
NSW Health

NSW Sexually Transmissible Infections Data Report

January – June 2022



We acknowledge Aboriginal people as the Traditional Custodians of the lands and waters in which we all work, live and learn. We recognise the incredible richness, strength and resilience of the world's oldest living cultures, including cultural practices, languages and connection to Country



The artwork is called 'Baalee'. It is inspired by the original artwork of Aboriginal artist Tanya Taylor and designed by the National Aboriginal Design Agency. This artwork symbolises the Centre for Aboriginal Health working in partnership with Aboriginal people to support wholistic health and wellbeing and its role in the health system to build a culturally safe and responsive health service.

Key Data

Notifications

Notifications and rates per 100,000 population

Condition	Target	Jan-Jun 2022	3-year average (2017-2019)	% Difference
Number of congenital syphilis notifications	All	1	0	-
	Confirmed	1	0	-
	Probable	0	0	-
Infectious syphilis rates (per 100,000 population)	All	22.7	17.5	29.8%
	Female	4.6	2.0	123.6%
	Male	41.0	33.0	24.3%
Gonorrhoea rates (per 100,000 population)	All	120.4	127.5	-5.6%
	Female	41.7	43.7	-4.7%
	Male	200.0	211.4	-5.4%
Chlamydia rates (per 100,000 population)	All	303.4	396.5	-23.5%
	Female	260.6	366.9	-29.0%
	Male	346.0	424.5	-18.5%
LGV rate (per 100,000 population)	Male	0.4	1.1	-65.5%

Key Messages

Executive Summary

The annualised notification rate of **infectious syphilis** in January to June 2022 was 22.7 notifications per 100,000 population, an increase of 3.7% from the rate in 2021, and more than double the rate since 2016. The largest increase in annualised infectious syphilis rates between 2021 and 2022 was reported in females, where the sex-specific rate increased by 34% from 3.1 to 4.6 notifications per 100,000. Over the same period, the male sex-specific notification rate was relatively stable compared to 2021, with a 0.5% increase from 40.7 to 40.9 notification per 100,000 males. During this reporting period, 6.9% of infectious syphilis notifications were in Aboriginal and/or Torres Strait Islander people, this is slightly higher than average which ranges between 2.6% and 5.4%.

One case of **congenital syphilis** was reported in January to June 2022. Pregnant women accounted for 12.5% of infectious syphilis notifications among women of reproductive age (15 to 45 years), with an additional 3.8% having an unknown or missing pregnancy status.

The **gonorrhoea** notification rate in the first half of 2022 increased compared to the 2021 annual rate by 32% to 120.4 notifications per 100,000 population. There were 4,919 notifications, which was an increase compared to the previous six months but remains lower than 6-monthly counts prior to the COVID-19 pandemic. The increase in the notification rate was largely driven by an increase in male notifications, with substantial increases recorded on 2021 rates for males between 25 and 39 years of age.

In contrast, the **chlamydia** notification rate in January to June 2022 remained relatively stable compared to 2021 at 303.4 notifications per 100,000 population. There were divergent trends between females and males in this time period, with the male notification rate increasing compared to 2021 by 6%, versus an 8% decrease in the female notification rate.

NSW Sexually Transmissible Infections Strategy 2022–2026

The NSW Sexually Transmissible Infections Strategy 2022–2026 was launched in September 2022. The STI Strategy aims to reduce the prevalence and impacts of STIs including a new focus on equity and access to safeguard the sexual health and wellbeing of everyone living in NSW. The four key initiatives include:

1. **Prevent** new infections through new and existing methods, education and health promotion;
2. **Test** often, normalise testing, and promoting innovative testing models;
3. **Treat** STIs rapidly and effectively and reduce onward transmission, and;
4. **Equity and Access** to services, reduce STI-related stigma, discrimination, and anxiety, and removing barriers for those seeking help

NSW Health has introduced ambitious targets to track progress towards this vision. Although this January to June 2022 data report captures a time period prior to the Strategy's launch, several figures relating to STI notification rates include a target overlay to provide baseline data for ongoing evaluation.

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Glossary of Terms

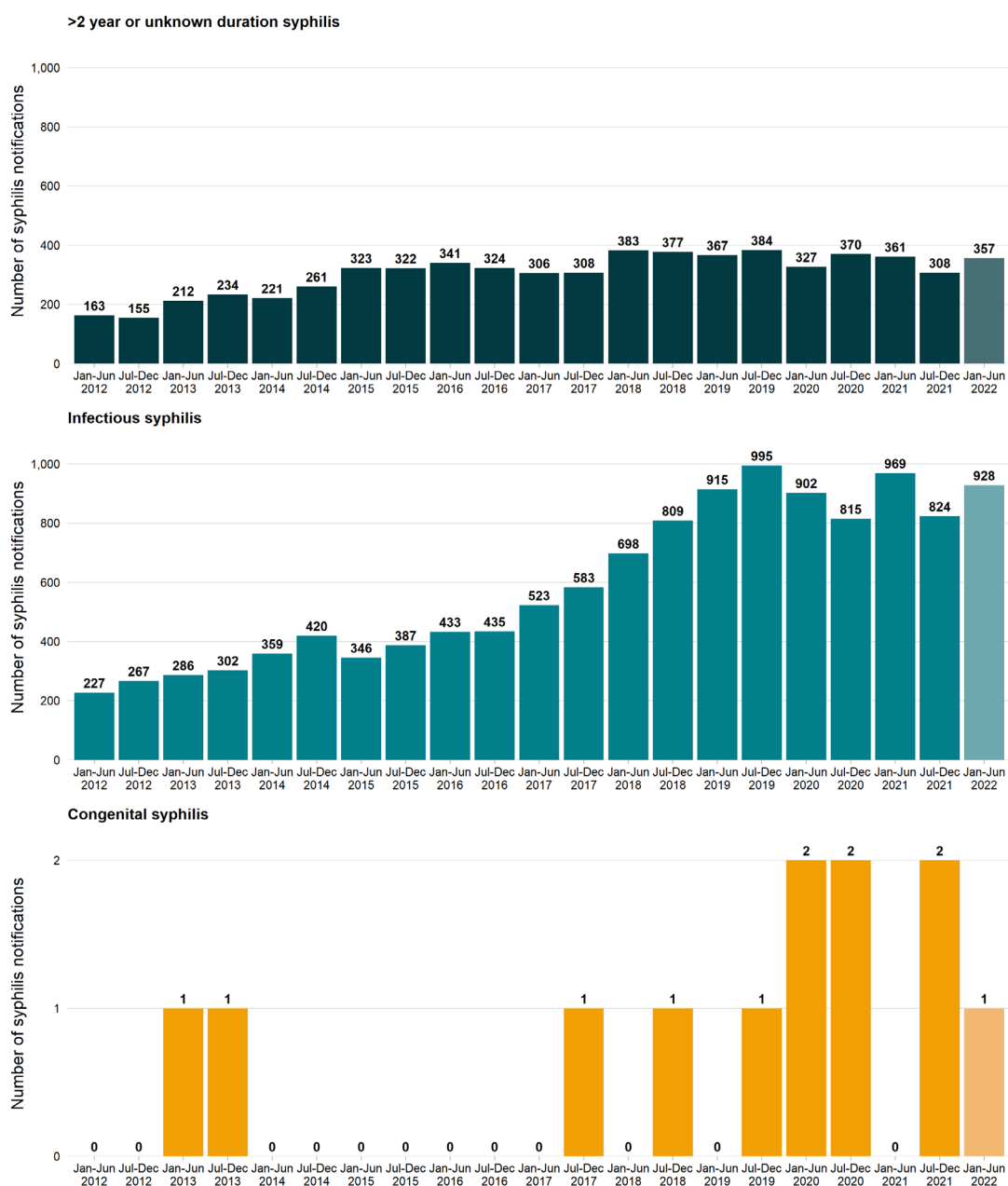
ABS	Australian Bureau of Statistics
ART	Antiretroviral therapy
GBM	Gay and bisexual men
GU	Genitourinary tract
HIV	Human immunodeficiency virus
LGV	Lymphogranuloma venereum
LHD	Local Health District
MHCL	Medium to high caseload
MSM	Men who have sex with men
NAAT	Nucleic acid amplification testing
NAT	Nucleic acid testing
NCIMS	Notifiable Conditions Information Management System
NSW	New South Wales
PFSHSs	Publicly funded sexual health services
SAPHaRI	Secure Analytics for Population Health Research and Intelligence

Syphilis

There were 928 infectious syphilis notifications between January and June 2022, which is the third highest 6-monthly count over the past decade¹

One congenital syphilis case was notified during this reporting period. Congenital syphilis is an entirely preventable disease and represents a failure of the health system. Its occurrence reflects a failure of delivery systems for antenatal care and for syphilis control programs. In NSW, all cases of congenital syphilis are investigated to identify and remedy gaps in service delivery.

