Introduction

On 23 March 2021, the Australian Health Protection Principal Committee (AHPPC) endorsed the *National strategic approach for responding to rising rates of syphilis in Australia 2021* (Strategic Approach) developed to guide the national response to the continued rise in syphilis notifications in Australia. The Strategic Approach outlines three national targets which provide a specific focus for efforts towards addressing the rising rates of syphilis and adverse outcomes in Australia:

1. Reduce incidence of syphilis overall, with a focus on women of reproductive age.
2. Eliminate[i] congenital syphilis.
3. Control outbreaks[ii] among Aboriginal and Torres Strait Islander peoples in Queensland, the Northern Territory, Western Australia, and South Australia.

Supporting the Strategic Approach is the *National syphilis surveillance and monitoring plan* (Surveillance Plan) which outlines indicators that will be used to monitor progress towards achieving the three specific targets.

This report provides a quarterly account of progress against the targets and indicators in the Strategic Approach and Surveillance Plan.

Analysis

The Department of Health and Aged Care acknowledges the providers of the many sources of data used in this report and greatly appreciates their contribution.

Summary

- Syphilis notifications are being monitored across four population groups: non-Indigenous males, non-Indigenous females, Aboriginal and Torres Strait Islander males and Aboriginal and Torres Strait Islander females.
- The last 12 months (Q2 2022 – Q1 2023) marks the highest number of cases reported for a 12 month period since infectious syphilis first became notifiable in 2004[iii]. Increases have been observed across all four population groups with the greatest proportional increase reported in non-Indigenous females (23%).
- Aboriginal and Torres Strait Islander people continue to be disproportionately represented in the syphilis notification data, with notification rates overall 7 times that of non-Indigenous people in the previous 12 months.
- The greatest proportion of syphilis cases were reported in non-Indigenous men, who largely resided in major cities, with notification rates increasing marginally over the previous 12 months (5%).
- Notification rates in Aboriginal and Torres Strait Islander females across all age groups and residing in major cities of Australia reported the greatest increases compared to the preceding 12 months (Q2 2021 – Q1 2022).
- Notification rates in Aboriginal and Torres Strait Islander people in remote and very remote areas of Australia continue to be the highest, reflecting sustained transmission associated with the outbreak in Queensland, the Northern Territory, Western Australia and South Australia.
- Notification rates among Aboriginal and Torres Strait Islander and non-Indigenous females of reproductive age (15-44 years) residing in major cities and inner/outer regional areas increased over the previous 12 months.
- Increases in notifications of syphilis of among women of reproductive age in recent years have coincided with the highest number of congenital syphilis cases diagnosed in 2020 (n=17) since 2001.

[i] The 2018-22 National STI Strategy and Aboriginal and Torres Strait Islander BBV and STI Strategy, define elimination of congenital syphilis as '*no new cases of congenital syphilis nationally notified for two consecutive years*'.

[ii] At the time of writing Queensland, the Northern Territory, Western Australia and South Australia were the only jurisdictions with officially declared outbreak regions. New outbreak regions in other jurisdictions may be declared with endorsement from the CDNA, after which this target will be amended.

[iii] Syphilis has been nationally notifiable since 1991, however prior to 2004, syphilis cases were reported under the overarching category of syphilis (all), which was inclusive of all cases of syphilis regardless of the stage of infection. From 2004, the syphilis (all) category was redefined with cases of syphilis reported under 3 new categories: infectious syphilis (<2 years duration), unspecified syphilis (unspecified or >2 years duration) and congenital syphilis (https://www.health.gov.au/resources/collections/cdna-surveillance-case-definitions).

- Seventy-seven per cent (77%) of women giving birth to an infant with congenital syphilis were diagnosed late in pregnancy.[iv]

Data presented are to 31 March 2023 unless otherwise specified.

Considerations

This report aims to increase awareness of syphilis in Australia by providing an analysis of available notification and testing data. Delays in the reporting of data may cause data to change retrospectively. When considering the below analysis, it is important to note that the impact of the COVID-19 pandemic on health seeking behaviours, testing and sexual behaviour in relation to syphilis is not yet known. However, it is expected that syphilis testing will have declined overall due to the diversion of resources to COVID-19 testing and changes in people's behaviours during the pandemic.

