

Sexually Transmissible Infections in NSW: January to June 2020 data update

1. Introduction

Due to the ongoing COVID-19 response, this data update replaces the *NSW STI Strategy January to June 2020 Data Report*. For additional surveillance data, including breakdowns by Local Health District, please refer to the [NSW Health Infectious Diseases data webpage](#).

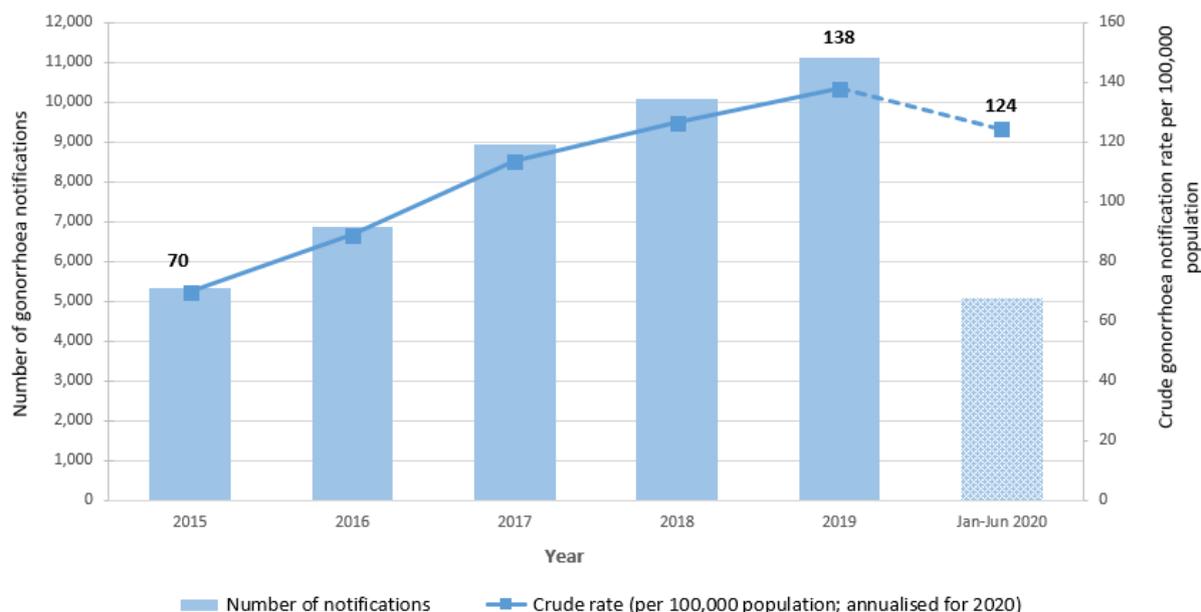
Surveillance data for the time period January to June 2020 should be interpreted with caution as the effects of the COVID-19 pandemic on social behaviour, health-seeking behaviour, and service delivery are not yet fully known. Testing data are not currently available to determine whether changes in notification trends observed in the first half of 2020 reflect a change in transmission levels, a change in testing uptake, or a combination of both.

2. Gonorrhoea notifications

2.1. Notifications trends

In the time period January to June 2020, the annualised gonorrhoea notification rate was 124 notifications per 100,000 population. This is 10% lower compared to 2019 when the yearly rate was 138 notifications per 100,000 population (Figure 1). The decline in the annualised notification rate in the first half of 2020 ends a consistent yearly increase over the past five years. However, the rate remains 1.8 times as high as in 2015 when 70 notifications per 100,000 population were recorded.

Figure 1: Number and crude rate of gonorrhoea notifications by reporting year, NSW, 1 January 2015 - 30 June 2020



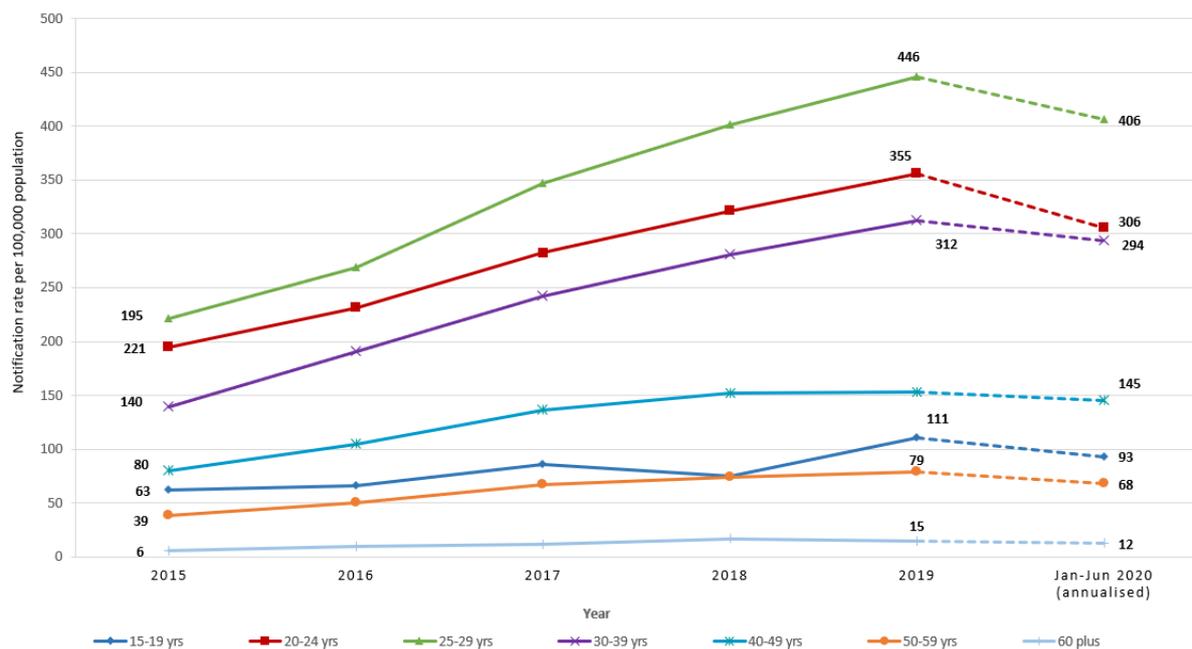
Data source: NCIMS and ABS population estimates (via SAPHaRI), NSW Health; data extracted 8 September 2020.