Figure 1: Number of syphilis notifications by classification, NSW, 1 January 2012 – 30 June 2022

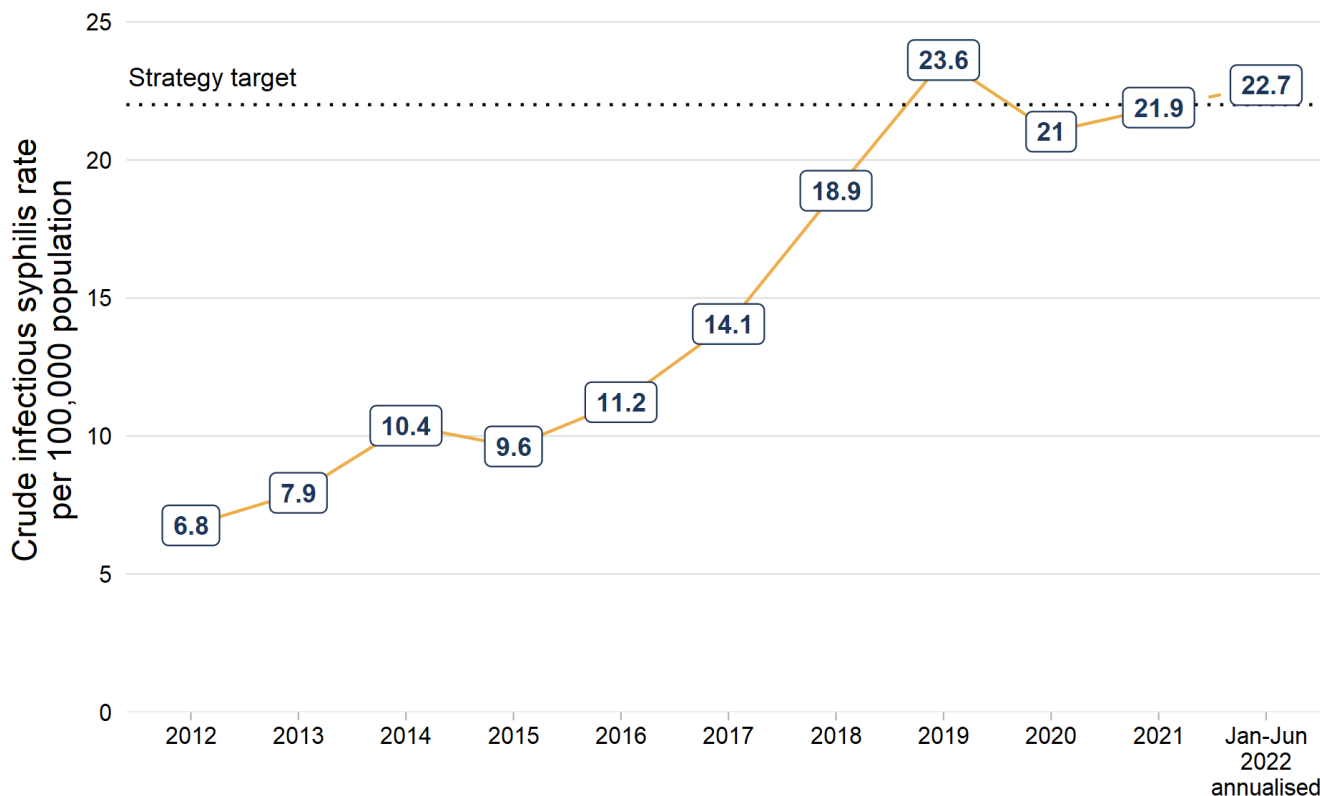


Data source: NCIMS, NSW Health; data extracted 27 February 2023.

¹ A small part of the increase in infectious syphilis notifications observed since 2016 is due to a change in the case definition in August 2016, resulting in improved reporting of infectious syphilis cases. See Appendix C for links to the full case definitions for syphilis.

The annualised infectious syphilis notification rate is currently 22.7 notifications per 100,000 populations which is an increase from the 2021 annual rate by 3.7% and 3.2% above the strategy target of 22.0 notifications per 100,000 population.

Figure 2: Infectious syphilis notification rate, NSW, 1 January 2012 – 30 June 2022

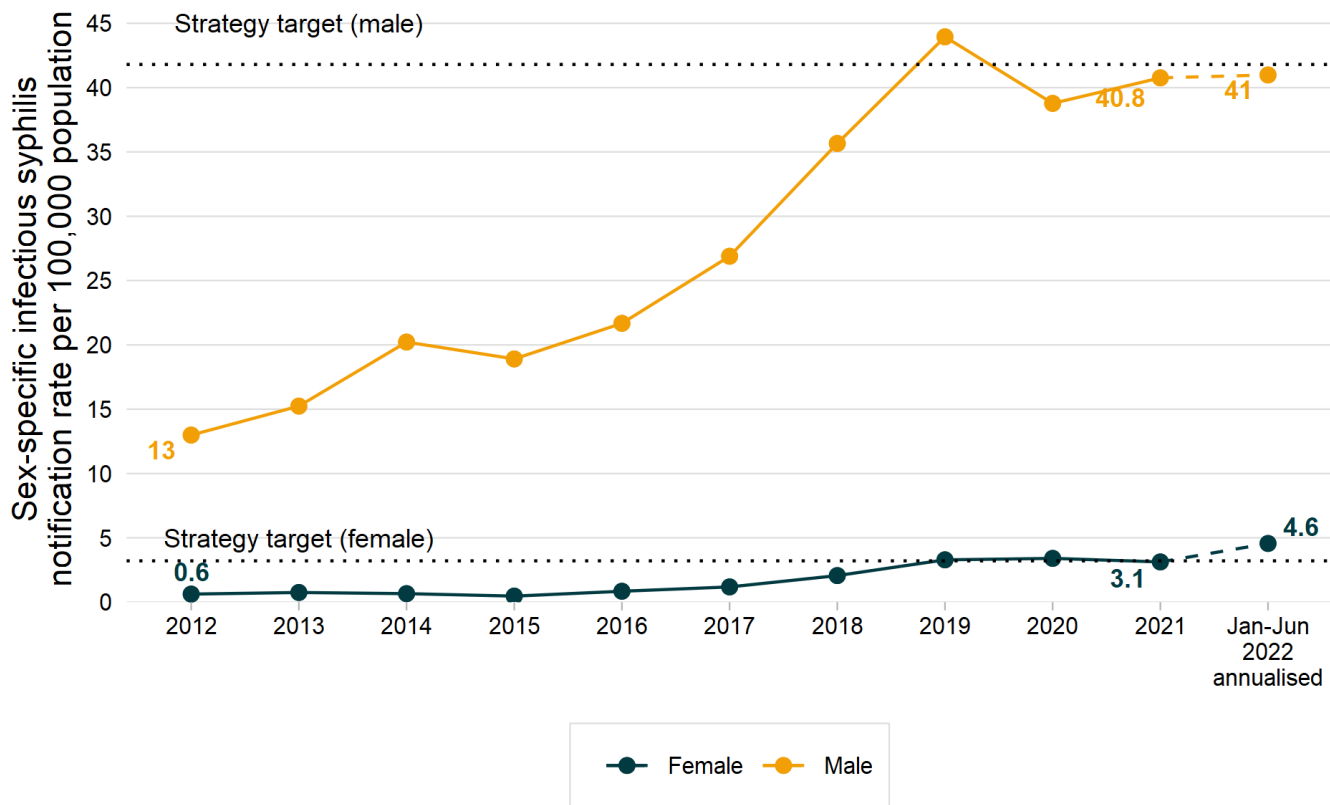


Data source: NCIMS and ABS population estimates (via SAPHaRI), NSW Health; data extracted 27 February 2023. The rate is based on six months of data between January–June 2022 adjusted to an annual rate and is subject to change.

Between January to June 2022, there were 831 notifications in males (89.5%) and 94 notifications in females (10%). The male infectious syphilis rate during this time period was relatively stable compared to 2021 (0.5% increase from 40.8 to 41.0 notifications per 100,000 males). In contrast the female sex-specific rate increased by 45.9% from 3.1 to 4.6 notifications per 100,000 females. The ratio of male to female rates has continued to narrow since 2016 when it was 25.6 notifications per 100,000 males received for each notification per 100,000 females. Currently, the ratio is 9.0 notifications per 100,000 males received for each notification per 100,000 females.

The annualised male infectious syphilis rate in 2022 is 2% lower than the strategy target of 41.8 notifications per 100,000 males. Whilst the 2022 female annualised rate is currently 42.1% above the strategy target of 3.21 notifications per 100,000 females.

Figure 3: Sex specific infectious syphilis notification rates, NSW, 1 January 2012 – 30 June 2022

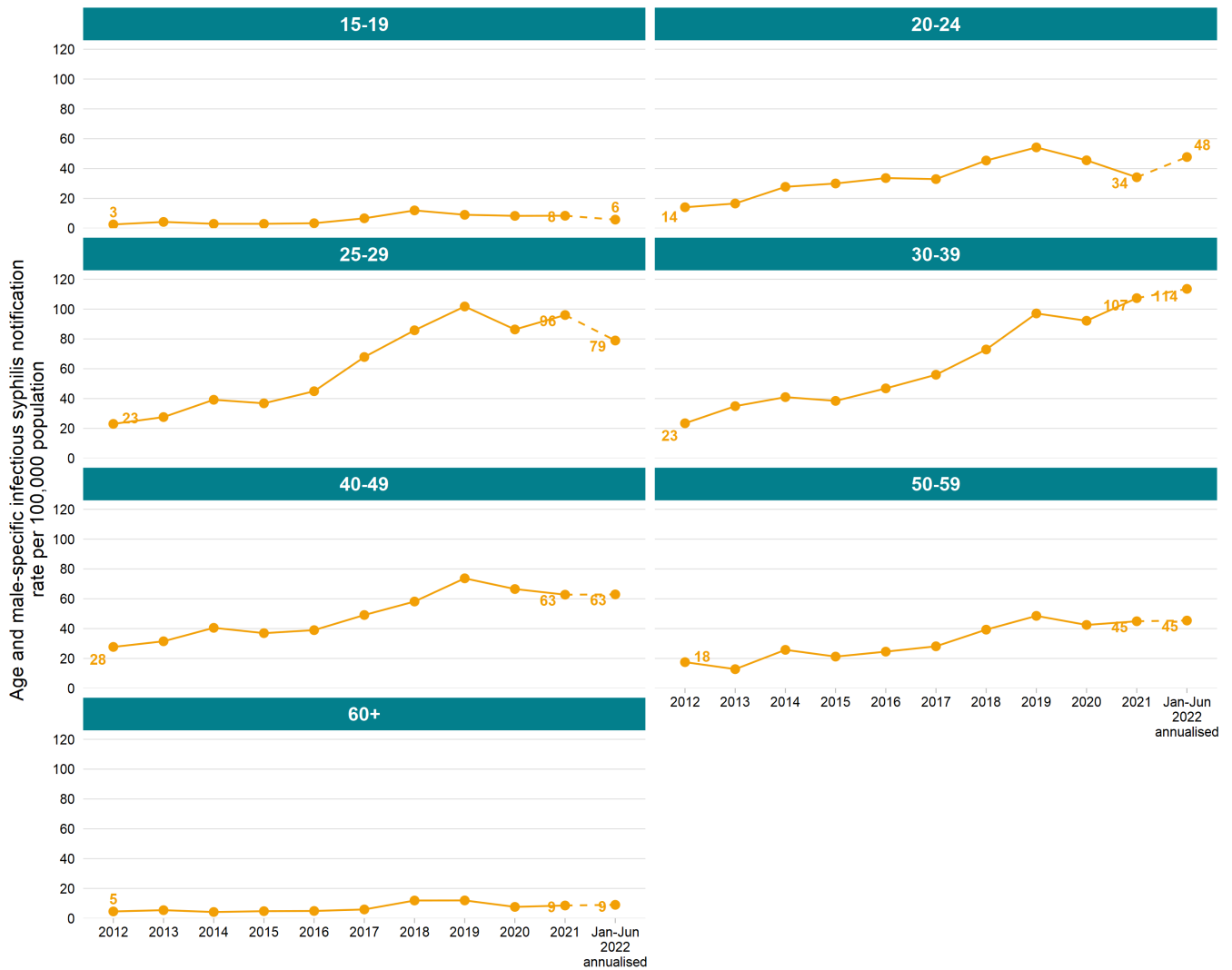


Data source: NCIMS (via SAPHaRI), NSW Health; data extracted 27 February 2023. The rate is based on six months of data between January - June 2022 adjusted to an annual rate and is subject to change. Excludes persons reported as transgender (due to small numbers), persons whose sex was not reported, non-NSW residents and persons whose residential postcode was not known.