Target 1: Reduce incidence of syphilis overall, with a focus on women of reproductive age

Indicator 1.1 - Rate of infectious syphilis

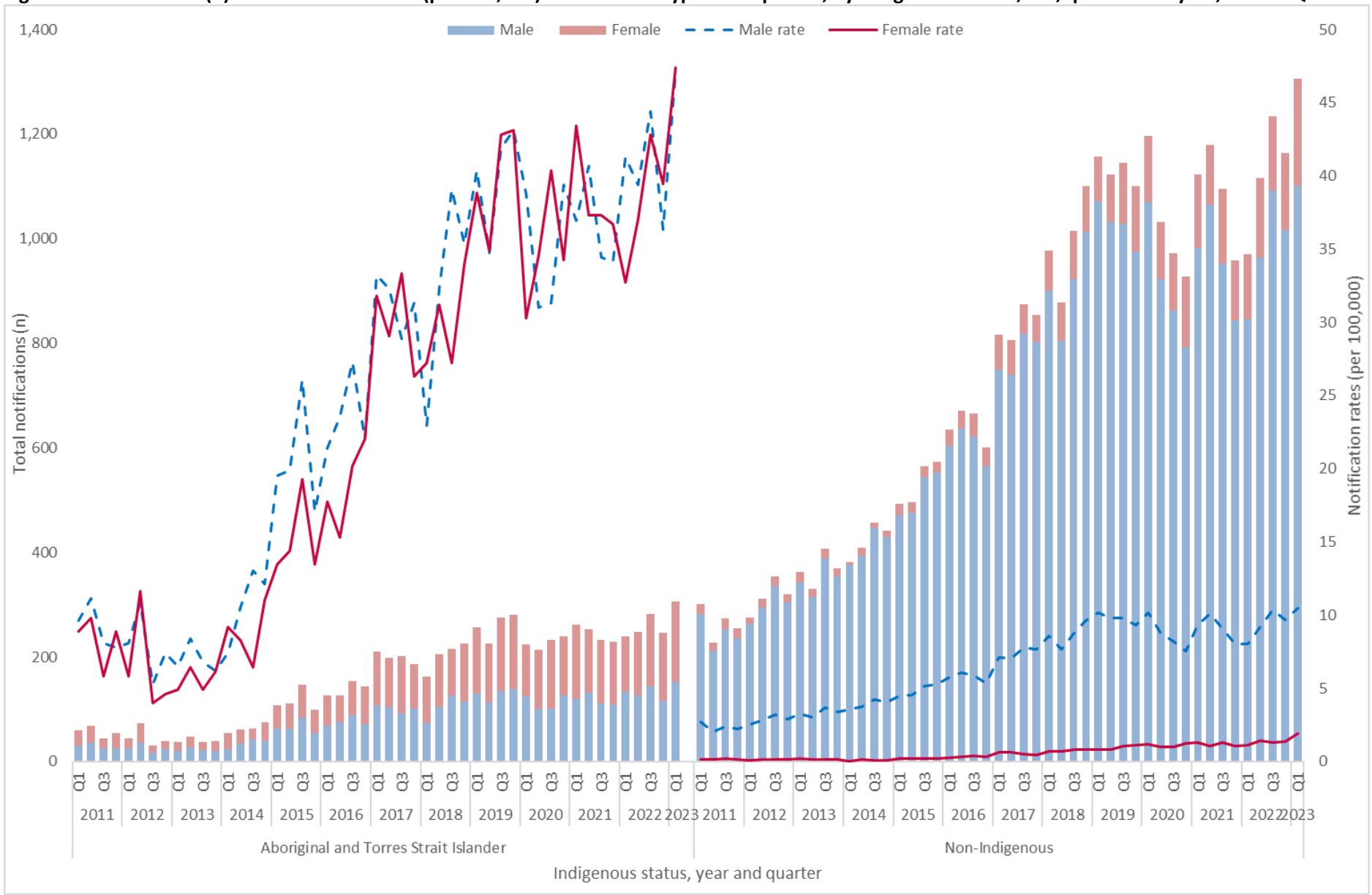
In the previous 12 months (Q2 2022 – Q1 2023), there were 6,822 cases of infectious syphilis reported to the National Notifiable Diseases Surveillance System (NNDSS). This period marks the highest number of cases reported for a 12 month period since infectious syphilis first became nationally notifiable in 2004[v]. Of the 6,822 cases of infectious syphilis 5,649 cases (87%) reported Indigenous status and sex:

