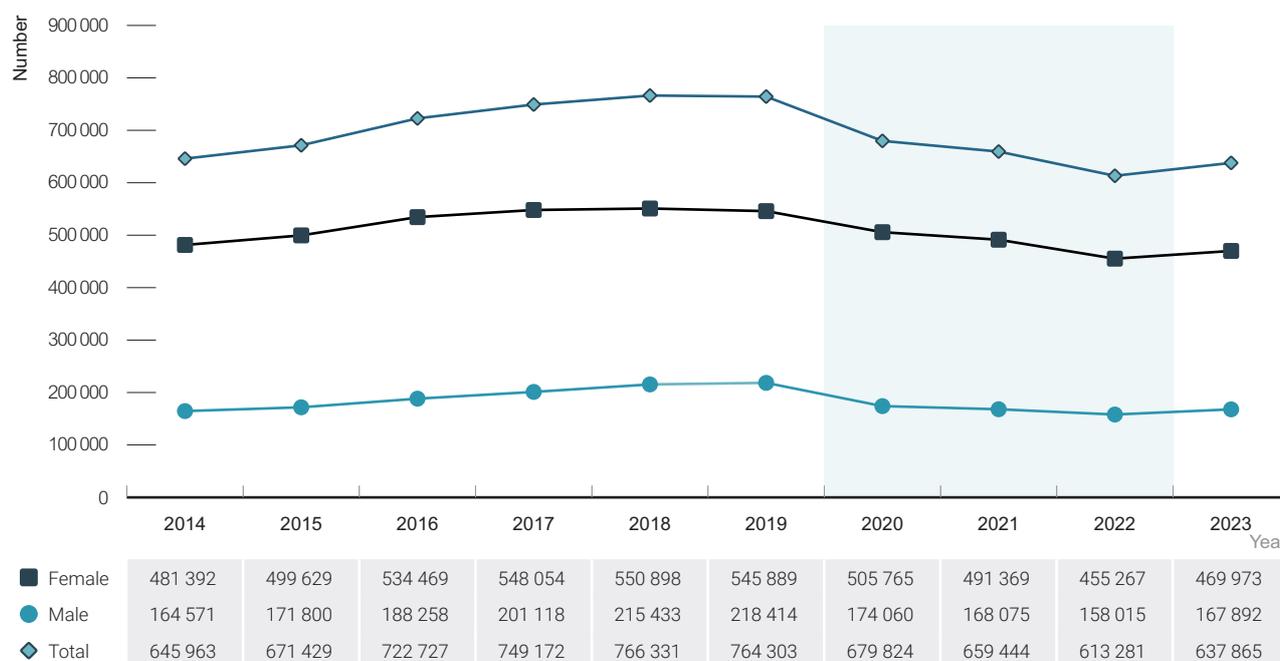
## 4.2 Chlamydia testing

Clinical guidelines recommend the opportunistic offer of chlamydia screening to all young people (15 to 29 years of age) at least annually, including offering self-collected samples when appropriate, and regular testing for women reporting sex work. Annual testing is recommended for sexually active gay and bisexual men and testing every three months for higher risk men based on behavioural criteria and those taking pre-exposure prophylaxis (PrEP) <sup>(3)</sup>. Chlamydia testing data are included in this report from a number of sources including Medicare, and a sample of sexual health clinics and high-caseload general practice clinics.

### Medicare-rebated chlamydia tests

Between 2014 and 2019, the number of Medicare-rebated chlamydia tests among those aged 15 to 29 years increased by 18%, from 645 963 in 2014, to 764 303 in 2019, with increases among both men (33% increase) and women (13% increase) (Figure 15). Between 2019 and 2023, the number of tests declined by 17%, with a greater decline in the number of tests seen among males (28%) than females (17%). The decline in the number of chlamydia tests was likely related to the challenges accessing healthcare because of the COVID-19 pandemic. Declines in testing also likely influenced the decline in notification rates seen between 2019 and 2022. It is important to note that these tests capture Medicare-rebated tests and that testing conducted in government hospitals and sexual health services are usually not included. Therefore, the numbers given here underestimate all chlamydia tests conducted in Australia.

**Figure 15** Number of Medicare-rebated chlamydia tests among people aged 15 to 29 years by sex, 2014 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Medicare.



#### What does this mean?

Every year between 2014 and 2023, women obtained more than twice the number of Medicare-rebated chlamydia tests than men. Over this time, the number of tests fluctuated among men and women.

In 2023, 16% of people aged 15–29 years attending general practice had a Medicare-rebated chlamydia test in the previous 12 months (22% of women and 10% of men), with proportions steady since the start of the COVID-19 pandemic but higher than the years preceding it (Figure 16). Despite the higher proportion of people getting tested for chlamydia at their general practice, the lower number of tests conducted since 2020 overall suggests that the number of people seeking health care at their general practice has declined. Across all populations, the number of face-to-face Medicare-rebated General Practice appointments declined by 22% between 2019 and 2022 <sup>(6)</sup>.

**Figure 16** Proportion of general practice attendees aged 15–29 years who had a Medicare-rebated chlamydia test in a year, by sex, 2014 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Medicare.

It is important to consider trends in chlamydia notifications in the context of patterns of testing, as changes in notification rates can be an indication of changes in incidence, changes in testing, or both. In 2023, the number of chlamydia notifications per 100 Medicare-rebated chlamydia tests was 11.6. By sex, the number of chlamydia notifications per 100 Medicare-rebated chlamydia tests was 18.2 for males and 9.1 for females (Figure 17). Males had a higher number of notifications per 100 tests than females each year from 2014 to 2023. Further breakdowns by age and sex are available on the [Kirby Institute data site](#).

**Figure 17** Number of chlamydia notifications per 100 Medicare-rebated chlamydia tests by sex, 2014 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Medicare; National Notifiable Diseases Surveillance System.



### What does this mean?

For every year between 2014 and 2023, on average, men were diagnosed more than twice as often as women for each chlamydia test undertaken.

## 4.3 Chlamydia incidence

Chlamydia incidence is an important indicator of new transmissions and can reflect the impact of prevention programs, whereas prevalence reflects the burden of disease. Chlamydia incidence is available from ACCESS<sup>(7,8)</sup> and is calculated by dividing the number of incident infections (negative test followed by a positive test) by the person's time at risk (determined by the time between repeat chlamydia tests)<sup>(5)</sup>. These incidence estimates represent populations attending sexual health clinics and may not be generalisable to the broader priority populations.

In 2023, chlamydia incidence among HIV-positive gay and bisexual men was 44.1 new infections per 100 person-years, which was higher than among HIV-negative gay and bisexual men (28.1 per 100 person-years). There was a 27% increase in chlamydia incidence among HIV-positive gay and bisexual men since 2014 (from 34.6 per 100 person-years) and a 54% increase in HIV-negative gay and bisexual men since 2014 (from 18.3 per 100 person-years) (Figure 18). Among women reporting sex work, chlamydia incidence increased by 36% between 2014 and 2023 (from 9.7 to 13.2 per 100 person-years) (Figure 18).

Caution should be taken with interpretation as some confidence intervals overlap, indicating that these between-year differences are not statistically significant. Same year differences in incidence estimates between reports are likely due to variations in ACCESS clinics included in the analysis, depending on data availability.

**Figure 18 Chlamydia incidence in sexual health clinic attendees by select population, 2014 – 2023**



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: ACCESS (Australian Collaboration for Coordinated Enhanced Sentinel Surveillance).