For males, the highest notification rates continued to be among those aged 30–39 years (N=336, 114 notifications per 100,000 males) and 25–29 years (N=115, 79 notifications per 100,000 males). The largest increases in the annualised infectious syphilis rates were among those in the 20–24 years (39.8% increase from 34 notifications per 100,000 males) and 30–39 years age groups (5.8% increases increase from 107 notifications per 100,000 males).

Males aged 25–29 years recorded a decrease in the annualised infectious syphilis notification rate of 17.8% from 96 to 79 notifications per 100,000 males.

Figure 4: Male age-specific infectious syphilis notification rates in people aged 15 years and over, NSW, 1 January 2012 – 30 June 2022

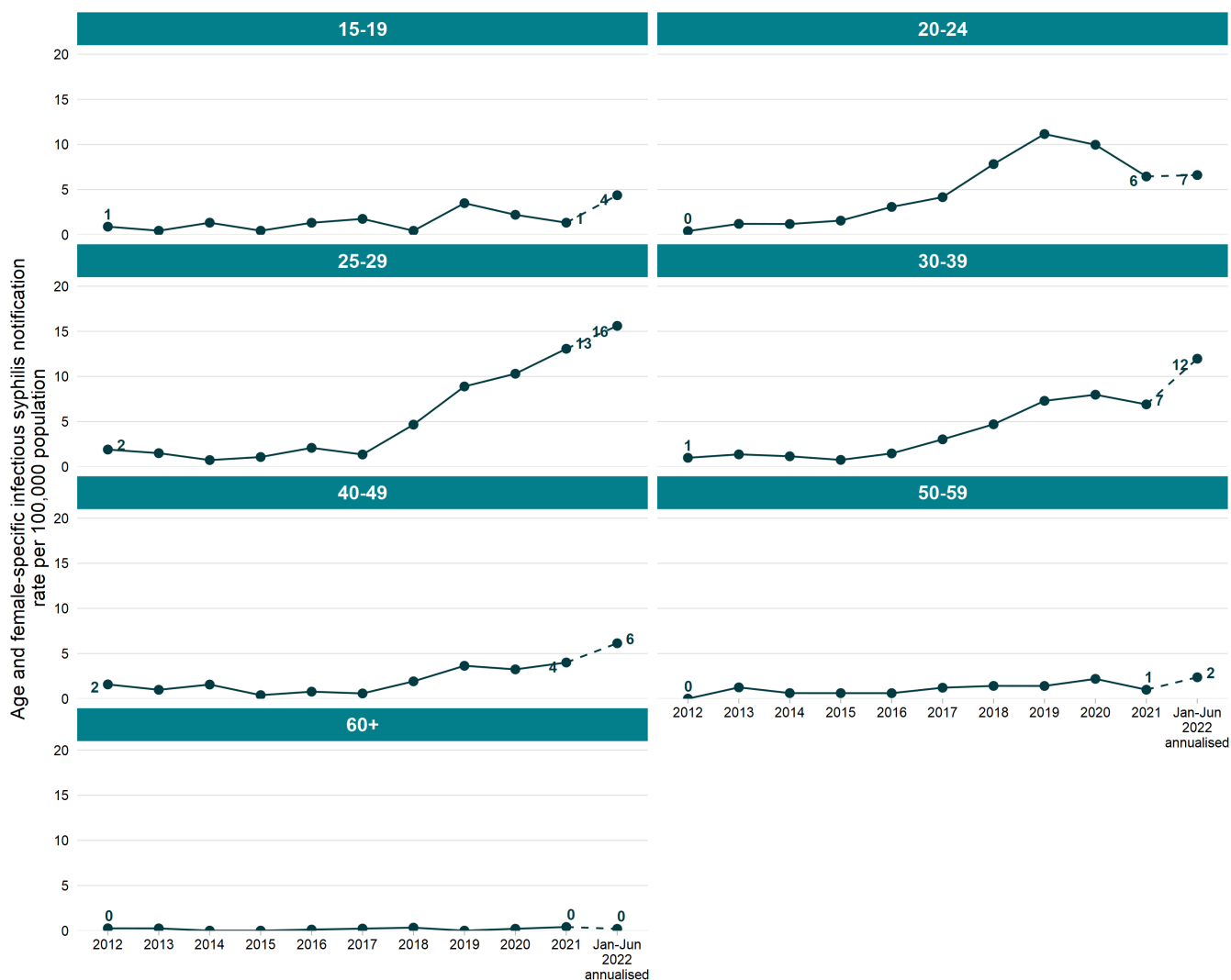


Data source: NCIMS (via SAPHaRI), NSW Health; data extracted 27 February 2023. The rate is based on six months of data between January - June 2022 adjusted to an annual rate and is subject to change. Excludes persons reported as transgender (due to small numbers), persons whose age or sex was not reported, non-NSW residents and persons whose residential postcode was not known.

There was an increase in all female annualised infectious syphilis notification rates during this time period. Although the number of female cases is relatively small, the continued increase in the female infectious syphilis rates is concerning due to the risk of mother to child transmission.

The highest rates continue to be in the 25–29-year (N=23, 16 notifications per 100,000 females) and 30–39-year age groups (N=37, 12 notifications per 100,000 females), which are the groups of most concern for mother to child transmission. Compared to 2021, the annualised rates for the 30–39-year and 25–29-year age groups increased by 73.4% and 1.94%, respectively.

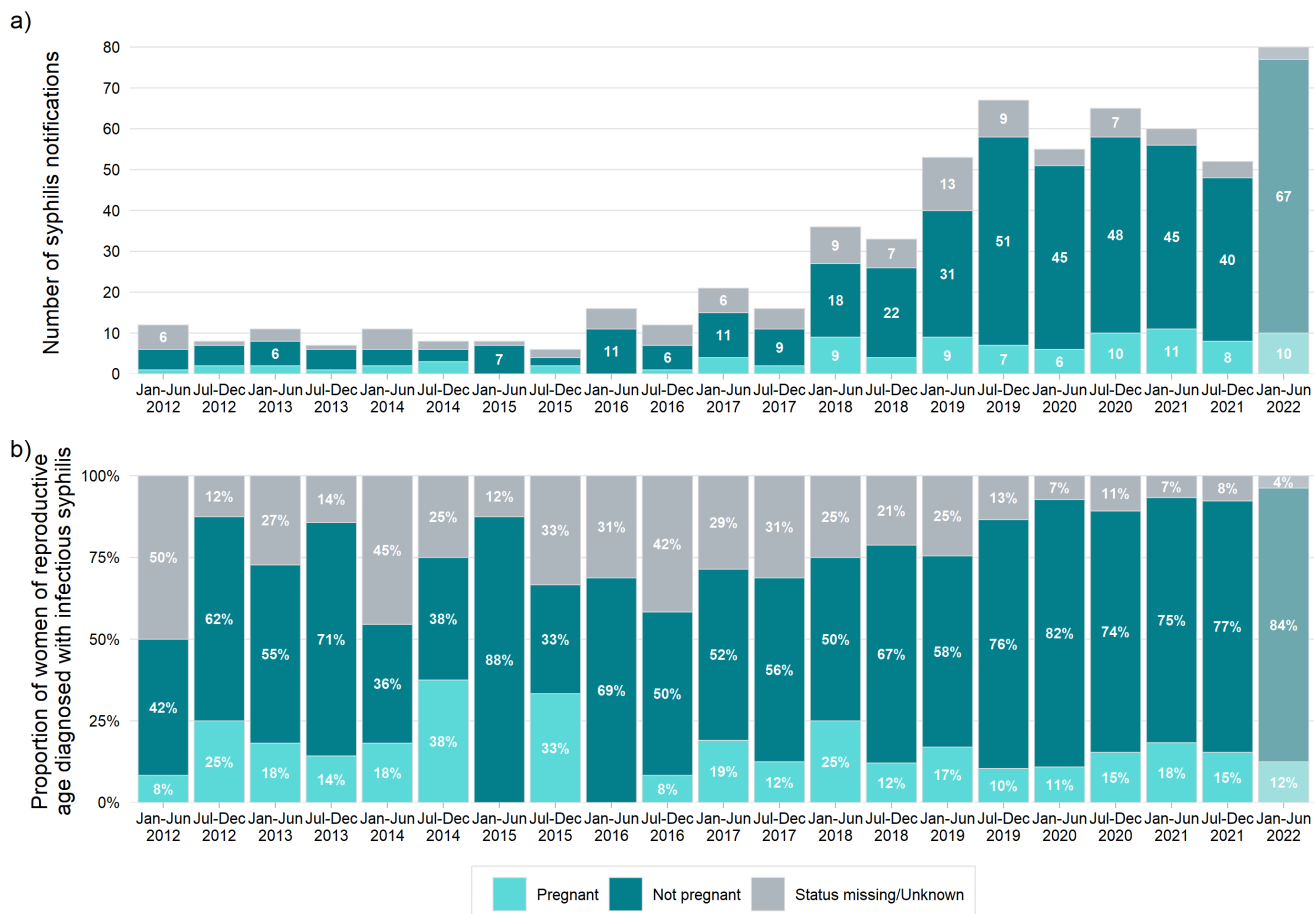
Figure 5: Female age-specific infectious syphilis notification rates in people aged 15 years and over, NSW, 1 January 2012 – 30 June 2022



Data source: NCIMS (via SAPHaRI), NSW Health; data extracted 27 February 2023. The rate is based on six months of data between January - June 2022 adjusted to an annual rate and is subject to change. Excludes persons reported as transgender (due to small numbers), persons whose age or sex was not reported, non-NSW residents and persons whose residential postcode was not known.