- The greatest proportion of cases were among non-Indigenous males (69%, n=3,918/5,649), followed by non-Indigenous females (12%, 647/5,649), Aboriginal and Torres Strait Islander females (10%, 545/5,649) and Aboriginal and Torres Strait Islander males (10%, 539/5,649).
- Aboriginal and Torres Strait Islander males and females are disproportionately represented in the notification data, with notification rates for both population groups in the previous 12 months reported as 167 per 100,000. Non-Indigenous males, despite representing the greatest proportion of total notifications, reported a notification rate substantially lower (37 per 100,000) followed by non-Indigenous females (6 per 100,000) (Figure 1).
- In the previous 12 months, increases in notification rates were observed across all groups (Aboriginal and Torres Strait Islander and non-Indigenous males and females) compared to the preceding 12 months (Q2 2021 – Q1 2022). The greatest rate increase was reported in non-Indigenous females (23%), followed by Aboriginal and Torres Strait Islander females (14%), Aboriginal and Torres Strait Islander males (10%) and non-Indigenous males (5%).
- Compared to the 5-year mean, notification rates increased in non-Indigenous females (25%), Aboriginal and Torres Strait Islander females (11%) and Aboriginal and Torres Strait Islander males (9%). Notification rates remained the same in non-Indigenous males.

[iv] 'Late diagnosis' is defined as a syphilis diagnosis less than 30 days prior to delivery, at birth (day of delivery) or post birth.

[v] Syphilis has been nationally notifiable since 1991, however prior to 2004, syphilis cases were reported under the overarching category of syphilis (all), which was inclusive of all cases of syphilis regardless of the stage of infection. From 2004, the syphilis (all) category was redefined with cases of syphilis reported under 3 new categories: infectious syphilis (<2 years duration), unspecified syphilis (unspecified or >2 years duration) and congenital syphilis (https://www.health.gov.au/resources/collections/cdna-surveillance-case-definitions).

Figure 1: Notifications (n) and notification rate (per 100,000) of infectious syphilis* reported, by Indigenous status, sex, quarter and year, 2010 – Q1 2023



*Excludes cases for whom sex and/or Indigenous status was not reported.

Remoteness area

Across all remoteness areas of Australia, Aboriginal and Torres Strait Islander men and women have substantially higher notification rates compared to non-Indigenous men and women (Figures 2 a-c and 3 a-c).

In the previous 12 months (Q2 2022 – Q1 2023) the highest notification rates were reported among Aboriginal and Torres Strait Islander men and women aged 15-34 years old residing in remote and very remote areas of Australia, reflecting sustained transmission associated with the infectious syphilis outbreak in Queensland, the Northern Territory, Western Australia and South Australia (see Target 3 below for further information on the outbreak).

- *Major cities*

  Non-Indigenous men represented the greatest proportion (82%) of syphilis notifications in major cities across Australia. Notification rates in this population group observed increases across all age groups, when comparing the previous 12 months to the preceding 12 months (Q2 2021 – Q1 2022). Aboriginal and Torres Strait Islander and non-Indigenous women aged 45+ years observed the greatest increases overall compared to the preceding 12 months, with both population groups reporting an increase of 86%. Increases were reported across all age groups among Aboriginal and Torres Strait Islander and non-Indigenous women. Aboriginal and Torres Strait Islander men were the only population group to report a decrease in any age group, with rates in 35-44 year declining by 11% (Figures 2a and 3a).