## 4.4 Chlamydia diagnosis and care cascade

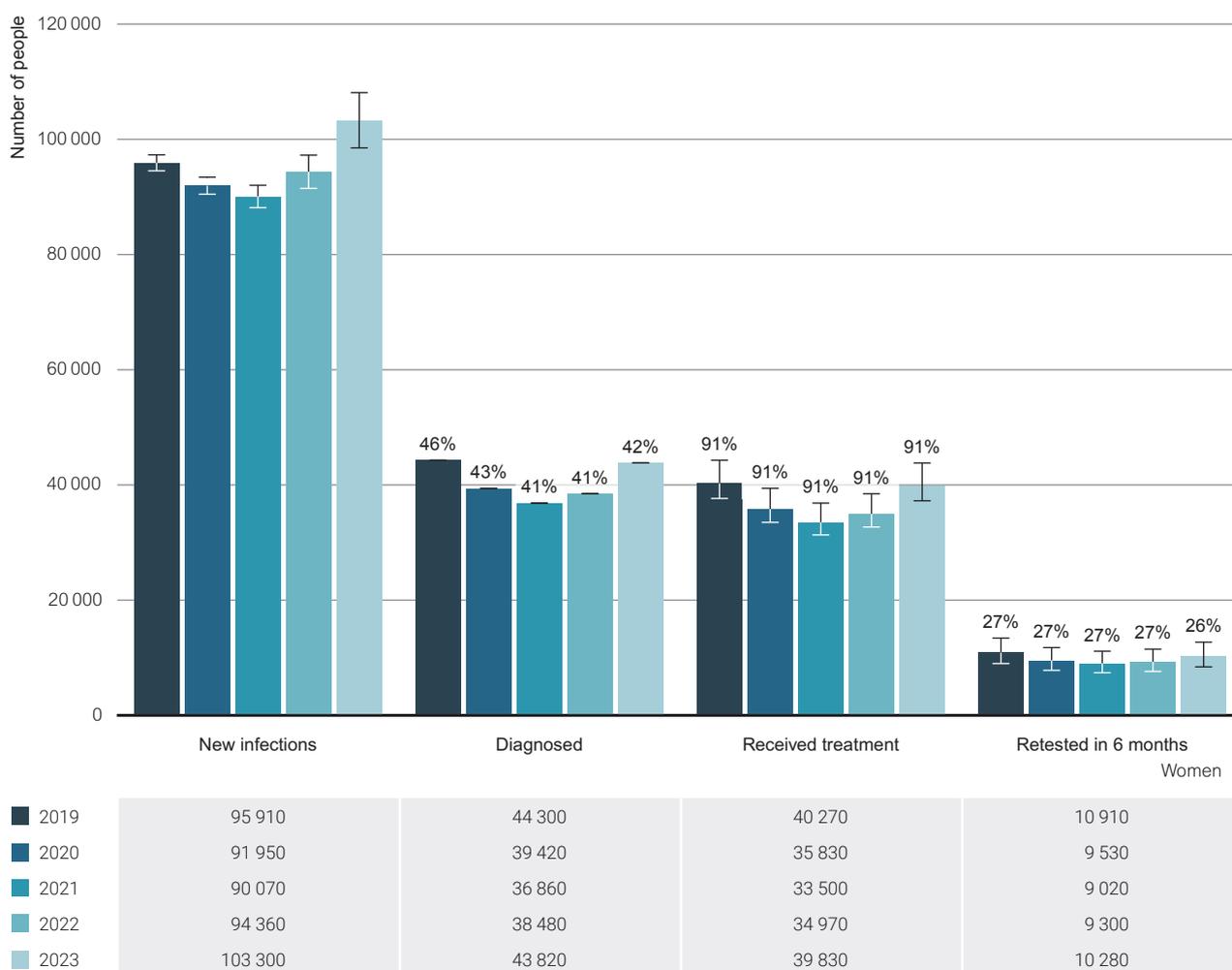
This report includes the chlamydia diagnosis and care ‘cascade’ for women aged 15–29 years, which estimates the number and proportion of women with new chlamydia infections in Australia, and the number and proportion who were notified, received treatment and had a retest at three months post-treatment, as recommended in clinical guidelines <sup>(3)</sup>.

These estimates are used to support the improvement of delivery of services to people with chlamydia across the entire continuum of care—from diagnosis of infection, uptake of treatment, and management (retesting).

Using available data and accounting for uncertainties, the proportions of women in each stage of the cascade in Australia were estimated. Methods and the associated uncertainties are described in detail in the [Methodology](#). The approach was informed by recommendations from a national stakeholder reference group (see [Acknowledgements](#)). The cascade focuses on women aged 15–29 years, as guidelines recommend annual testing in this group and most chlamydia diagnoses occur in this age group.

In 2023, there were an estimated 103 300 new chlamydia infections in women aged 15–29 years, including reinfections, up from 95 910 infections in 2019. Of new infections in 2023, 43 820 (42%) were diagnosed, an estimated 39 830 (91%) received treatment, and 10 280 (26%) had a retest between six weeks and six months after diagnosis (Figure 19). The greatest gaps in the cascade were therefore at the diagnosis and retesting steps. Similar trends in the gaps were observed between 2019 and 2023.

**Figure 19** The chlamydia diagnosis and care cascade among women aged 15–29 years, 2019 – 2023



Source: See [Methodology](#) for further details of mathematical modelling used to generate estimates.

# 5 Gonorrhoea

See page 6 for summary.

## 5.1 Gonorrhoea notifications

There were 40 029 gonorrhoea (*Neisseria gonorrhoeae*) notifications in Australia in 2023, a 155% increase from 15 671 notifications in 2014. In 2023, 69% of notifications were among males (27 677 notifications), 75% were among people residing in major cities (30 221 notifications), and 41% (16 587 notifications) were among people aged 20 to 29 years (Table 3).

Of the 40 029 notifications in 2023, 5631 (14%) were among Aboriginal and Torres Strait Islander peoples, 26 283 (66%) were among non-Indigenous peoples, and there were a further 8115 (20%) notifications for whom Aboriginal and Torres Strait Islander status was not reported (Table 3). The ratio of male to female notifications among Aboriginal and Torres Strait Islander peoples in 2023 was 0.8:1 compared with 2.8:1 among non-Indigenous people suggesting greater transmission attributed to male-to-male sex among non-Indigenous people. In 2023, almost a quarter (22%) of gonorrhoea notifications among Aboriginal and Torres Strait Islander peoples were among people aged 15 to 19 years, compared to 6% among non-Indigenous people aged 15 to 19 years. See *Bloodborne viral and sexually transmissible infections in Aboriginal and Torres Strait Islander people: annual surveillance report 2024* for further details <sup>(1)</sup>.