From January to June 2022, 12% of women of reproductive age notified with infectious syphilis were pregnant, which is a slight decrease from 15% of women of reproductive age with infectious syphilis in the prior 6-month period. However, as the number of infectious syphilis notifications are small, trends should be interpreted with caution.

Figure 6: Number of infectious syphilis notifications in women of reproductive age by pregnancy status at the time of diagnosis, NSW, 1 January 2012 – 30 June 2022

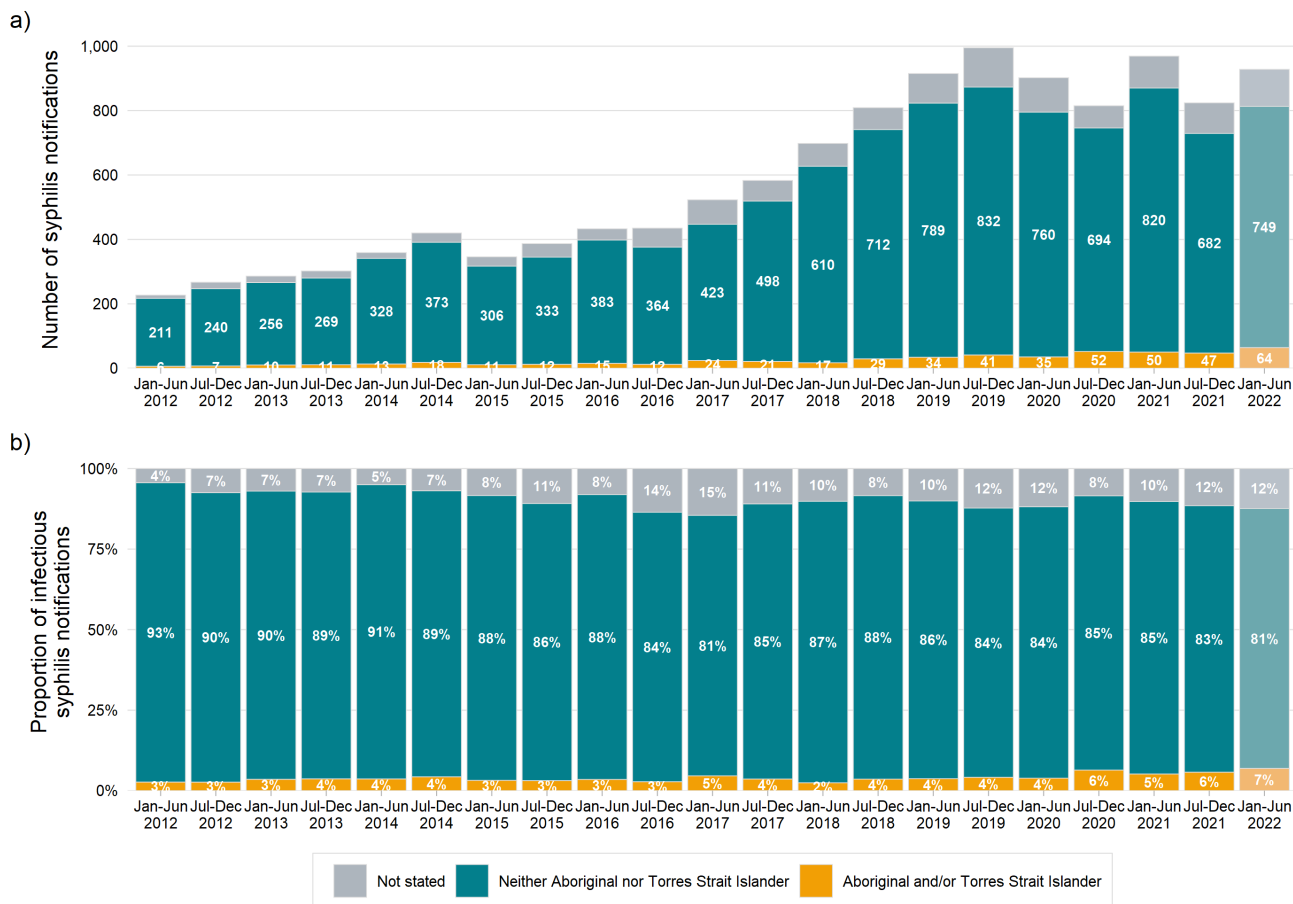


Data source: NCIMS (via SAPHaRI), NSW Health; data extracted 23 February 2023. Note: Reproductive age is defined as 15–45 years. Excludes non-NSW residents and persons whose residential postcode was not known. Data from before 2020 should be interpreted with caution due to the higher proportion of women with unknown pregnancy status.

Of 928 infectious syphilis notifications, 6.9% (N=64) were among Aboriginal and/or Torres Strait islander people, which was a further increase from the prior 6-month period when it was 5.7%. The proportion of infectious syphilis notifications among Aboriginal and/or Torres Strait islander people since 2021 appears to be increasing and for this period is above average 6-monthly proportions since January 2012 of 3.6%. Of the 64 infectious syphilis notifications among Aboriginal and/or Torres Strait islander people, 43 (67%) were male and 21 (33%) were female, which is consistent with prior years.

Note: As the number of infectious syphilis notifications in the Aboriginal population is small, trends should be interpreted with caution.

Figure 7: Infectious syphilis notifications by Aboriginality, NSW, 1 January 2012 – 30 June 2022

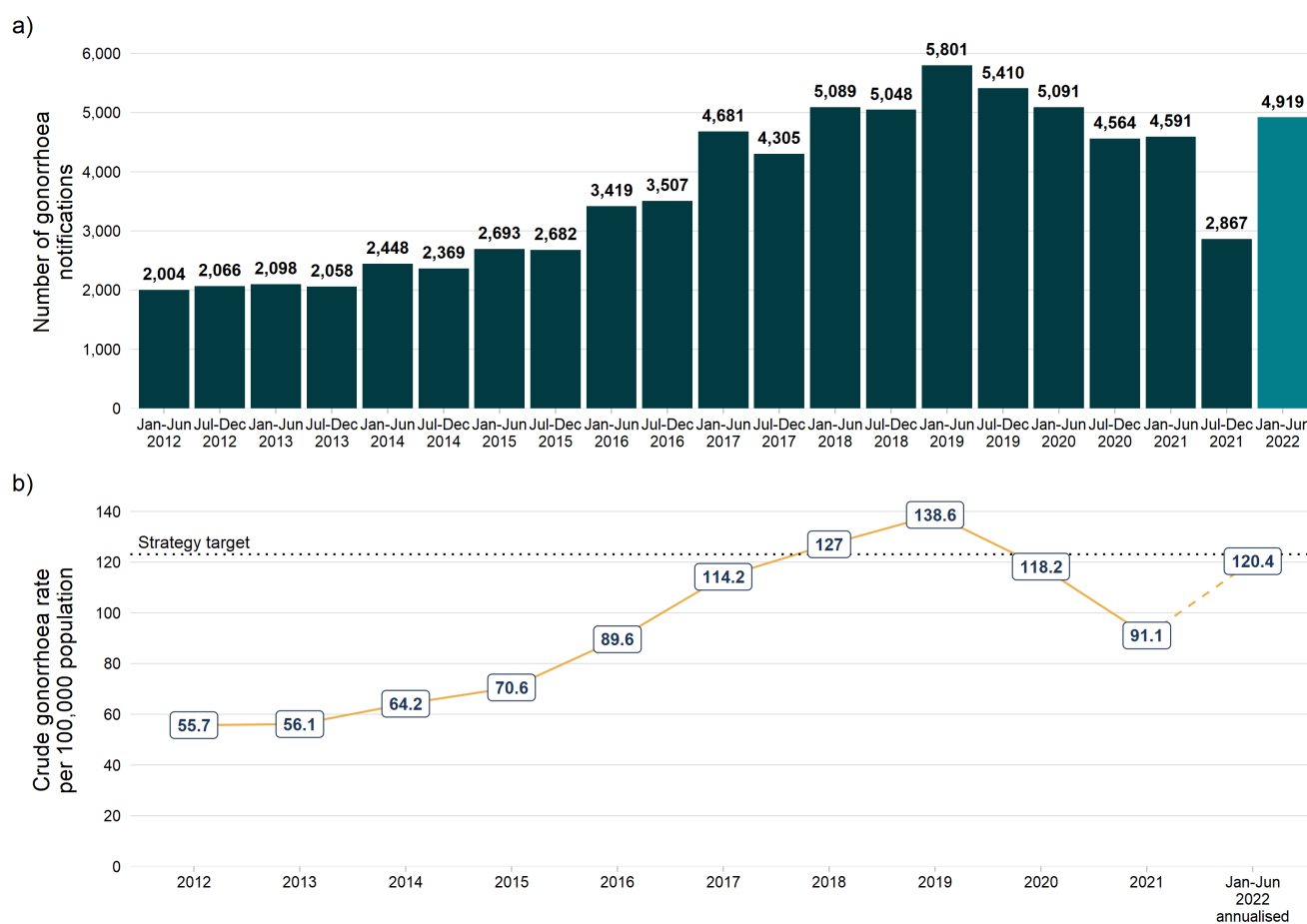


Data source: NCIMS, NSW Health; data extracted 23 February 2023. Excludes non-NSW residents and persons whose residential postcode was not know.

Gonorrhoea

From January to June 2022 there were 4,919 notifications of gonorrhoea and the annualised gonorrhoea notification rate was 120.4 notifications per 100,000 population. This rate is 32% higher compared to 2021, when the annual rate was 91.1 per 100,000 population. The notification rate has increased after declines in notifications due COVID-19 related factors but remains 13% lower than the peak in 2019 and 2.2% below the strategy target of 123.1 notifications per 100,000 population.