- *Inner and outer regional areas*

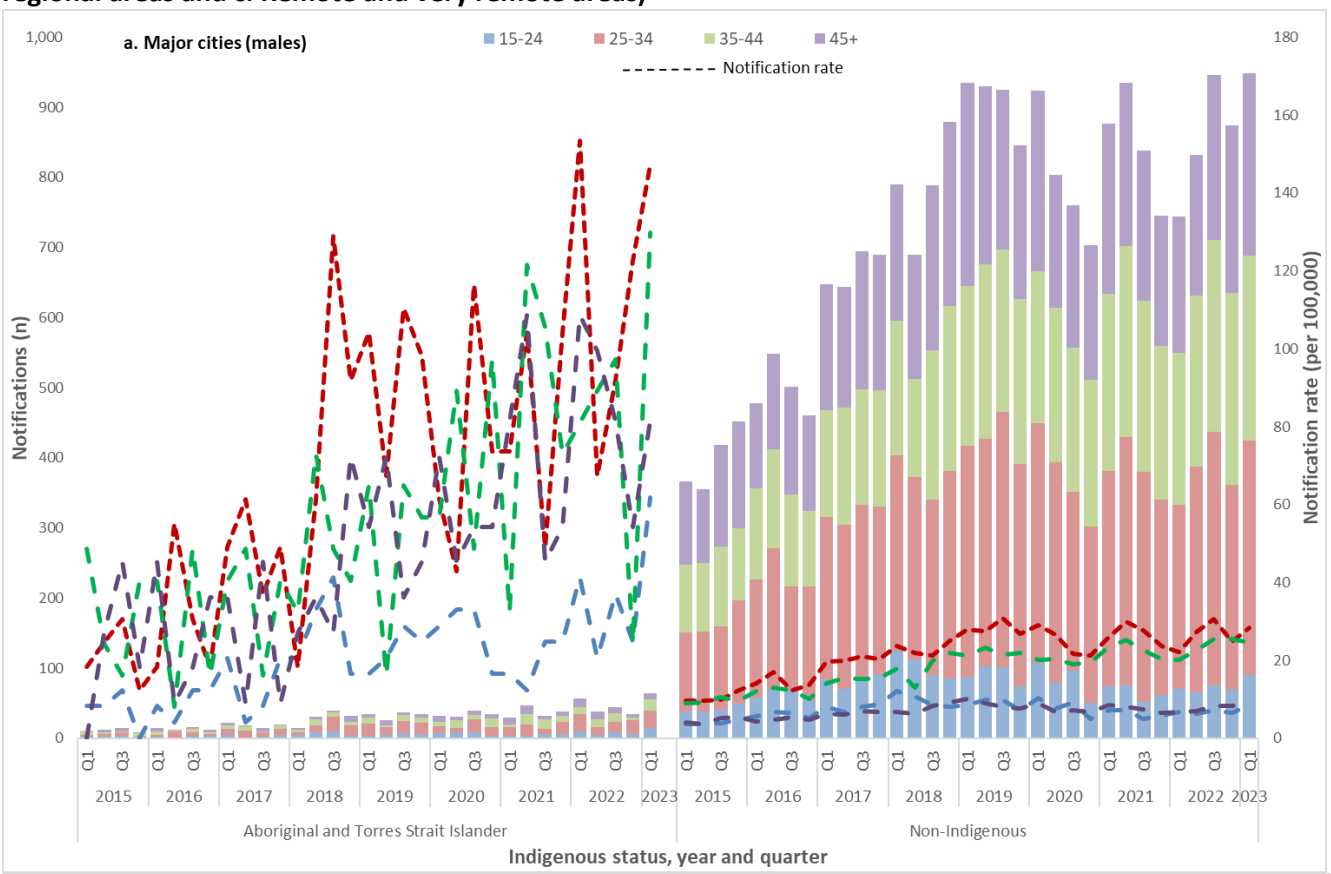
  Non-Indigenous men represented the greatest proportion of cases reported in the past 12 months in inner and outer regional areas (49%) followed by non-Indigenous women (18%) and Aboriginal and Torres Strait Islander men and women (18% and 16% respectively)[vi]. With the exception of Aboriginal and Torres Strait Islander men aged 15-24 years, notification rates across all age and population groups increased in the past 12 months compared to preceding 12 months. The greatest increases were among Aboriginal and Torres Strait Islander men aged 35-44 years (208%) in the past 12 months compared to the preceding 12 months, followed by non-Indigenous females (127%) of the same age group (Figures 2b and 3b).