Note: Excludes non-NSW residents. Reporting year is based on calculated onset date. Calculated onset date reflects the date of symptom onset where reported, or otherwise the earliest of several dates related to specimens or notification.

In line with the overall trend, gonorrhoea notification rates declined across all age groups (Figure 2), ranging from a 6% decrease in the 30-39 years and 40-49 years age groups to a 17% decrease in those aged 60 years and older. The highest annualised gonorrhoea notification rates continued to occur in the 25-29 years and 20-24 years age groups, followed by those aged 30-39 years.

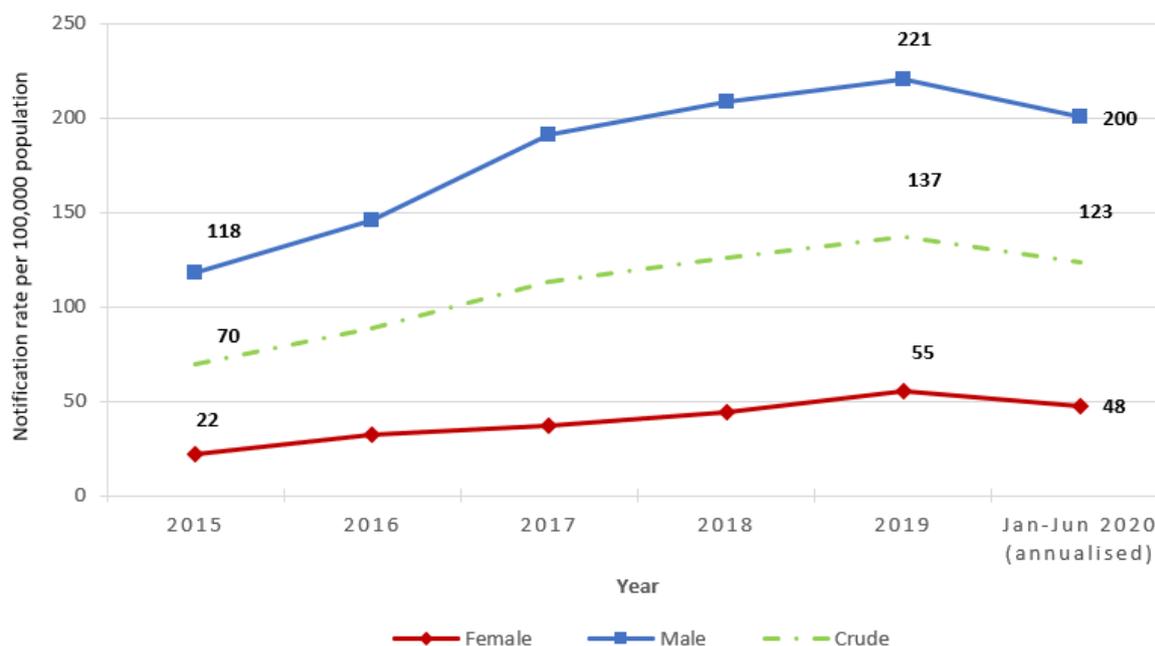
The annualised 2020 notification rates declined in both males and females, relative to the yearly 2019 rates. The rate decrease was slightly lower for males than for females at 9% and 13%, respectively (Figure 3). As a result, the male-to-female notification rate ratio widened for the first time since 2017, with 4.2 notifications per 100,000 males received for each notification per 100,000 females.

Figure 2: Age-specific gonorrhoea notification rates in people aged 15 years and over, NSW, 1 January 2015 - 30 June 2020



Data source: NCIMS and ABS population estimates (via SAPHaRI), NSW Health; data extracted 8 September 2020. Note: Excludes non-NSW residents and persons whose age at diagnosis was not stated. Reporting year is based on calculated onset date. Calculated onset date reflects the date of symptom onset where reported, or otherwise the earliest of several dates related to specimens or notification.

Figure 3: Sex-specific gonorrhoea notification rates, NSW, 1 January 2015 - 30 June 2020



Data source: NCIMS and ABS population estimates (via SAPHaRI), NSW Health; data extracted 8 September 2020.

Note: Excludes non-NSW residents, persons reported as transgender (due to small numbers), and persons whose sex was not reported. Reporting year is based on calculated onset date. Calculated onset date reflects the date of symptom onset where reported, or otherwise the earliest of several dates related to specimens or notification.