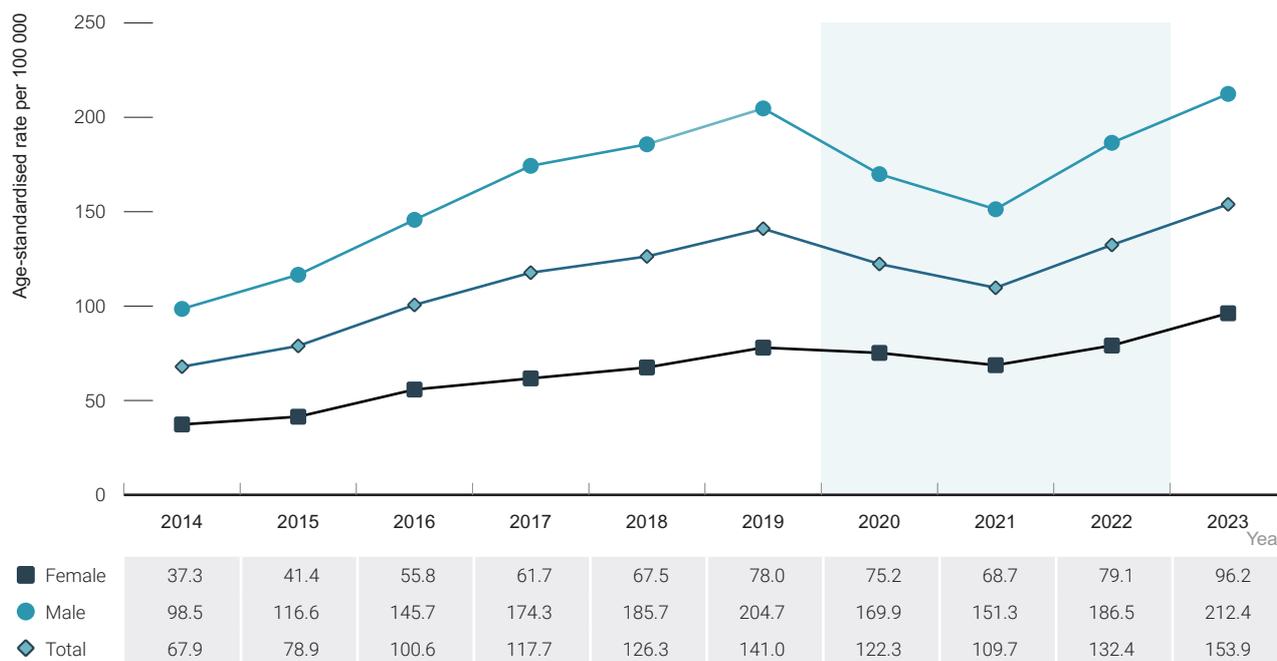
**Table 3 Characteristics of gonorrhoea notifications, 2014 – 2023**

Characteristic	Year of diagnosis									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Total cases</b>	15 671	18 462	23 853	28 353	30 838	34 742	29 801	26 598	33 145	40 029
<b>Gender</b>										
Female	4 202	4 747	6 497	7 290	8 100	9 426	8 941	8 097	9 628	12 180
Male	11 430	13 689	17 308	21 006	22 645	25 206	20 766	18 424	23 385	27 677
Not reported	39	26	48	57	93	110	94	77	132	172
<b>Age group</b>										
0–14	252	219	254	202	200	201	171	165	143	247
15–19	2 047	2 010	2 385	2 585	2 425	2 524	2 365	2 171	2 738	3 423
20–24	3 673	4 113	4 969	5 958	5 940	6 373	5 346	4 642	6 284	8 192
25–29	3 258	4 056	5 322	6 395	6 876	7 878	6 597	5 721	6 863	8 395
30–34	2 194	2 804	3 870	4 744	5 458	6 346	5 572	4 963	5 902	7 063
35–39	1 348	1 743	2 407	3 019	3 605	4 301	3 854	3 403	4 304	4 789
40+	2 889	3 462	4 597	5 450	6 332	7 117	5 883	5 531	6 901	7 918
Not reported	10	55	49	0	2	2	13	2	10	2
<b>Median age at diagnosis</b>										
Female	23	24	25	25	26	26	27	26	25	25
Male	29	29	30	30	31	31	31	31	32	31
Overall	27	28	28	29	29	30	30	30	30	29
<b>Remoteness</b>										
Major cities	10 423	12 969	17 767	20 996	22 812	26 258	22 796	19 962	25 242	30 221
Regional	2 031	2 054	2 505	3 064	3 316	3 856	3 726	3 406	3 972	5 109
Remote	2 591	2 717	2 789	2 692	3 055	2 385	2 451	2 722	3 084	3 456
Not reported	626	722	792	1 601	1 655	2 243	828	508	847	1 243
<b>Aboriginal and Torres Strait Islander status</b>										
Aboriginal and/or Torres Strait Islander	3 612	3 655	3 877	4 249	4 784	4 202	4 451	4 712	5 098	5 631
Non-Indigenous	8 054	9 794	13 254	17 300	19 237	21 767	17 737	15 539	19 156	26 283
Not reported	4 005	5 013	6 722	6 804	6 817	8 773	7 613	6 347	8 891	8 115
<b>State/Territory</b>										
ACT	120	141	201	250	328	332	284	330	368	481
NSW	4 836	5 404	6 979	9 196	10 531	11 673	9 832	7 589	10 294	12 357
NT	1 742	1 829	1 769	1 755	2 130	1 346	1 344	1 672	2 079	2 449
QLD	2 724	3 032	4 033	5 078	4 908	5 980	6 356	5 402	5 887	7 497
SA	736	794	1 110	1 271	1 290	2 094	1 661	1 441	1 790	2 248
TAS	65	57	83	117	149	158	150	185	258	362
VIC	3 254	4 897	6 317	7 342	8 085	9 233	6 595	7 062	9 167	9 970
WA	2 194	2 308	3 361	3 344	3 417	3 926	3 579	2 917	3 302	4 665

Source: Australian National Notifiable Diseases Surveillance System.

Between 2014 and 2023 there was a 127% increase in the gonorrhoea notification rate (from 67.9 to 153.9 per 100 000) (Figure 23). A decline in the notification rate between 2019 and 2021 is likely in part due to a decrease in testing rates related to the COVID-19 pandemic and reflect the trend in new gonorrhoea infections. Similar trends were observed among males and females. The gonorrhoea notification rate has been higher among males than females in each year since 2014 and in 2023 was 212.4 per 100 000 among males and 96.2 per 100 000 among females.

**Figure 20** Gonorrhoea notification rate per 100 000 population by sex, 2014 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Australian National Notifiable Diseases Surveillance System.



### What does this mean?

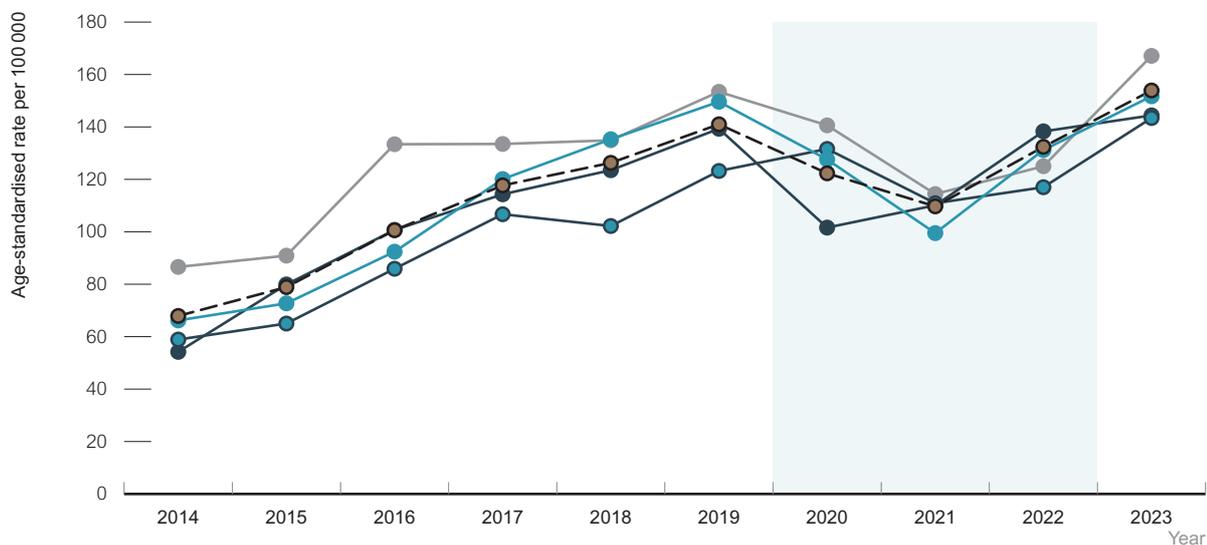
Apart from over the peak of the COVID-19 pandemic, gonorrhoea diagnosis rates increased steadily between 2014 and 2023. Each year in this period, men were diagnosed with gonorrhoea more often than women.