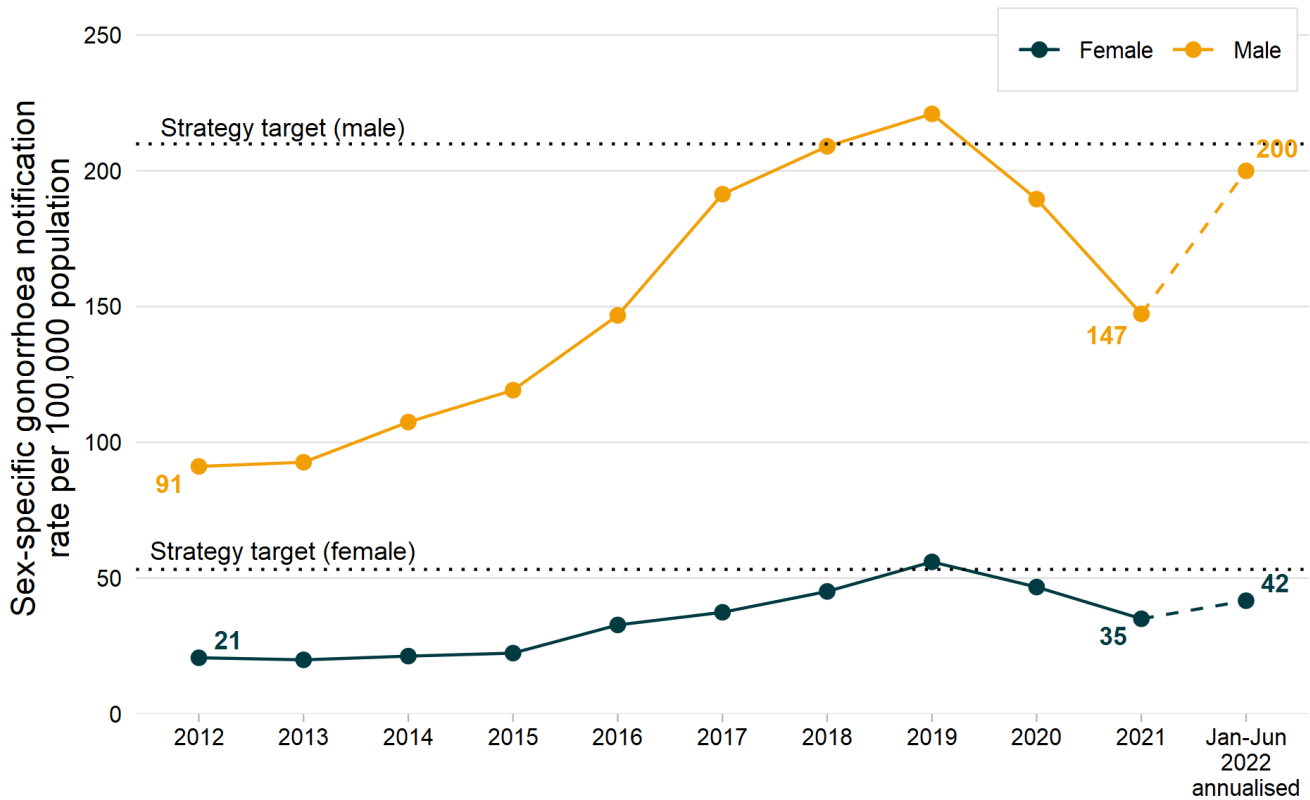
Figure 8: Number and crude rate of gonorrhoea notifications, NSW, 1 January 2012 – 30 June 2022



Data source: NCIMS and ABS population estimates (via SAPHaRI), NSW Health; data extracted 30 January 2023. The rate is based on six months of data between January –June 2022 adjusted to an annual rate and is subject to change. Excludes non-NSW residents and persons whose residential postcode was not known.

The majority of the 4,919 gonorrhoea notifications from January to June 2022 were reported in males (4,050, 82%), which is consistent with previous years. Females represented only 17.5% (N=859) of total notifications during this period and the annualised crude gonorrhoea notification rate in males (200 notifications per 100,000 males) was 4.8 times higher than that for females (42 notifications per 100,000 females). Both male and female rates are currently lower than strategy targets, 4.7% and 21.7 per 100,000 population lower, respectively.

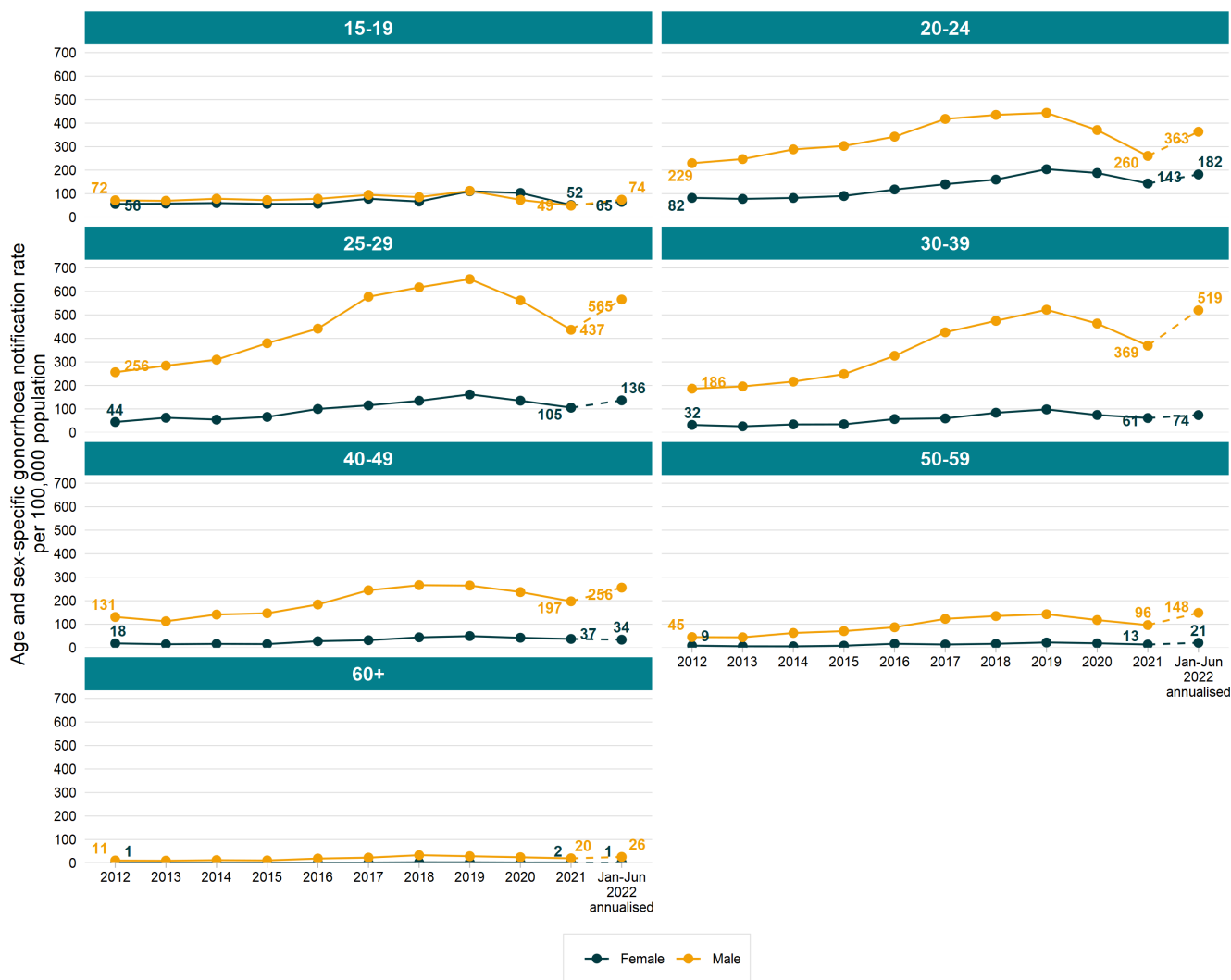
Figure 9: Sex specific gonorrhoea notification rates, NSW, 1 January 2012 – 30 June 2022



Data source: NCIMS and ABS population estimates (via SAPHARI), NSW Health; data extracted 30 January 2023. The rate is based on six months of data between January –June 2022 adjusted to an annual rate and is subject to change. Excludes persons reported as transgender (due to small numbers), persons whose age or sex was not reported, non-NSW residents and persons whose residential postcode was not known.

In January to June 2022, the highest notification rate in males continued to be the 25–29-year age group (N=826, 565 notifications per 100,000 males), followed by the 30–39-year group (N= 1,527, 519 notifications per 100,000 males), which had the largest increase in notification rates since 2021. For females, the highest rates continued to be the 20–24 (N=220, 182 notifications per 100,000 females) and 25–29-year age groups (N=191, 136 notifications per 100,000 females).

Figure 10: Age and sex specific gonorrhoea notification rates in people aged 15 years and over, NSW, 1 January 2012 – 30 June 2022



Data source: NCIMS and ABS population estimates (via SAPHaRI), NSW Health; data extracted 30 January 2023. The rate is based on six months of data between January–June 2022 adjusted to an annual rate and is subject to change. Excludes persons reported as transgender (due to small numbers), persons whose age or sex was not reported, non-NSW residents and persons whose residential postcode was not known.

The site of infection can give some indication of trends in transmission and screening, noting that one notification often includes infections at several sites. In males, genitourinary infections are usually symptomatic, which means the majority are likely to be diagnosed. Therefore, the number of male genitourinary gonorrhoea infections may be used as a broad indicator of gonorrhoea transmission. Male rectal and throat infections are usually asymptomatic and so trends in these infections are likely to reflect screening trends, as well as disease transmission. In females, up to 80% of genitourinary infections are asymptomatic and notifications of infection at any site likely reflect a combination of screening trends and disease transmission.

Figure 11: Number of gonorrhoea infections by site of infection and ratio of infections by a) females and b) males, NSW, 1 January 2012 – 30 June 2022



Data source: NCIMS, NSW Health; data extracted 30 January 2023. Note: Does not include 'other' (including conjunctiva and joints) site of infection or missing/unknown site of infection; number of infections may exceed number of notifications due to infection at multiple sites. Excludes persons reported as transgender and persons whose gender was not reported.

From January to June 2022 genitourinary infections remained the most frequently reported site of infection, followed by throat infections for both females and males. Compared to previous years, there were relatively fewer genitourinary infections reported in males, as compared to throat or rectal infections. This could potentially indicate a reduction in transmission in males or an increase in asymptomatic infections detected via screening programs. The ratio of genitourinary infections to throat or rectal infections in females remained consistent to the trends of previous years.