2.2. Trends in reported infection sites

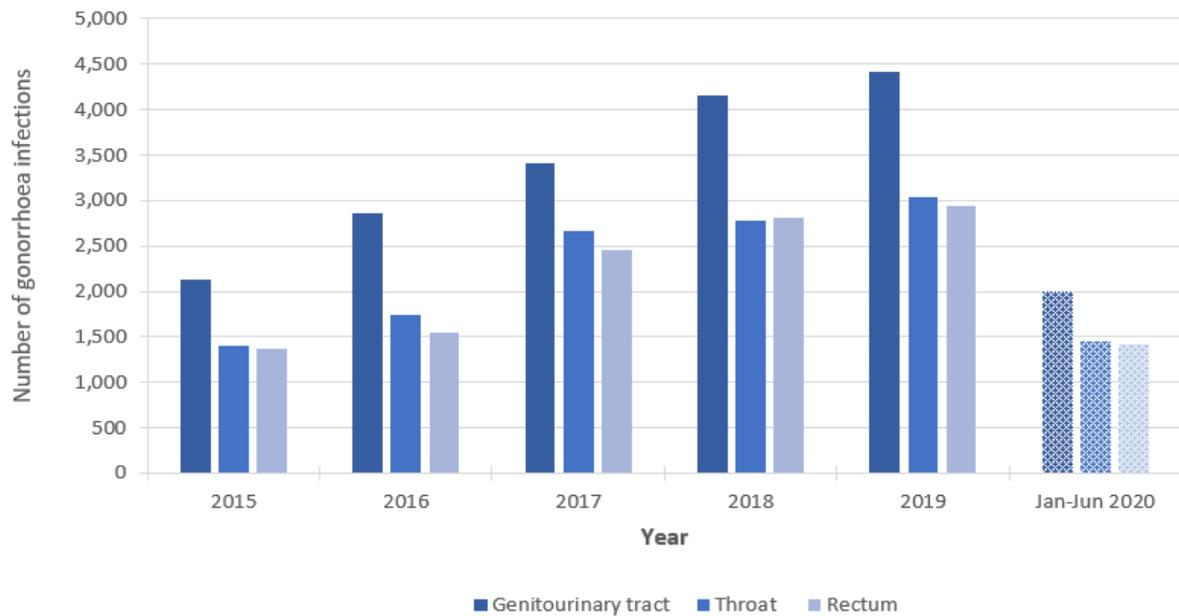
The site of infection can give some indication of trends in transmission and screening, noting that one notification often includes infections at several sites: in males, genitourinary infections are usually symptomatic, which means the majority are likely to be diagnosed. Therefore, the notification rate of male genitourinary gonorrhoea may be used as a broad indicator of gonorrhoea transmission. Rectal and throat infections, however, are usually asymptomatic. Therefore, trends in the notification rate of 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.

On an annualised basis, the total number of infections at each site decreased in the first half of 2020 for both males and females, with the most notable relative decrease in female throat infections.

In males, the ratio of genitourinary infections to throat infections decreased slightly, from 1.5 genitourinary infections diagnosed for every one throat infection in 2019 to 1.4 genitourinary infections diagnosed for every one throat infection in 2020 (Figure 4). The relative decrease in genitourinary infections may suggest a temporary decrease in transmission.

In the first half of 2020, the ratio of genitourinary infections to throat infections in females decreased considerably, from 5.2 genitourinary infections diagnosed for every one throat infection in 2019 to 4.0 genitourinary infections diagnosed for every one throat infection in 2020 (Figure 5). The large relative decrease in throat infection may suggest a temporary decrease in comprehensive screening, possibly in conjunction with a decrease in transmission.

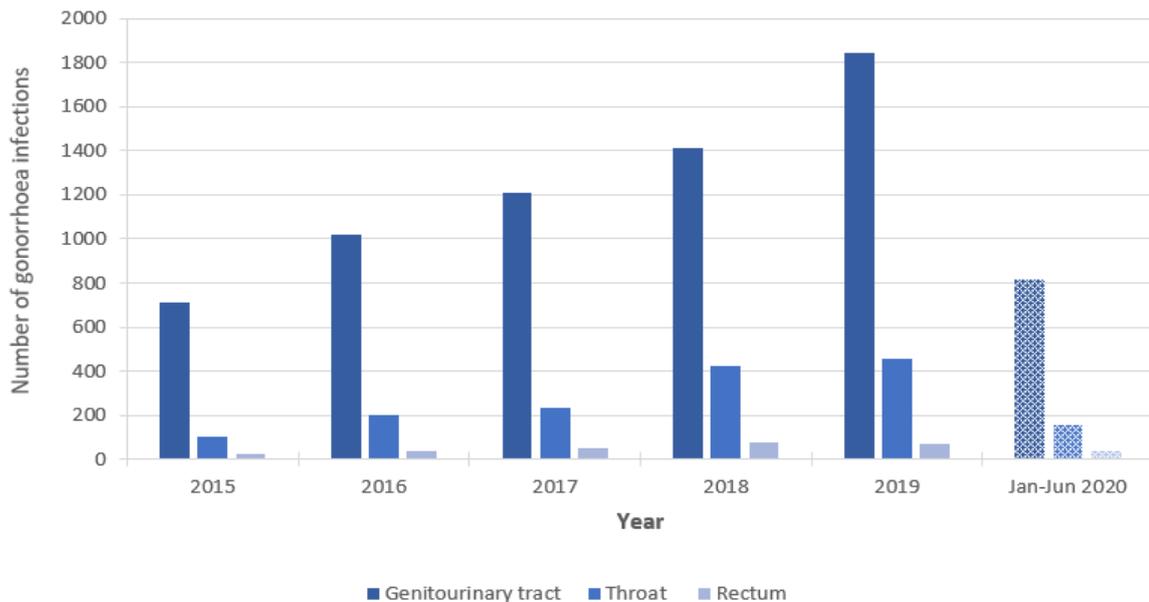
Figure 4: Number of gonorrhoea infections in males by anatomical site of infection, NSW, 1 January 2015 - 30 June 2020



Data source: NCIMS, NSW Health; data extracted 8 September 2020.