Between 2014 and 2023 the gonorrhoea notification rate increased for all age groups aged 14 years and older, with the largest increases among those aged 35 to 39 years (183% increase). In 2023, the highest notification rates were among those aged 20 to 24 years (462.7 per 100 000), 25 to 29 years (425.4 per 100 000), and 30 to 34 years (350.0 per 100 000). Similar trends were seen among males and females.

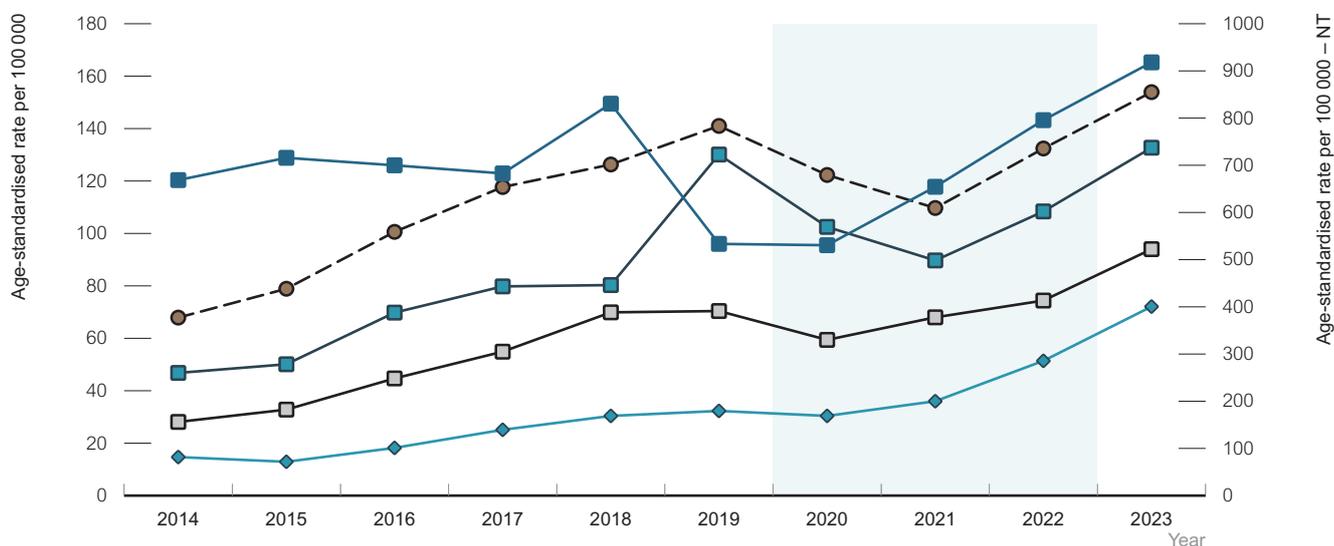
Among males in 2023, the highest notification rates were among those aged 25 to 29 years (584.7 per 100 000), 30 to 34 years (554.0 per 100 000), and 20 to 24 years (500.9 per 100 000). Among females in 2023, the highest notification rates were among those aged 20 to 24 years (421.5 per 100 000), 25 to 29 years (261.8 per 100 000), and 15 to 19 years (258.4 per 100 000). For full notifications data by age, please see the [Kirby Institute data site](#).

By state and territory, the gonorrhoea notification rate was highest every year from 2014 to 2023 in the Northern Territory and was 918.1 per 100 000 in 2023. Between 2014 and 2023, gonorrhoea notification rates increased in every state and territory with the largest increases recorded in Tasmania (390% increase), the Australian Capital Territory (234% increase), and South Australia (184% increase) (Figure 21).

**Figure 21** Gonorrhoea notification rate per 100 000 population by state/territory, 2014 – 2023



● NSW	66.2	72.7	92.4	120.1	135.3	149.6	127.6	99.5	131.2	151.7
● QLD	58.9	65.0	85.9	106.7	102.2	123.2	131.6	110.9	117.0	143.4
● VIC	54.2	79.9	100.7	114.3	123.5	139.3	101.6	110.1	138.3	144.4
● WA	86.6	90.9	133.4	133.5	134.9	153.4	140.6	114.4	125.0	167.1
● Australia	67.9	78.9	100.6	117.7	126.3	141.0	122.3	109.7	132.4	153.9



■ ACT	28.1	32.8	44.7	54.9	69.9	70.4	59.4	68.0	74.4	94.0
■ NT	668.6	715.8	699.9	682.7	830.5	533.4	530.6	654.4	795.6	918.1
■ SA	46.8	50.1	69.8	79.8	80.3	130.1	102.5	89.7	108.4	132.7
◆ TAS	14.7	12.9	18.2	25.1	30.4	32.3	30.4	36.0	51.4	72.1
● Australia	67.9	78.9	100.6	117.7	126.3	141.0	122.3	109.7	132.4	153.9

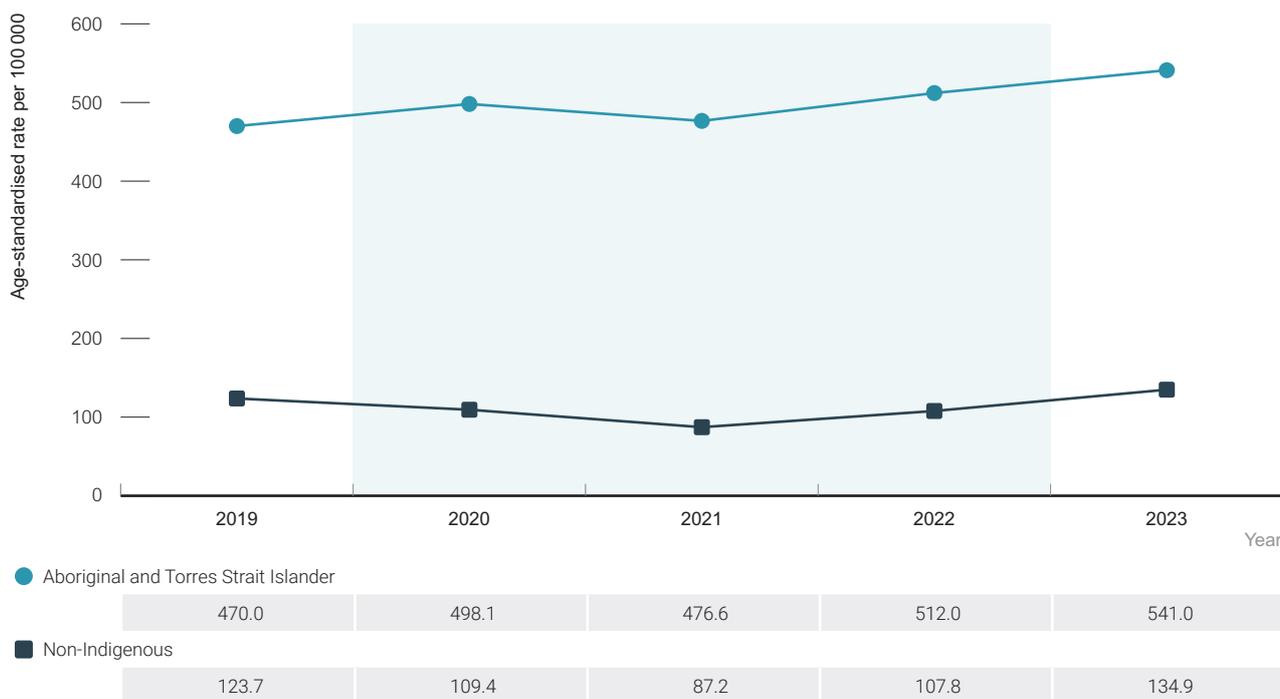
Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Australian National Notifiable Diseases Surveillance System.