Table 1: Number of gonorrhoea infections by site, NSW, 1 January – 30 June 2022

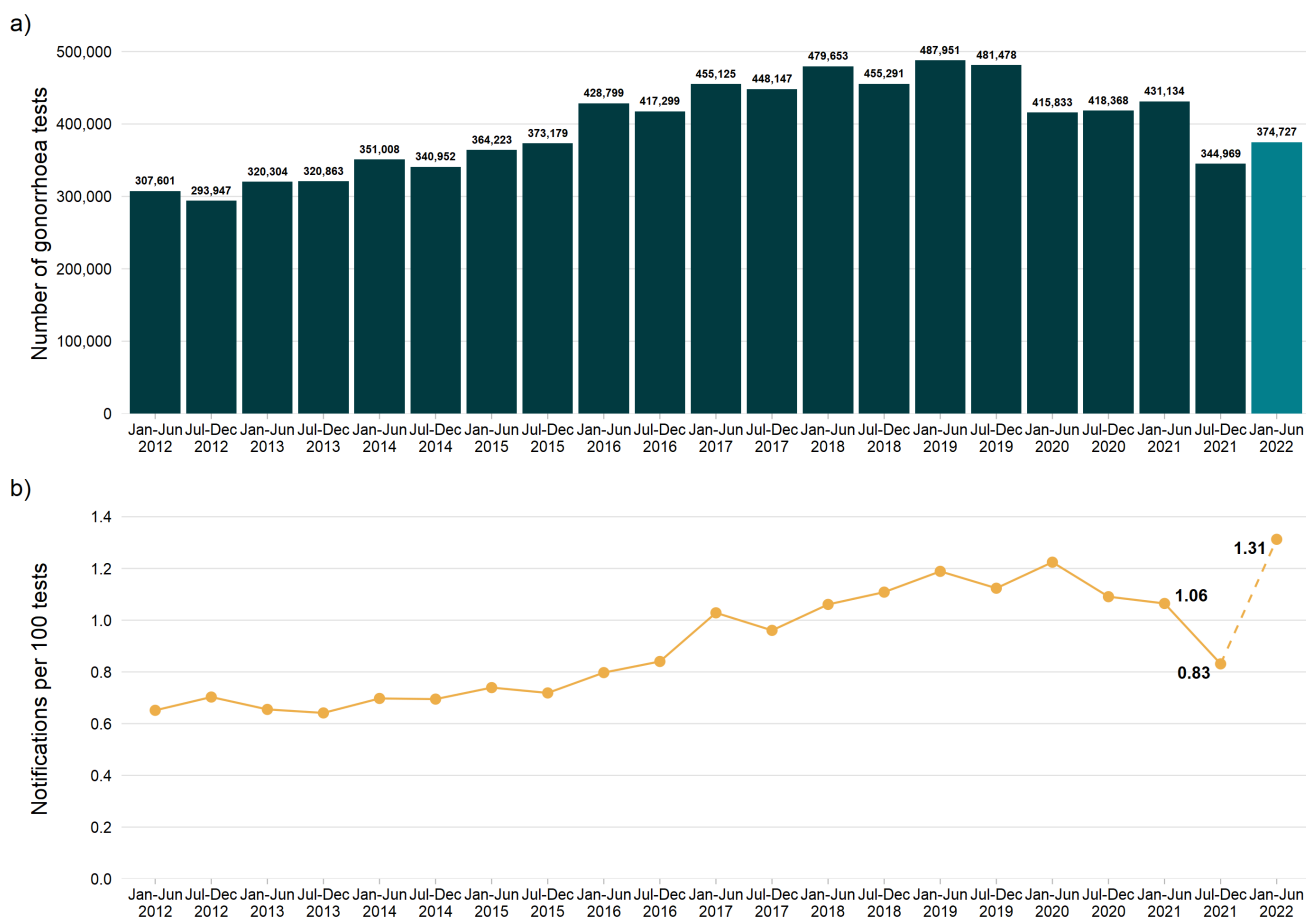
Site of infection	Number of infections		
	Male	Female	Total
Genitourinary tract (GU) only	1,426	684	2,116
Throat only	966	78	1,045
Rectum only	761	13	774
Rectum and throat	431	8	441
GU and rectum	103	10	113
GU and throat	77	28	105
GU, rectum, and throat	111	8	119
Other (joints/conjunctiva/nasopharynx) only	15	3	18
Other (joints/conjunctiva/nasopharynx) and either GU/throat/rectum	12	2	14

Data source: NCIMS, NSW Health; data extracted 30 January 2023. Note: Excludes non-NSW residents and 'other' site of infection or missing/unknown site of infection. The number of infections may exceed number of notifications. Total includes transgender people and people whose gender was not stated/ inadequately described.

In the first 6 months of 2022 there were 374,727 gonorrhoea tests (NAAT + culture) performed in NSW. Although testing in this 6-monthly period was an increase of 8.6% from the prior 6-month period in 2021, 6-monthly testing numbers have remained relatively low since December 2019.

The notification to test ratio increased substantially from 0.83 notifications per 100 gonorrhoea tests in Jul-Dec 2021 to 1.31 in Jan-Jul 2022. In addition to being the largest recorded 6-monthly increase, 1.31 notifications per 100 test is the highest ratio since January 2012. The increase in notification to test ratio and continuing low relative numbers of male genitourinary site infections (an indicator of symptomatic presentation and transmission) suggests that screening programs targeting people at higher risk of infection have performed well in identifying asymptomatic infections.

Figure 12: Number of gonorrhoea tests and ratio of notifications per 100 tests, NSW, 1 January 2012 – 30 June 2022

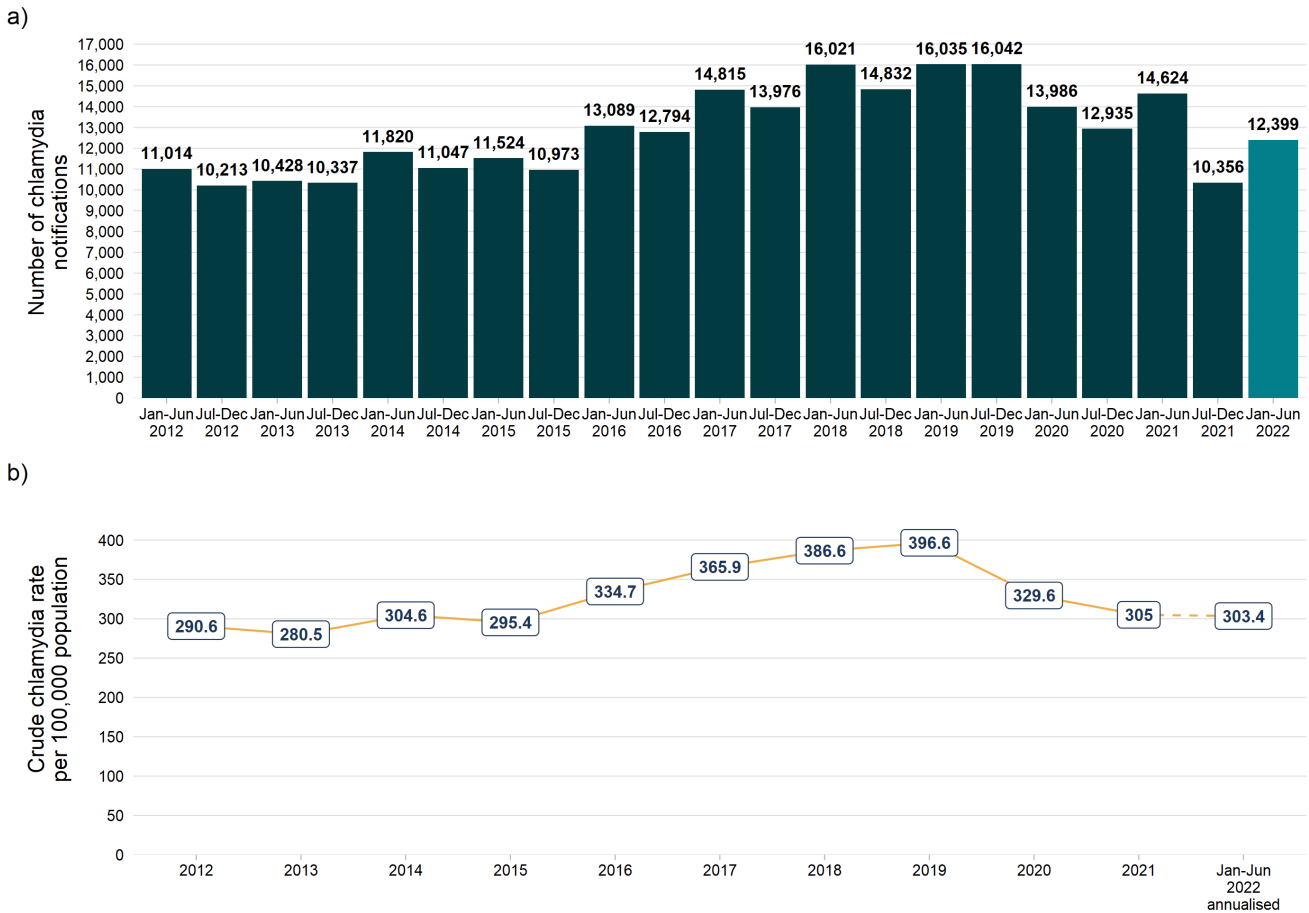


Data source: NCIMS (via SAPHaRI) and NSW Denominator Data Project, NSW Health. Data extracted 30 January 2023.

Chlamydia

From January to June 2022 the annualised chlamydia notification rate was 303 notifications per 100,000 population. This is less than 1% lower than the annual 2021 rate of 305 per 100,000 population. The chlamydia notification rate has continued to decrease since the peak in 2019, when it was 23.5% higher at 396.6 notifications per 100,000 population.