Note: Excludes non-NSW residents, persons reported as transgender (due to small numbers), and persons whose sex was not reported. Reporting year is based on calculated onset date. Calculated onset date reflects the date of symptom onset where reported, or otherwise the earliest of several dates related to specimens or notification. Number of infections exceeds number of notifications due to infection at multiple anatomical sites.

Figure 5: Number of gonorrhoea infections in females by anatomical site of infection, NSW, 1 January 2015 - 30 June 2020



Data source: NCIMS, NSW Health; data extracted 8 September 2020.

Note: Excludes non-NSW residents, persons reported as transgender (due to small numbers), and persons whose sex was not reported. Reporting year is based on calculated onset date. Calculated onset date reflects the date of symptom onset where reported, or otherwise the earliest of several dates related to specimens or notification. Number of infections exceeds number of notifications due to infection at multiple anatomical sites.

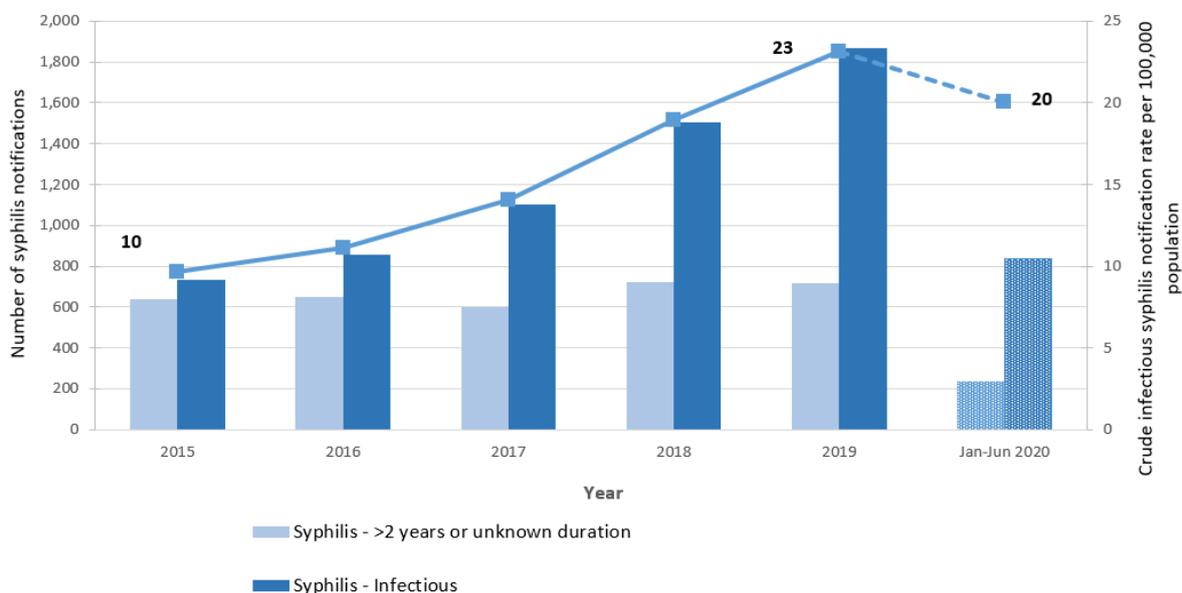
3. Infectious syphilis notifications

Note that the classification of syphilis results against the surveillance case definition often requires clinical information from the diagnosing doctor. Where clinical information is not received at three months from the date of notification, classification is completed based on the information available. For notifications received in July 2020, classification may not yet have been undertaken.

In the time period January to June 2020, the annualised syphilis notification rate was 20 notifications per 100,000 population. This is 11% lower compared to 2019 when the yearly rate was 23 notifications per 100,000 population (Figure 6).

The decline in the annualised notification rate in the first half of 2020 ends a consistent yearly increase over the past five years. However, the rate remains twice as high as in 2015 when 10 notifications per 100,000 population were recorded.

Figure 6: Number and crude rate of syphilis notifications, NSW, 1 January 2015 - 30 June 2020



Data source: NCIMS and ABS population estimates (via SAPHARI), NSW Health; data extracted 8 September 2020.

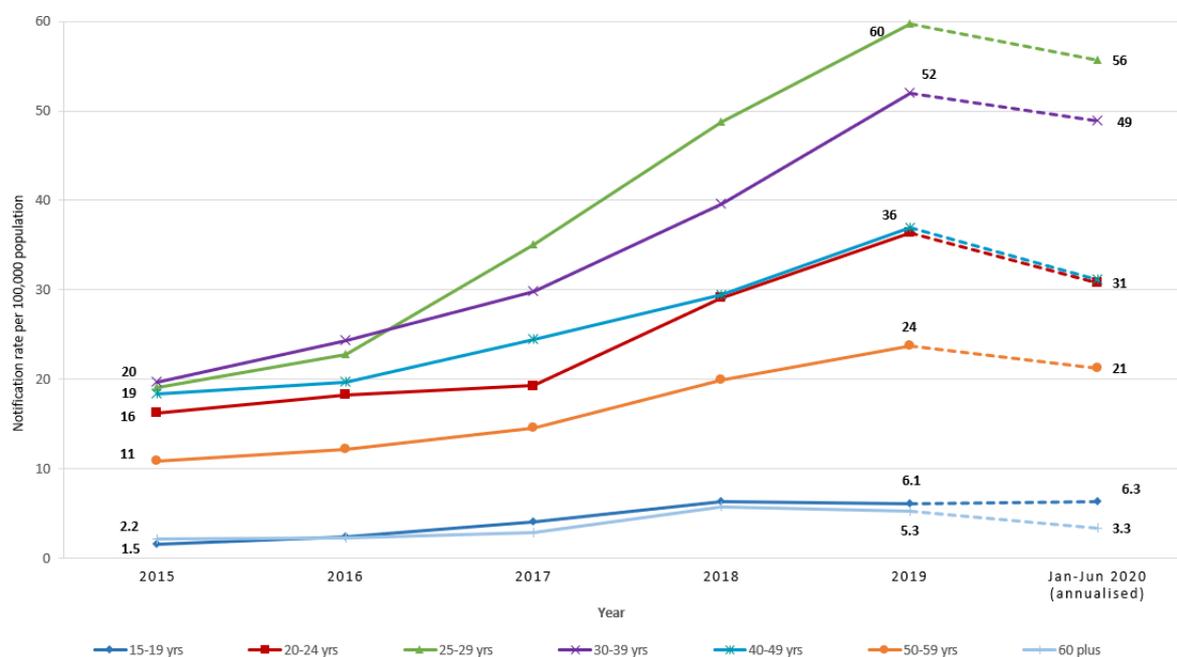
Note: Excludes non-NSW residents. Reporting year is based on calculated onset date. Calculated onset date reflects the date of symptom onset where reported, or otherwise the earliest of several dates related to specimens or notification.