The gonorrhoea notification rate among Aboriginal and Torres Strait Islander peoples is based on data from seven jurisdictions (the Australian Capital Territory, New South Wales, the Northern Territory, Queensland, South Australia, Tasmania, and Western Australia), where Aboriginal and Torres Strait Islander status was  $\geq 50\%$  complete each of the past five years (2019 – 2023).

Between 2019 and 2023, the gonorrhoea notification rate among Aboriginal and Torres Strait Islander peoples increased by 15% from 470.0 to 541.0 per 100 000. In the same period, the notification rate among non-Indigenous people fluctuated between 87.2 (in 2021) and 134.9 per 100 000 (in 2023). In 2023 the notification rate among Aboriginal and Torres Strait Islander peoples was more than four times as high as among non-Indigenous people (Figure 22).

**Figure 22** Gonorrhoea notification rate per 100 000 population by Aboriginal and Torres Strait Islander status, 2019 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

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



### What does this mean?

Between 2019 and 2023, gonorrhoea diagnosis rates among Aboriginal and Torres Strait Islander peoples remained around five times as high as among non-Indigenous people.

## 5.2 Gonorrhoea testing

Clinical guidelines recommend the opportunistic offer of gonorrhoea screening to all young people (15 to 29 years of age) at least annually, including offering self-collected samples when appropriate, and regular testing for women reporting sex work. Annual testing is recommended for sexually active gay and bisexual men and testing every three months for higher risk men based on behavioural criteria and those taking PrEP<sup>(9)</sup>. Gonorrhoea testing data are included in this report from a number of sources including Medicare, sexual health clinics and high-caseload general practice clinics.

### Medicare-rebated gonorrhoea tests

Between 2014 and 2023, the number of gonorrhoea notifications per 100 Medicare-rebated gonorrhoea tests increased by 121% from 1.4 to 3.1. The number of gonorrhoea notifications per 100 Medicare-rebated gonorrhoea tests has been higher in males than females in each of the years since 2014 (7.0 vs 1.7 in 2023). These data suggest that the increases observed in notifications between 2014 and 2023 cannot be fully explained by more testing (See Gonorrhoea notifications, pp 30).

**Figure 23** Number of gonorrhoea notifications per 100 Medicare-rebated gonorrhoea tests by sex, 2014 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Australian National Notifiable Diseases Surveillance System; Medicare.

## 5.3 Gonorrhoea incidence

Gonorrhoea incidence is an important indicator of new transmissions, reflecting the impact of current prevention programs, whereas prevalence reflects the burden of disease. Gonorrhoea incidence is available from ACCESS and is calculated by dividing the number of incident infections (negative test followed by a positive test) among people undergoing repeat gonorrhoea testing at sexual health services by the person's time at risk (determined by the time between repeat gonorrhoea tests) <sup>(5)</sup>. These incidence estimates represent populations attending sexual health clinics and may not be generalisable to the broader priority populations.

In 2023, gonorrhoea incidence was 36.4 new infections per 100 person-years among HIV-positive gay and bisexual men 42% higher compared with HIV-negative gay and bisexual men (25.7 per 100 person-years). Between 2014 and 2023, gonorrhoea incidence steadily increased among HIV-negative gay and bisexual men (40% increase) compared with a smaller increase among HIV-positive gay and bisexual men (26% increase) (Figure 24). Among women reporting sex work, gonorrhoea incidence more than doubled from 4.8 per 100 person-years in 2014 to 10.6 per 100 person-years in 2023 (Figure 24). Caution should be taken with interpretation as confidence intervals overlap between some years, indicating that between-year differences are not statistically significant.

**Figure 24** Gonorrhoea incidence in sexual health clinic attendees by population, 2014 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: ACCESS (Australian Collaboration for Coordinated Enhanced Sentinel Surveillance).