Figure 13: Number and crude rate of chlamydia notifications, NSW, 1 January 2012 – 30 June 2022

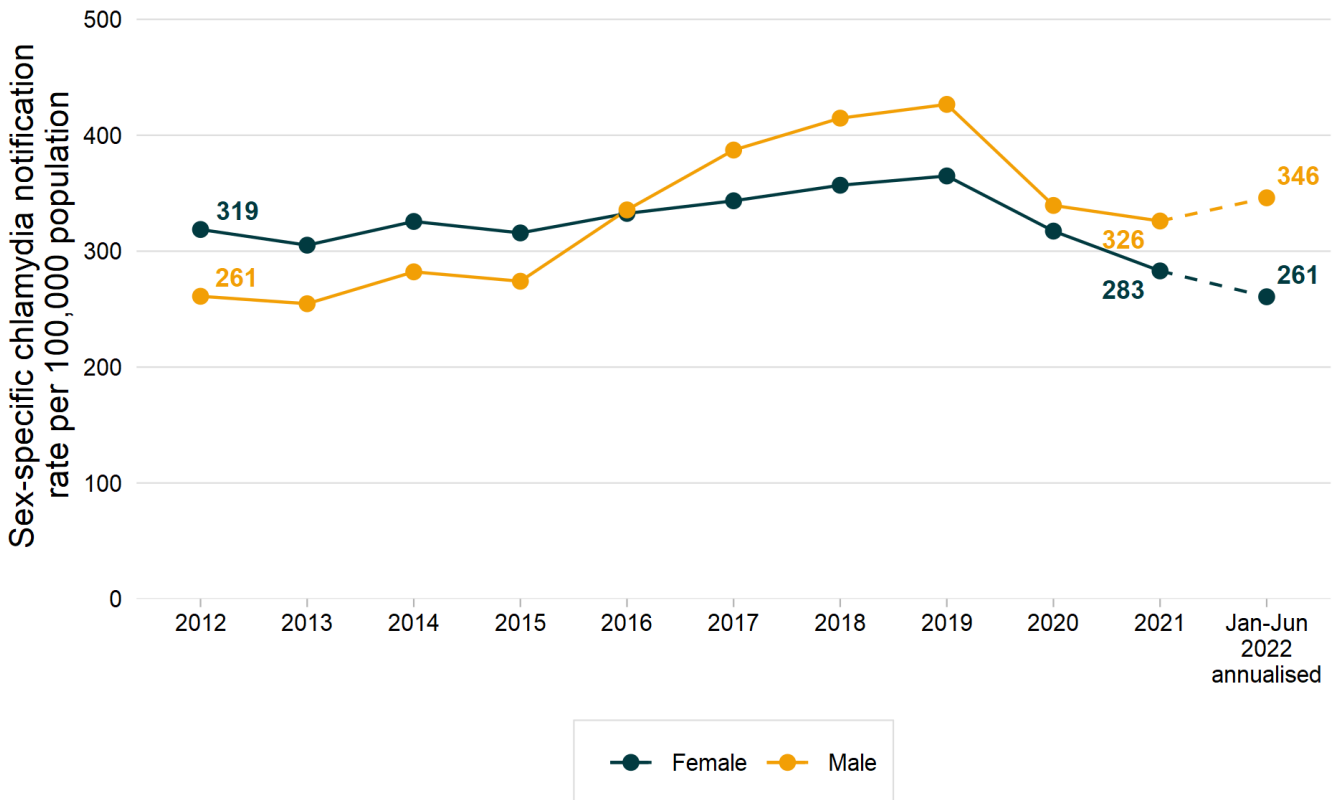


Data source: NCIMS and ABS (via SAPHaRI), NSW Health; data extracted 30 January 2023. The rate is based on six months of data between January-June 2022 adjusted to an annual rate and is subject to change. Excludes non-NSW residents and persons whose residential postcode was not known.

From January to June 2022 there were 7,009 notifications in males (57%) and 5,374 notifications in females (43%). The male annualised sex-specific chlamydia notification rate increased from the 2021 annual rate by 6% from 326 to 346 notifications per 100,00 males in 2022. Whilst for females the annualised sex-specific rate decreased by 8% over the same time.

The chlamydia notification rate in 2022 is currently 33% higher in males than in females. This is a larger relative difference than is typically observed and is driven by the divergent trends apparent from 2020 onwards.

Figure 14: Sex specific chlamydia notification rates, NSW, 1 January 2012 – 30 June 2022

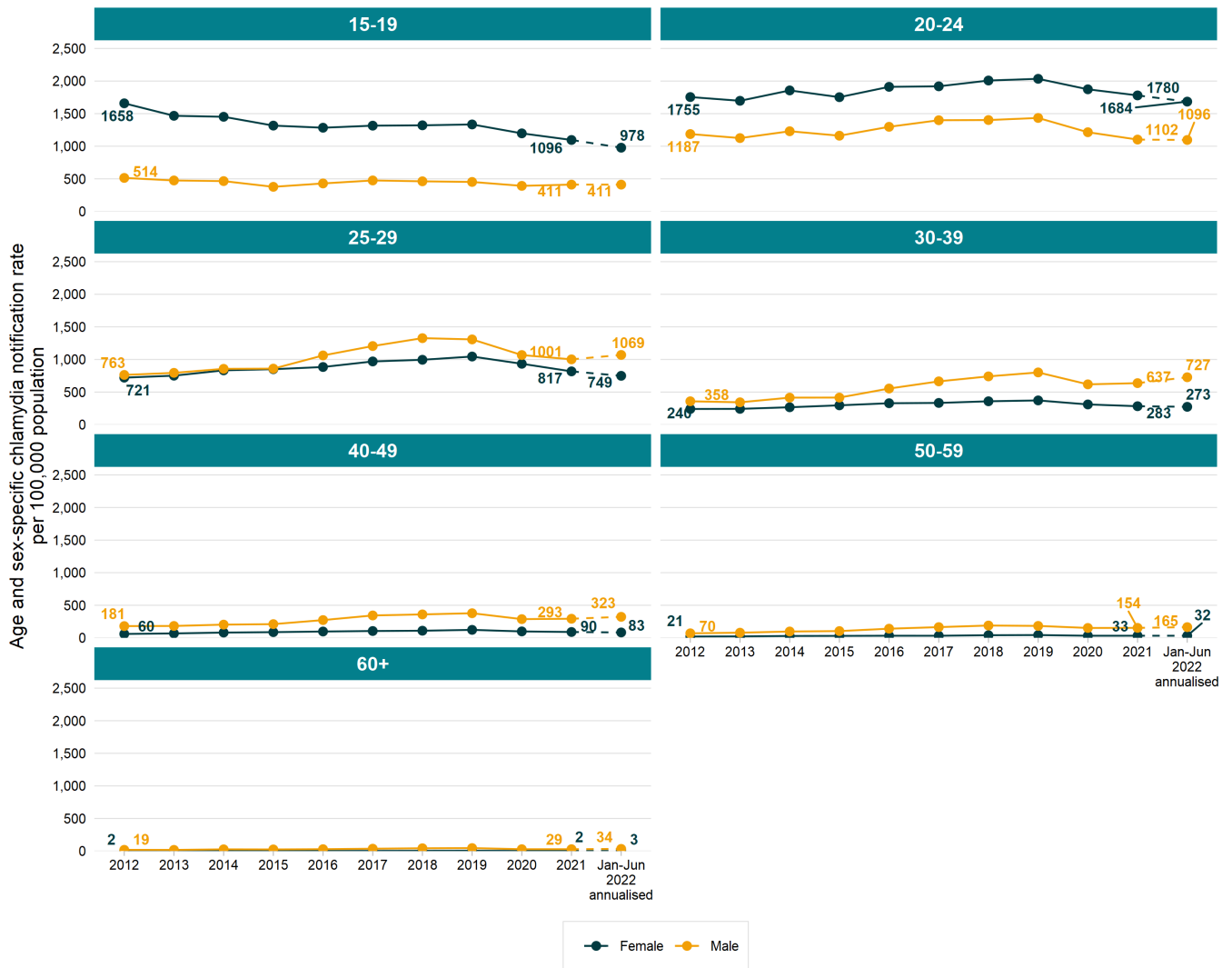


Data source: NCIMS (via SAPHaRI), NSW Health; data extracted 30 January 2023. The rate is based on six months of data between January-June 2022 adjusted to an annual rate and is subject to change. Excludes persons reported as transgender (due to small numbers), and persons whose sex was not reported, non-NSW residents and persons whose residential postcode was not known.

The age-sex specific notification rate for females 15–19 years (N=1,119, 978 notifications per 100,000 females) to 20–24 years of age (N=2,038, 1,684 notifications per 100,000 females) continues to be substantially higher than males of those age groups. However, rates in females aged 15–19 years have been trending lower over the past decade.

Notification rates increased since 2021 in all male age groups over 29-years and decreased in all female age groups, apart from females aged over 60 years.

Figure 15: Age and sex-specific chlamydia notification rates in people aged 15 years and over, NSW, 1 January 2012 - 30 June 2022