In line with the overall trend, syphilis notification rates declined across all age groups except in those aged 15 to 19 years (Figure 7). At 37%, the largest rate decrease was observed in those aged 60 years and older. The highest annualised syphilis notification rates continued to occur in the 25-29 years and 30-39 years age groups.

The annualised 2020 notification rates declined in both males and females, relative to the yearly 2019 rates. The rate decrease was slightly lower for females than for males at 8% and 11%, respectively (Figure 8). As a result, the male-to-female notification rate continues to narrow, with 14.1 notifications per 100,000 males received for each notification per 100,000 females. Although the number of notifications amongst females remained small in the first half of 2020, the sustained higher level of notifications compared to the time period prior to 2017 is of concern due to the risk of mother-to-child transmission of syphilis during pregnancy (also see section 4 on congenital syphilis notifications).

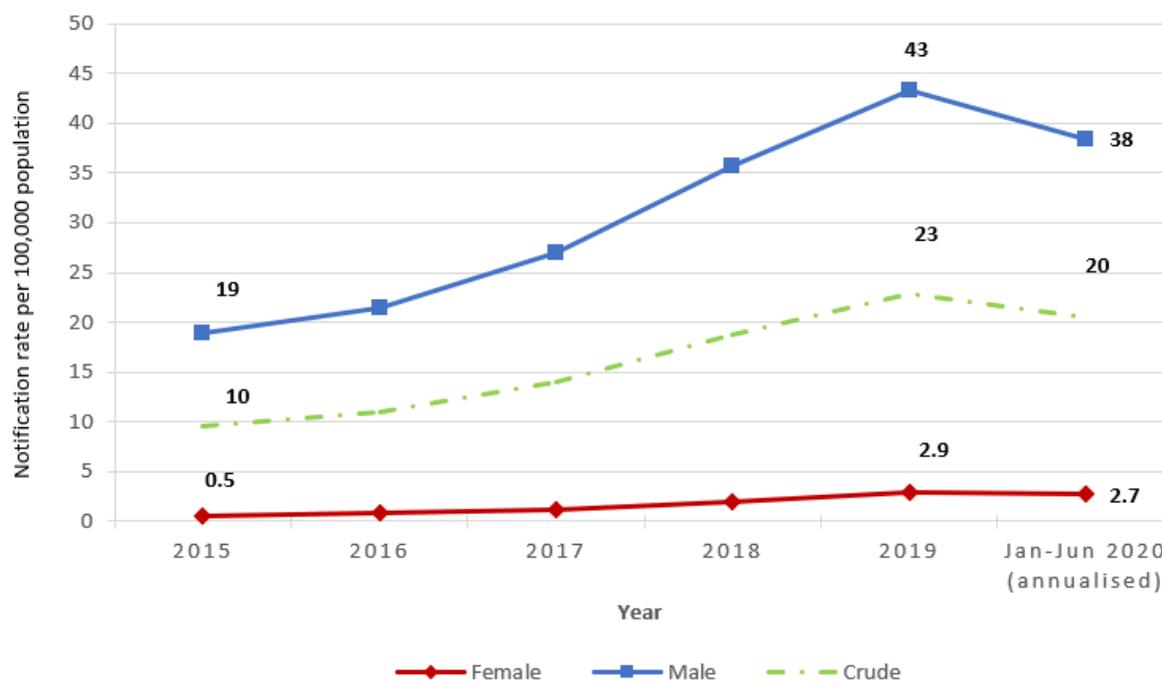
Of the 839 infectious syphilis notifications received in the time period January to June 2020, 26 (3.1%) were among Aboriginal and Torres Strait Islander people, 684 (82%) were among non-Indigenous people and Indigenous status was not stated for 129 persons (15%). The proportion of infectious syphilis notifications among Aboriginal or Torres Strait Islander people was similar to 2018 when it was 2.9%. There no evidence to suggest that the outbreak among Aboriginal populations in Queensland, the Northern Territory, South Australia, and Western Australia has spread to NSW. However, as the number of infectious syphilis notifications in the Aboriginal and Torres Strait Islander population is small, trends should be interpreted with caution.