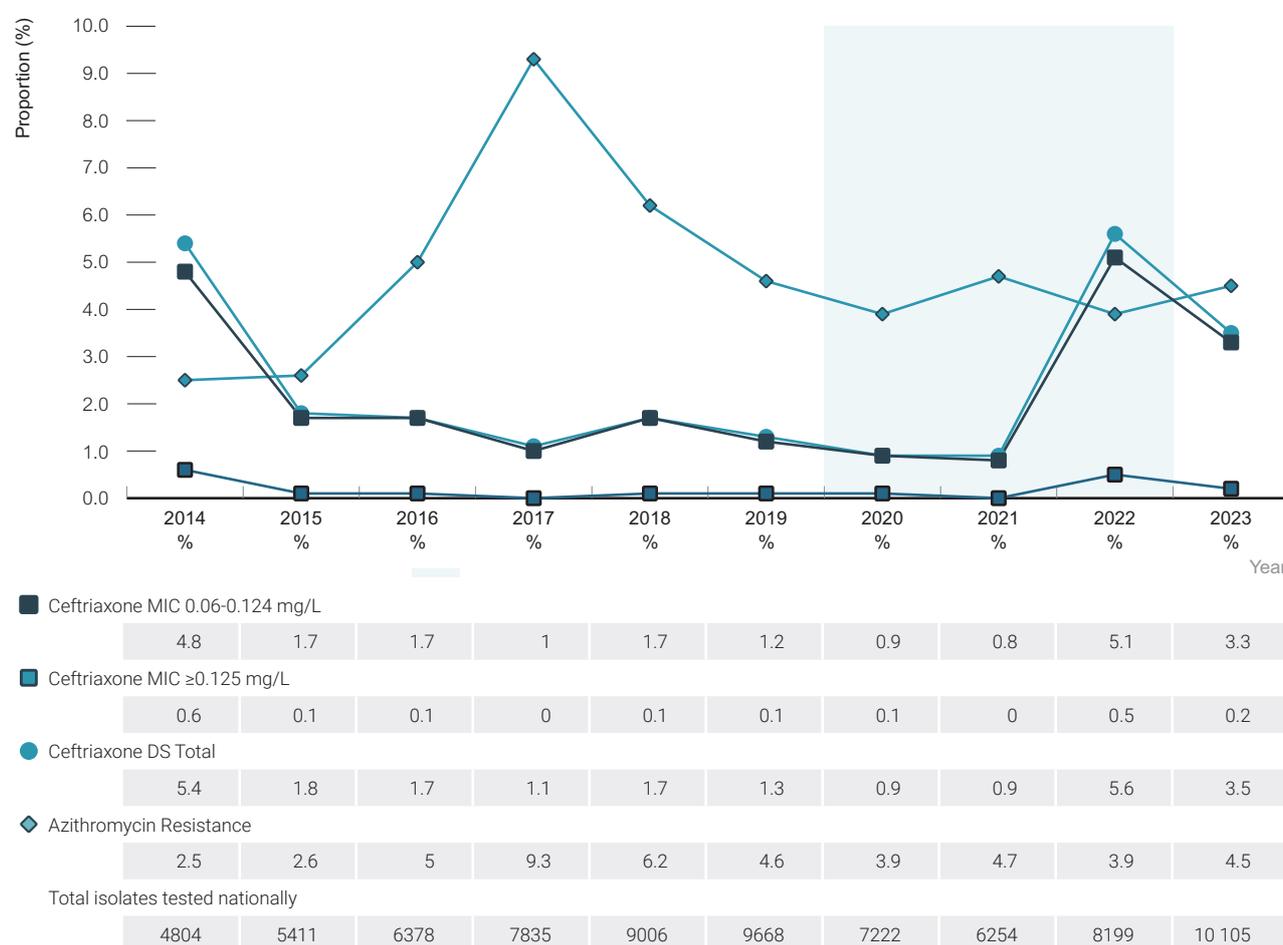
## 5.4 Antimicrobial resistance

Since 1981, the Australian Gonococcal Surveillance Programme has monitored antimicrobial resistance in clinical isolates of *N. gonorrhoeae* in all states and territories. Ceftriaxone in combination with azithromycin is currently the recommended treatment for gonorrhoea in most places in Australia (except for some areas in northern and central Australia where amoxicillin and azithromycin are used).

The World Health Organization recommends a reporting threshold for the decreased susceptibility to ceftriaxone (ceftriaxone minimum inhibitory concentration) as  $\geq 0.125$  mg. Between 2014 and 2023, the proportion of gonococcal isolates tested with a decreased ceftriaxone susceptibility ( $\geq 0.125$  mg) remained low, and was 0.2% in 2023 (Figure 25).

In Australia, gonococcal isolates with ceftriaxone minimum inhibitory concentration values of  $\geq 0.06$  mg/L have been reported since 2001. Between 2014 and 2021, the proportion of gonococcal isolates tested for antimicrobial resistance with decreased susceptibility to ceftriaxone ( $\geq 0.06$  mg/L), declined from 4.8% in 2014 to 0.8% in 2021. Between 2021 and 2023, this proportion increased to 3.3%, predominantly due to the rapid expansion of the *N. gonorrhoeae* clone, ST7827, in New South Wales <sup>(10)</sup>.

**Figure 25** Proportion of gonococcal isolates tested at the Australian Gonococcal Surveillance Programme with decreased susceptibility to ceftriaxone, 2014 – 2023, by state/territory



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Abbreviations: MIC = minimum inhibitory concentration; DS = decreased susceptibility.

Source: Lahra, Monica M et al. "Australian Gonococcal Surveillance Program, 1 October to 31 December 2023." *Communicable diseases intelligence* (2018) vol. 48. 16 May. 2024, <https://doi.org/10.33321/cdi.2024.48.15>.

# 6 Human papillomavirus infection

In Australia all girls aged 12 to 13 years have been routinely offered at least two doses of human papilloma virus (HPV) vaccination since 2007, as have boys of the same age since 2013. The Genital Warts Surveillance Network is a sentinel surveillance system that includes over 50 sexual health clinics across Australia and provides evaluation of the population-level effects of the Australian vaccination program. The network also monitors epidemiological trends of genital wart diagnoses by routinely collected de-identified data on demographics and sexual behaviours associated with genital wart clinical diagnoses from patient management systems.

Information available from sexual health clinics included in the Genital Warts Surveillance Network has shown a considerable reduction in the proportion of Australian-born non-Indigenous females under 21 years of age diagnosed with genital warts at first visit among, from 11.5% in 2007 to 0.0% in 2023 (Figure 26). In the same period, among women aged 21 to 30 years there was also a decline in the proportion who were diagnosed with genital warts at first visit from 14.2% in 2006 to 0.3% in 2023, reflecting the catch-up vaccination campaign in women aged up to 26 years between 2007 and 2009. Among women aged 30 years or older; there was a more gradual decline from 5.9% in 2006 to 2.7% in 2023.

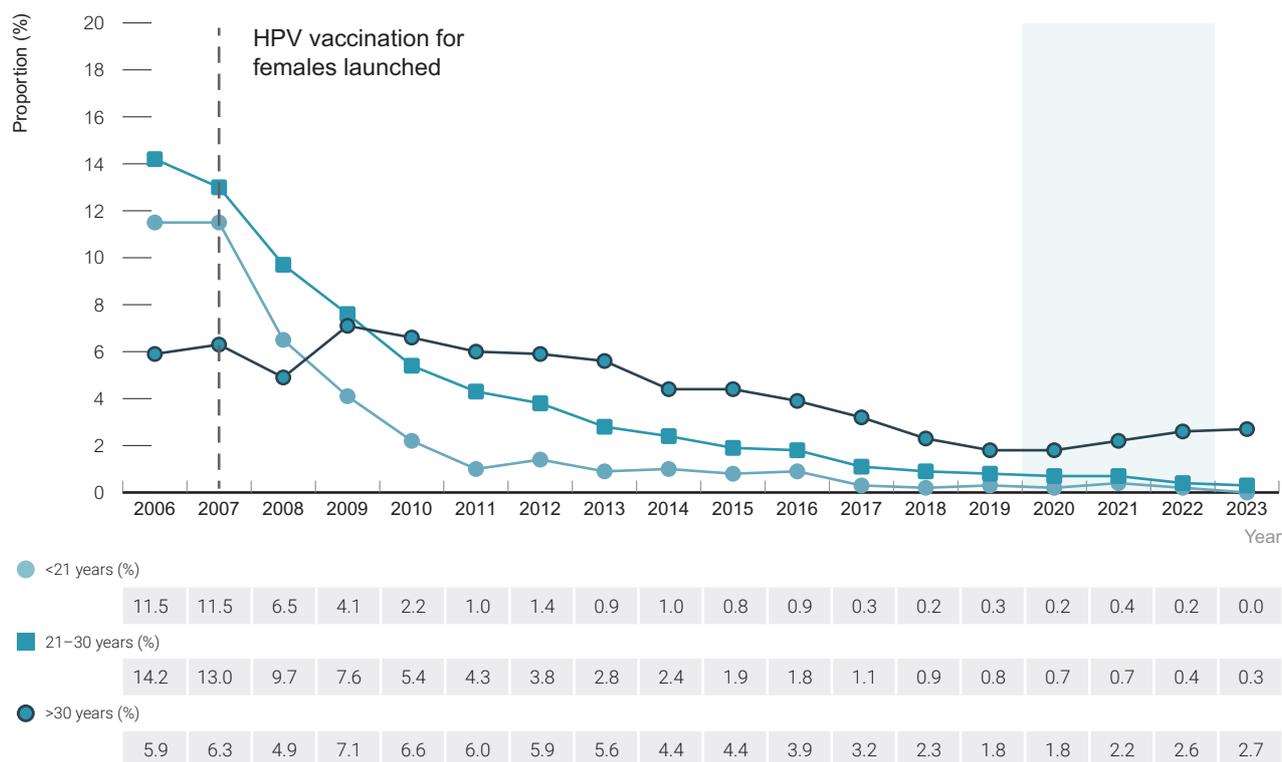
Among Australian-born non-Indigenous heterosexual males aged under 21 years, there was a reduction in the proportion diagnosed with genital warts at first visit from 9.8% in 2006 to 0.0% in 2023 (Figure 27). The proportion of genital warts diagnoses in men aged 21 to 30 years declined from 16.1% in 2006 to 1.4% in 2023. Among men aged 30 years or older, this proportion declined from 10.9% in 2006 to 3.6% in 2023.