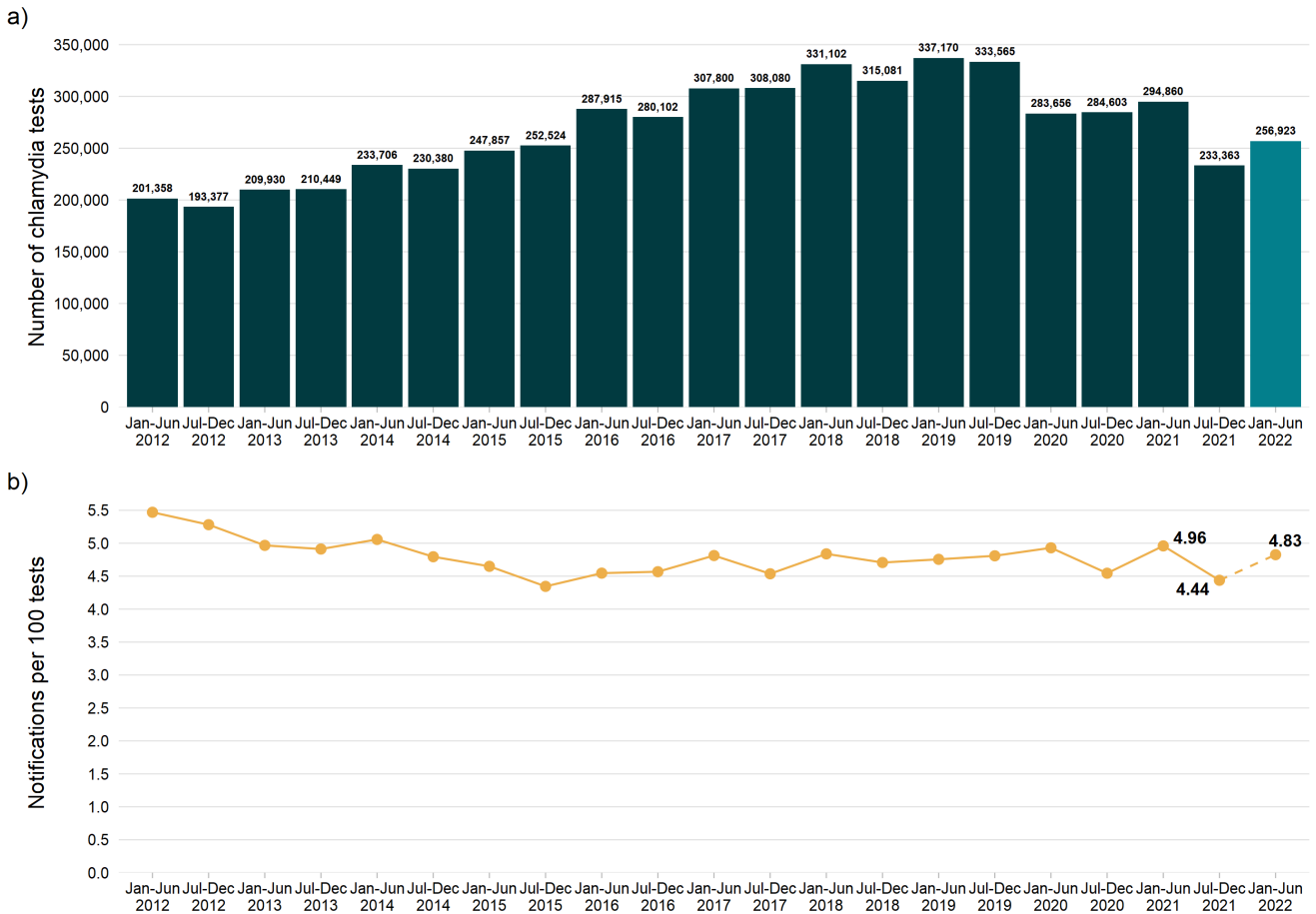


Data source: NCIMS (via SAPHaRI), NSW Health; data extracted 30 January 2023. The rate is based on six months of data between January-June 2022 adjusted to an annual rate and is subject to change. Excludes persons reported as transgender (due to small numbers), persons whose sex was not reported, non-NSW residents and persons whose residential postcode was not known.

In the first 6 months of 2022 there were 256,923 chlamydia tests (NAAT) performed in NSW. Although testing in this period saw an increase of 10% from the prior 6-month period in 2021, 6-monthly testing numbers have remained low relatively low since December 2019.

The notification to test ratio increased from 4.44 to 4.83 notifications per 100 chlamydia tests between Jul-Dec 2021 and Jan-Jun 2022. The chlamydia notification to test ratio has decreased below the prior 5-year average twice (Jul-Dec 2020 and Jul-Dec 2021). The increase of the notification to test ratio in this period returns the ratio back to the previous average.

Figure 16: Number of chlamydia tests and ratio of notifications per 100 tests, NSW, 1 January 2012 – 30 June 2022

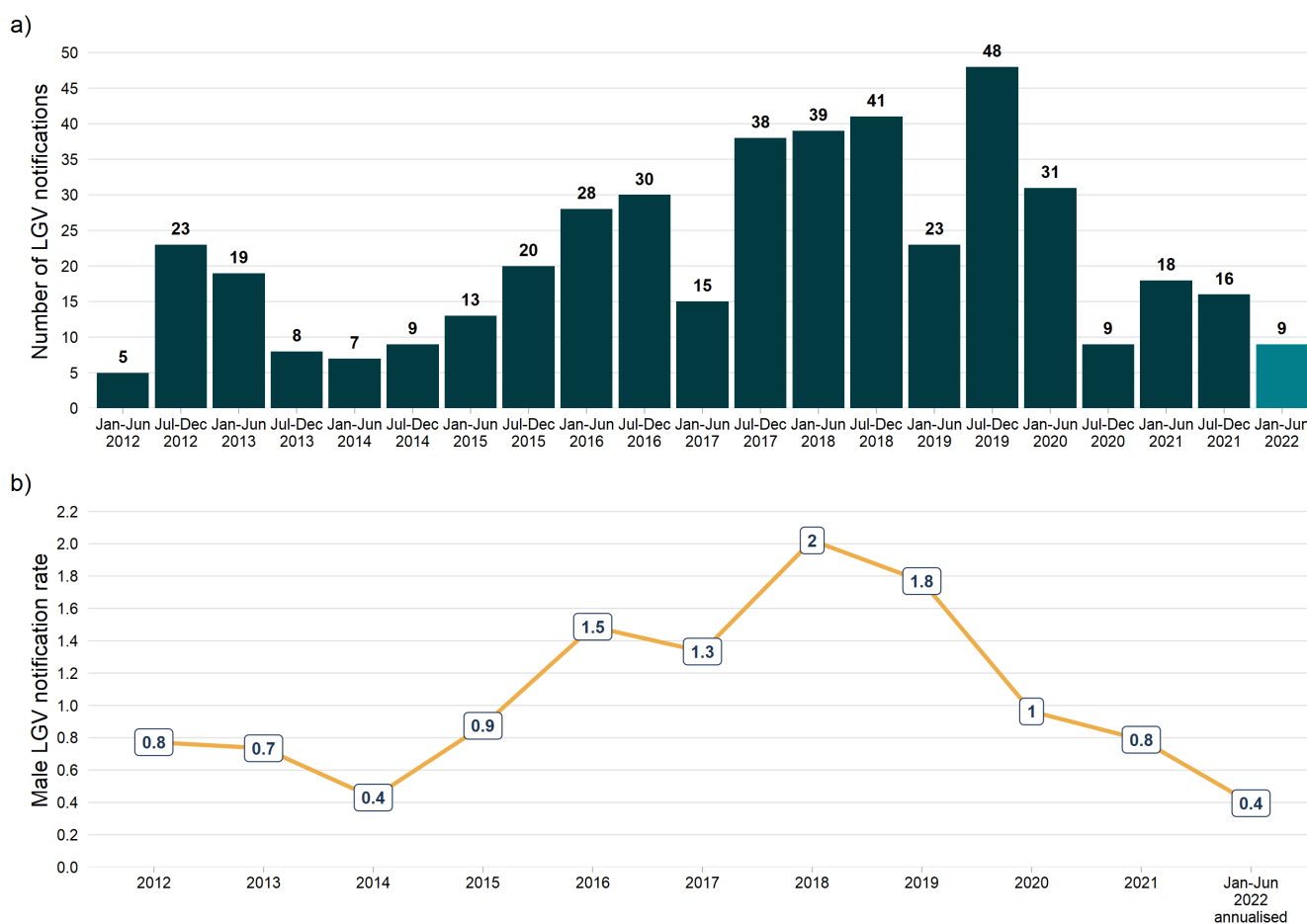


Data source: NCIMS (via SAPHaRI) and NSW Denominator Data Project, NSW Health. Data extracted 30 January 2023.

Lymphogranuloma venereum (LGV)

From January to June 2022 there were 9 cases of LGV notified. In 2022 so far, the most notified age group continued to be 30–39-year group (55%). Among the nine cases, eight were in males and one was reported in a female. The notification rate continued to decrease from the peak of 2.0 cases per 100,000 males in 2018 (N=80) and was at the lowest rate within the past six-years at 0.4 cases per 100,000 males (N=9).

Figure 17: Number and male notification rate of LGV notifications, NSW, 1 January 2012 – 30 June 2022



Data source: Data source: NCIMS and ABS population estimates (via SAPHaRI), NSW Health; data extracted 30 January 2023. The rate is based on six months of data between January-June 2022 adjusted to an annual rate and is subject to change. Excludes non-NSW residents and persons whose residential postcode was not know.

Appendices

Appendix A: Data sources

Table 2: Details on data sources included in this report

Name	Custodian	Description
NSW Notifiable Conditions Information Management System (NCIMS)	Health Protection NSW, NSW Health	<p>The NSW Notifiable Conditions Information Management System (NCIMS) contains records of all people notified to NSW Health with a notifiable condition under the NSW Public Health Act. Notification data may not reflect the true incidence of notifiable sexually transmitted diseases as they only represent a proportion of notifiable diseases in the population, however they are useful for monitoring trends over time.</p> <p>Re-infection periods: A person is only re-notified with chlamydia, gonorrhoea or infectious syphilis if the infection is acquired outside of the re-infection period as follows:</p> <p>Chlamydia - 29 days</p> <p>Gonorrhoea - 29 days</p> <p>Infectious syphilis - 89 days</p> <p>Multiple sites: A person who is notified with more than one site of infection simultaneously is counted as one notification.</p>
NSW Health denominator data project	Health Protection NSW, NSW Health	<p>Monthly aggregated testing data for selected notifiable conditions from 15 NSW public and private laboratories.</p> <p>These laboratories account for more than 90% of the total notifications for the selected conditions in NSW. Information from laboratories does not provide any indication on whether there are repeat tests or multiple site tests for the same individual.</p> <p>The notification to test ratio has been calculated by dividing the overall positive results notified to NSW Health by all laboratories by the total number of tests performed as reported from the participating laboratories and multiplying by 100. Notifications are for individual people with gonorrhoea/chlamydia reported from all laboratories. However, the testing data are for individual tests reported from participating laboratories and may include multiple specimens per individual. As such, the notification to test ratio may be an underestimate of the per cent of people tested that were positive in NSW for the condition</p>

Appendix B: Case definitions

The STI notifications in this report meet the case definitions in the relevant Control Guideline for Public Health Units as listed below:

Infectious syphilis – less than two years duration

<http://www.health.nsw.gov.au/Infectious/controlguideline/Pages/syphilis.aspx>

Syphilis - more than 2 years or unknown duration

<http://www.health.nsw.gov.au/Infectious/controlguideline/Pages/syphilis.aspx>

Congenital syphilis

<http://www.health.nsw.gov.au/Infectious/controlguideline/Pages/syphilis.aspx>

Gonorrhoea

<http://www.health.nsw.gov.au/Infectious/controlguideline/Pages/gonorrhoea.aspx>

Chlamydia

<http://www.health.nsw.gov.au/Infectious/controlguideline/Pages/chlamydia.aspx>

LGV

<https://www.health.nsw.gov.au/Infectious/controlguideline/Pages/lymphogranuloma.aspx>

NSW Health