Figure 7: Age-specific infectious syphilis notification rates in people aged 15 years and over, NSW, 1 January 2015 - 30 June 2020



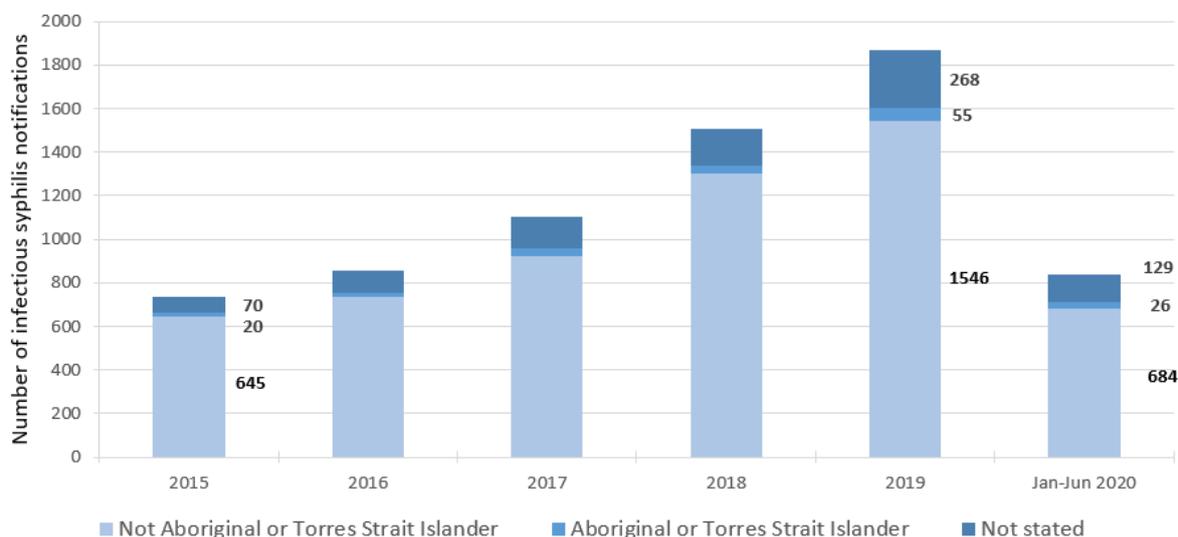
Data source: NCIMS and ABS population estimates (via SAPHaRI), NSW Health; data extracted 8 September 2020. Note: Excludes non-NSW residents and persons whose age at diagnosis was not stated. Reporting year is based on calculated onset date. Calculated onset date reflects the date of symptom onset where reported, or otherwise the earliest of several dates related to specimens or notification.

Figure 8: Sex-specific infectious syphilis notification rates, NSW, 1 January 2015 - 30 June 2020



Data source: NCIMS and ABS population estimates (via SAPHaRI), NSW Health; data extracted 8 September 2020. Note: Excludes non-NSW residents, persons reported as transgender (due to small numbers), and persons whose sex was not reported. Reporting year is based on calculated onset date. Calculated onset date reflects the date of symptom onset where reported, or otherwise the earliest of several dates related to specimens or notification.

Figure 9: Infectious syphilis notifications by Indigenous status, NSW, 1 January 2015 - 30 June 2020



Data source: NCIMS, NSW Health; data extracted 8 September 2020.

Note: Excludes non-NSW residents and persons with whose Aboriginal status was not stated. Reporting year is based on calculated onset date. Calculated onset date reflects the date of symptom onset where reported, or otherwise the earliest of several dates related to specimens or notification.

4. Congenital syphilis notifications

Congenital syphilis is an entirely preventable disease. 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.

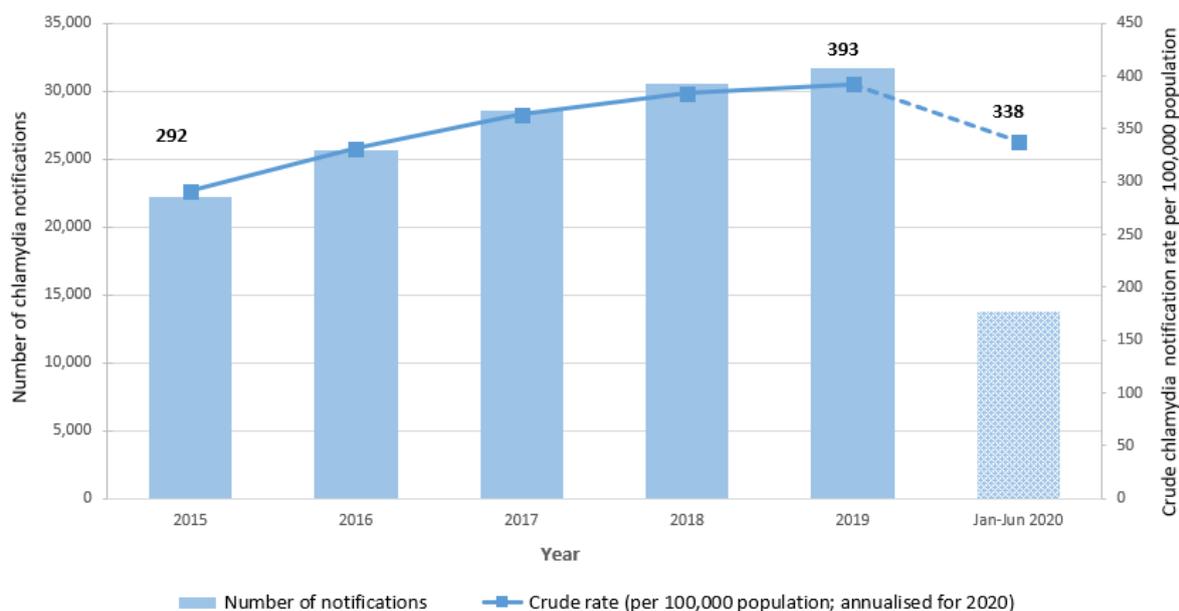
In the last five and half years there were five cases of congenital syphilis among NSW residents, with one case each in 2017, 2018, and 2019, and two cases in the first half of 2020. All five cases occurred in [metropolitan local health districts](#). There were no congenital syphilis cases in the Aboriginal population in NSW from January 2015 to June 2020.