Among Aboriginal and Torres Strait Islander females aged under 21 years, the proportion diagnosed with genital warts at first visit declined from 4.1% in 2006 to 0.0% in 2023. Among women aged 21 to 30 years the proportion diagnosed with genital warts reduced from 6.4% in 2006 to 0.6% in 2023. The proportion of Aboriginal and Torres Strait Islander women aged 30 years or older diagnosed with genital warts increased from 2.6% in 2006 to 4.2% in 2023 (Figure 28).

Among Aboriginal and Torres Strait Islander males aged under 21 years, the proportion diagnosed with genital warts at first visit declined from 5.0% in 2006 to 0.0% in 2023. Among men aged 21 to 30 years the proportion diagnosed with genital warts reduced from 8.9% in 2006 to 0.5% in 2023. The proportion of Aboriginal and Torres Strait Islander men aged 30 years or older diagnosed with genital warts declined from 7.0% in 2006 to 1.3% in 2023 (Figure 29).

The proportion of genital warts diagnoses among non-Indigenous Australian-born gay and bisexual men at first visit declined from 6.7% in 2006 to 0.9% in 2023. In this period, among bisexual men this proportion declined from 9.9% to 2.0% (Figure 30).

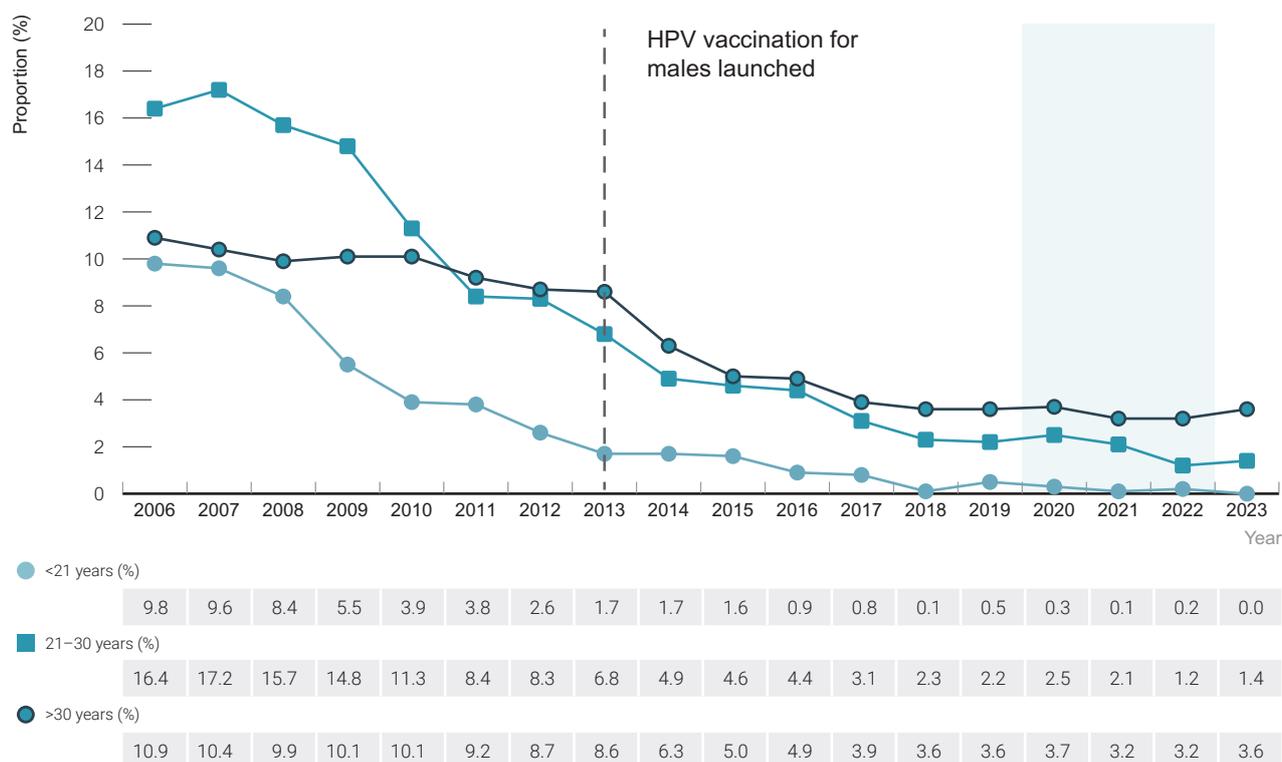
**Figure 26** Proportion of Australian-born non-Indigenous females diagnosed with genital warts at first visit at sexual health clinics by age group, 2006 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Genital Wart Surveillance Network.

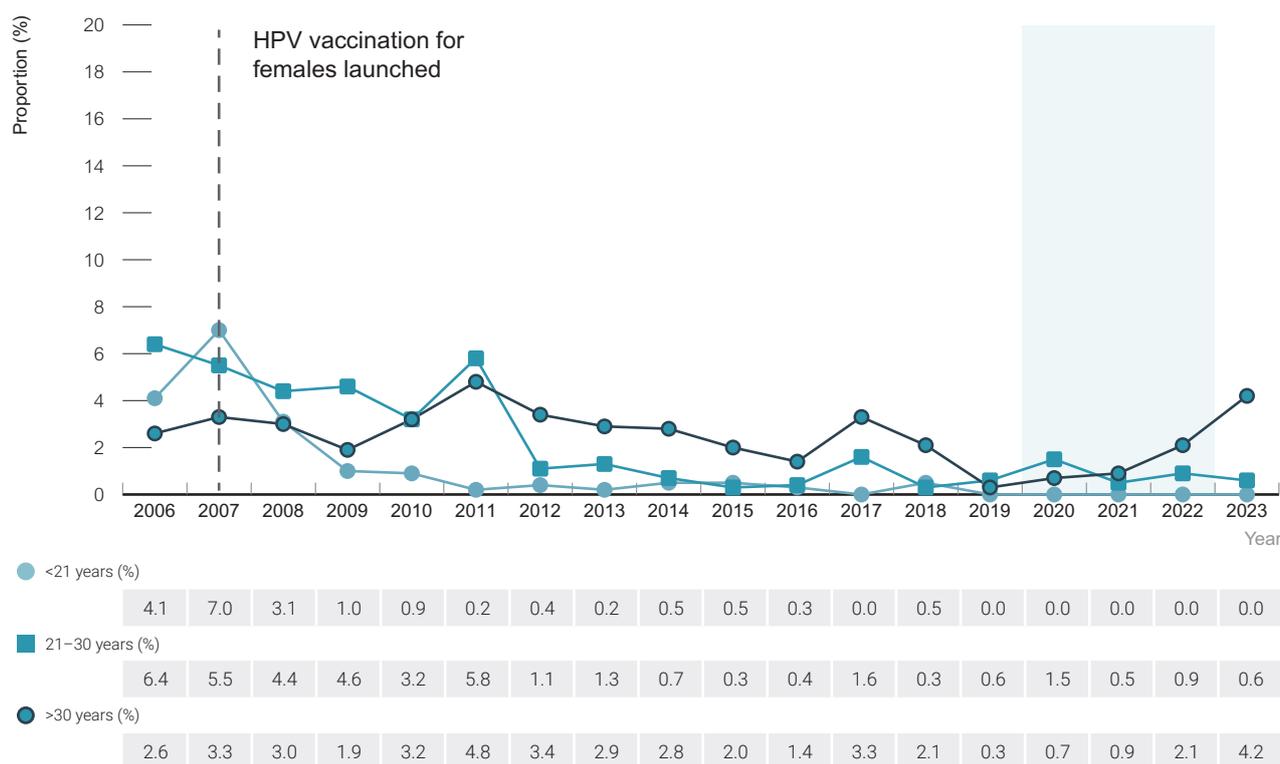
**Figure 27** Proportion of Australian-born non-Indigenous heterosexual males diagnosed with genital warts at first visit at sexual health clinics by age group, 2006 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Genital Wart Surveillance Network.

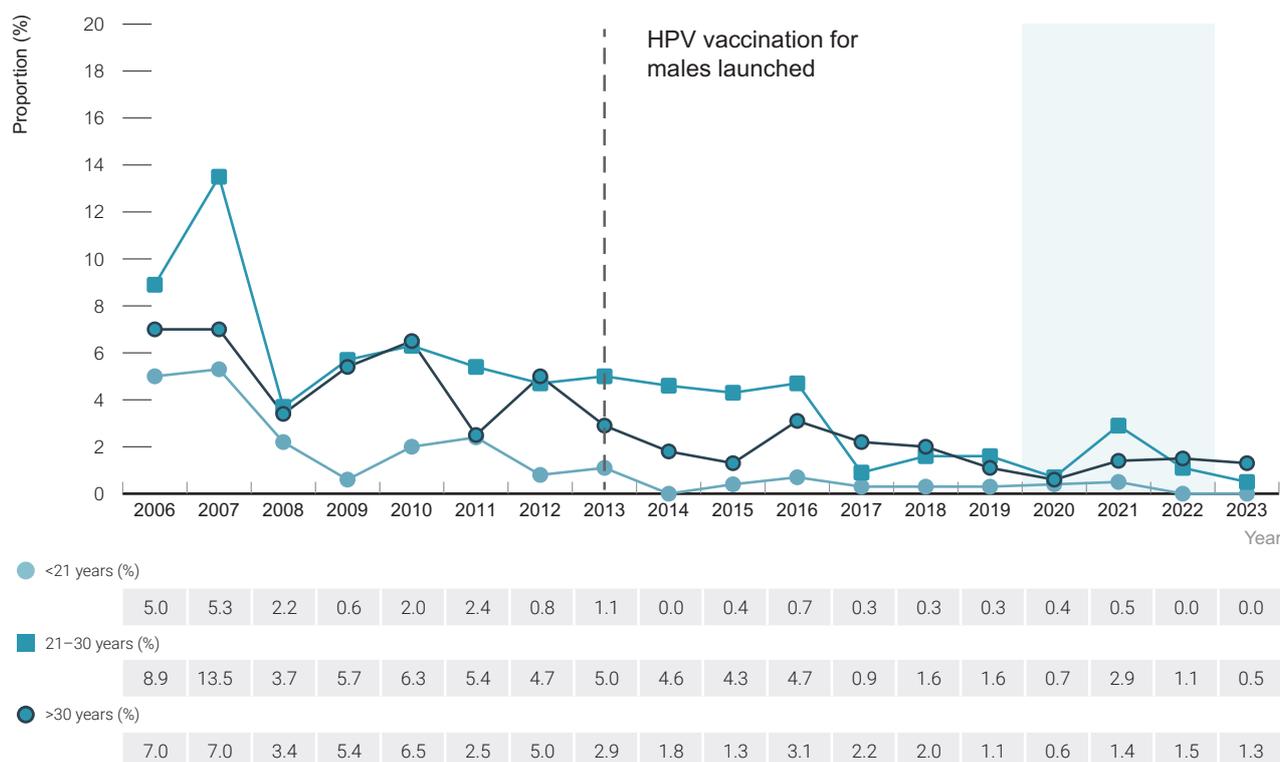
**Figure 28** Proportion of Aboriginal and Torres Strait Islander females diagnosed with genital warts at first visit at sexual health clinics by age group, 2006 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Genital Wart Surveillance Network.

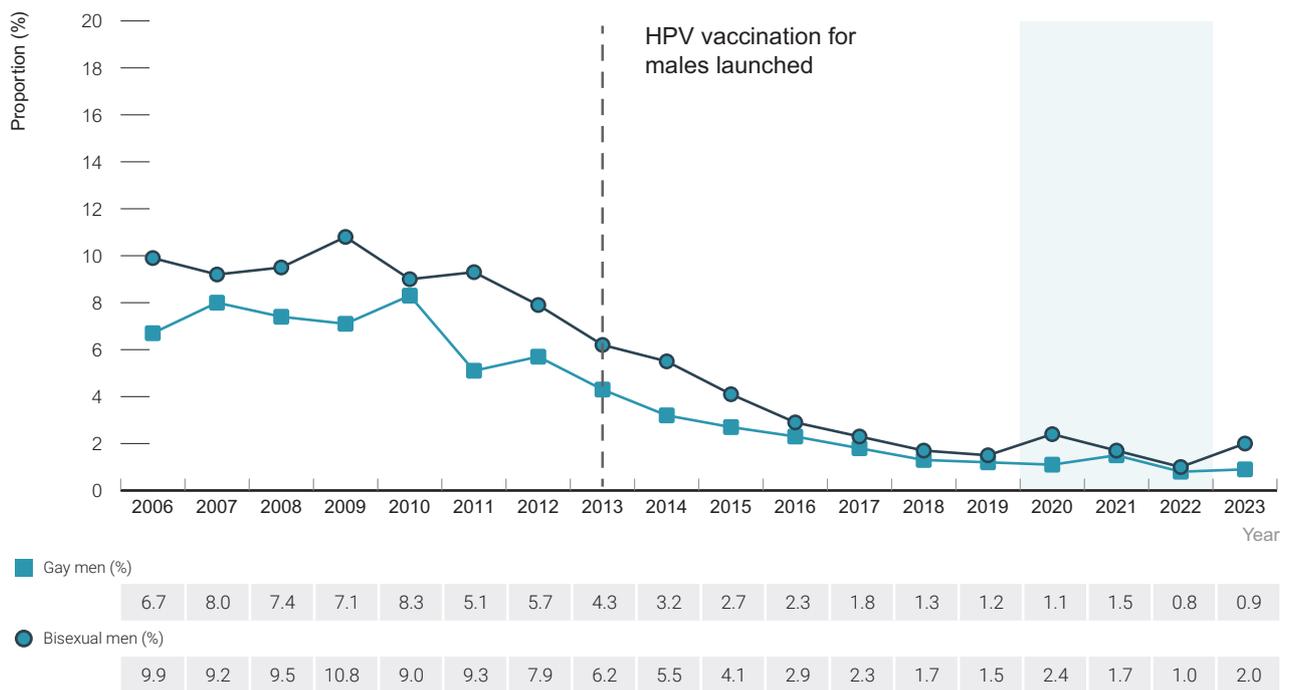
**Figure 29** Proportion of Aboriginal and Torres Strait Islander males diagnosed with genital warts at first visit at sexual health clinics by age group, 2007 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Genital Wart Surveillance Network.

**Figure 30** Proportion of Australian-born non-Indigenous gay or bisexual men diagnosed with genital warts at first visit at sexual health clinics, 2006 – 2023



Note: The shaded section of the chart indicates the years most affected by the COVID-19 pandemic, 2020 – 2022.

Source: Genital Wart Surveillance Network.

# 7 Donovanosis

Australia is on track to eliminate donovanosis, which was once a regularly diagnosed STI among remote Aboriginal communities. Since 2014 there has only been one case notified, in 2014 (Data not shown).

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