5. Chlamydia notifications

In the time period January to June 2020, the annualised chlamydia notification rate was 338 notifications per 100,000 population. This is 14% lower compared to 2019 when the yearly rate was 393 notifications per 100,000 population (Figure 10).

As a result, the annualised rate is at its lowest level since 2016 but remains 1.2 times as high as in 2015 when 292 notifications per 100,000 population were recorded.

Figure 10: Number and crude rate of chlamydia notifications by reporting year, NSW, 1 January 2015 - 30 June 2020



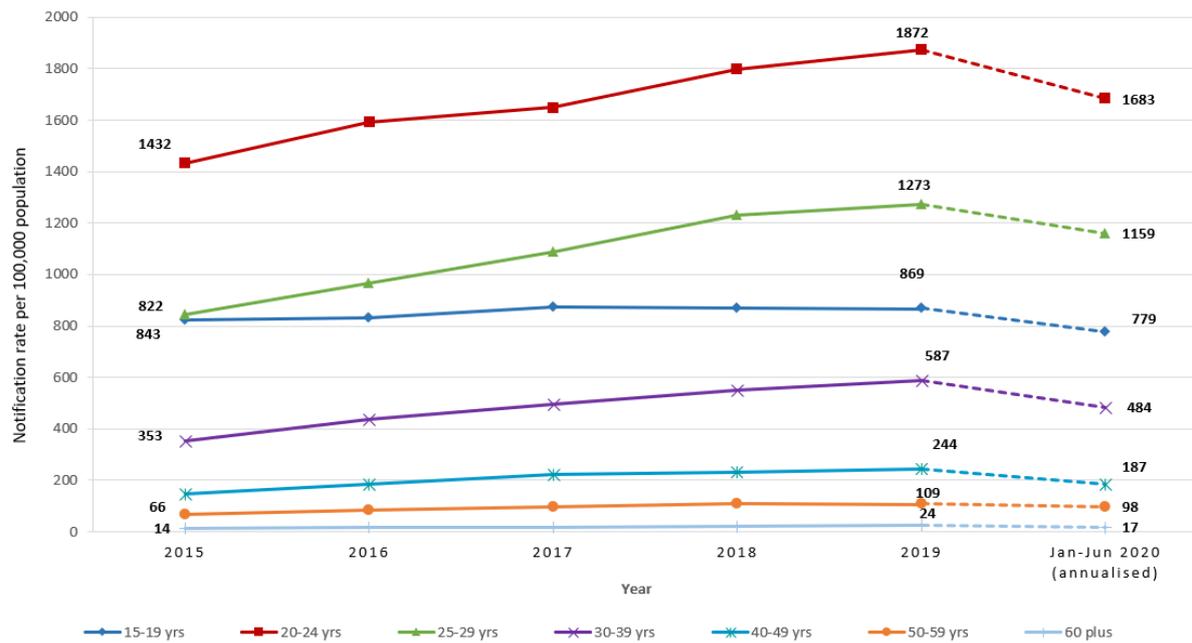
Data source: NCIMS and ABS population estimates (via SAPHaRI), NSW Health; data extracted 8 September 2020.

Note: Excludes non-NSW residents. Reporting year is based on calculated onset date. Calculated onset date reflects the date of symptom onset where reported, or otherwise the earliest of several dates related to specimens or notification.

In line with the overall trend, chlamydia notification rates declined across all age groups (Figure 11), ranging from a 9% decrease in the 25-29 years age group to a 28% decrease in those aged 60 years and older. The highest annualised gonorrhoea notification rates continued to occur in the 20-24 years age group, followed by those aged 25-29 years.

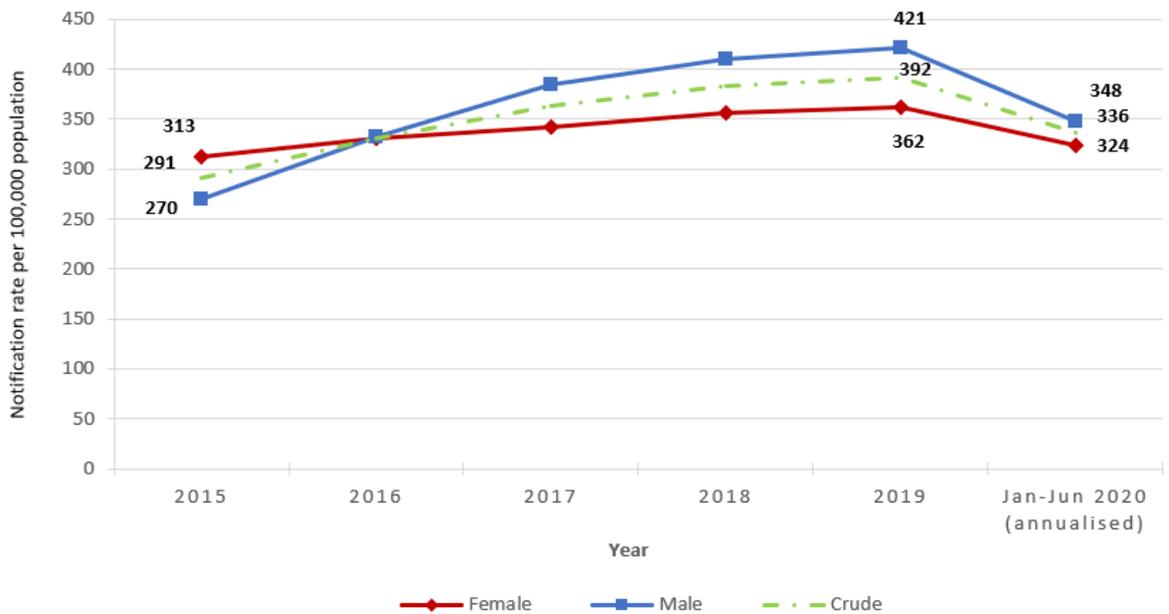
The annualised 2020 notification rates declined in both males and females, relative to the yearly 2019 rates. The rate decrease was lower for females than for males at 11% and 17%, respectively (Figure 12). As a result, the male-to-female notification rate ratio narrowed for the first time since 2017, with 1.08 notifications per 100,000 males received for each one notification per 100,000 females. Nevertheless, consistent with the trend observed since 2016, the male rate continues to exceed the female notification rate.

Figure 11: Age-specific chlamydia notification rates in people aged 15 years and over, NSW, 1 January 2015 - 30 June 2020



Data source: NCIMS and ABS population estimates (via SAPHaRI), NSW Health; data extracted 8 September 2020.
 Note: Excludes non-NSW residents and persons whose age at diagnosis was not stated. Reporting year is based on calculated onset date. Calculated onset date reflects the date of symptom onset where reported, or otherwise the earliest of several dates related to specimens or notification.

Figure 12: Sex-specific chlamydia notification rates, NSW, 1 January 2015 - 30 June 2020



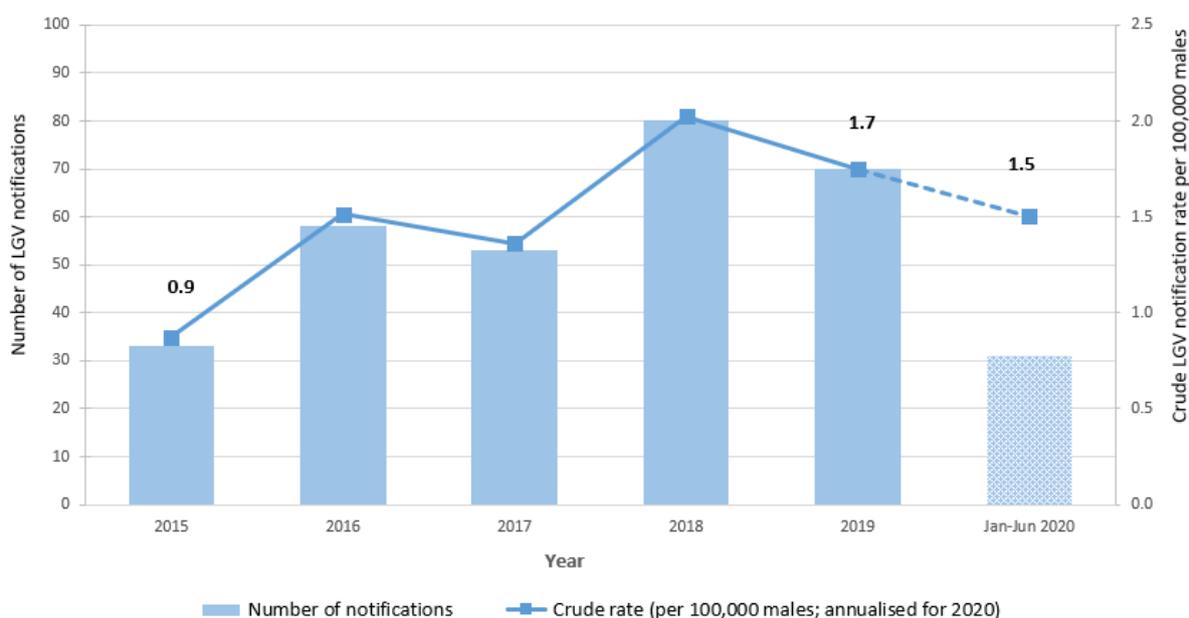
Data source: NCIMS and ABS population estimates (via SAPHaRI), NSW Health; data extracted 8 September 2020.
 Note: Excludes non-NSW residents, persons reported as transgender (due to small numbers), and persons whose sex was not reported. Reporting year is based on calculated onset date. Calculated onset date reflects the date of symptom onset where reported, or otherwise the earliest of several dates related to specimens or notification.

6. Lymphogranuloma venereum (LGV) notifications

In the time period January to June 2020, 31 cases of LGV were notified to NSW Health (Figure 1). All cases notified in the first half of 2020 were diagnosed in males. The annualised notification rate was 1.5 notifications per 100,000 males which is similar to the notification rate of 1.7 in 2019, taking into account variation due to small numbers. Only one female case of LGV was notified in NSW in the period January 2015 to June 2020.

LGV is the only notifiable STI with notification numbers that are comparable to 2019 levels. This observation should be interpreted with caution given the very small number of LGV notifications. Nevertheless, as asymptomatic LGV testing is not recommended in Australia, it is likely that these notifications reflect symptomatic presentations, with some transmission possibly pre-dating the effects of COVID-19.

Figure 13: Number and rate of LGV notifications in males by reporting year, NSW, 1 January 2015 - 30 June 2020



Data source: NCIMS and ABS population estimates (via SAPHaRI), NSW Health; data extracted 8 September 2020.

Note: Excludes non-NSW residents. Reporting year is based on calculated onset date. Calculated onset date reflects the date of symptom onset where reported, or otherwise the earliest of several dates related to specimens or notification.