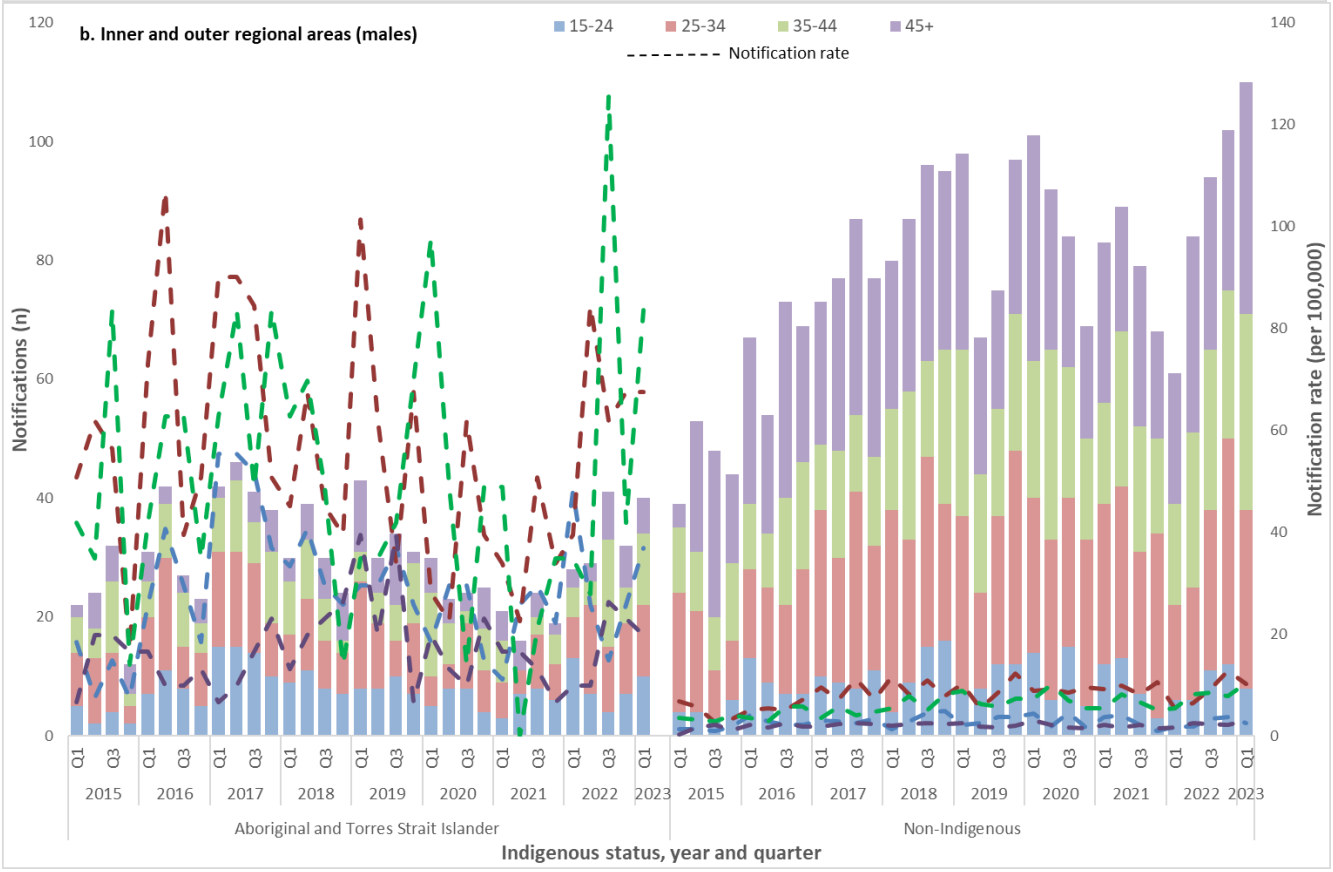
- *Remote and very remote areas*

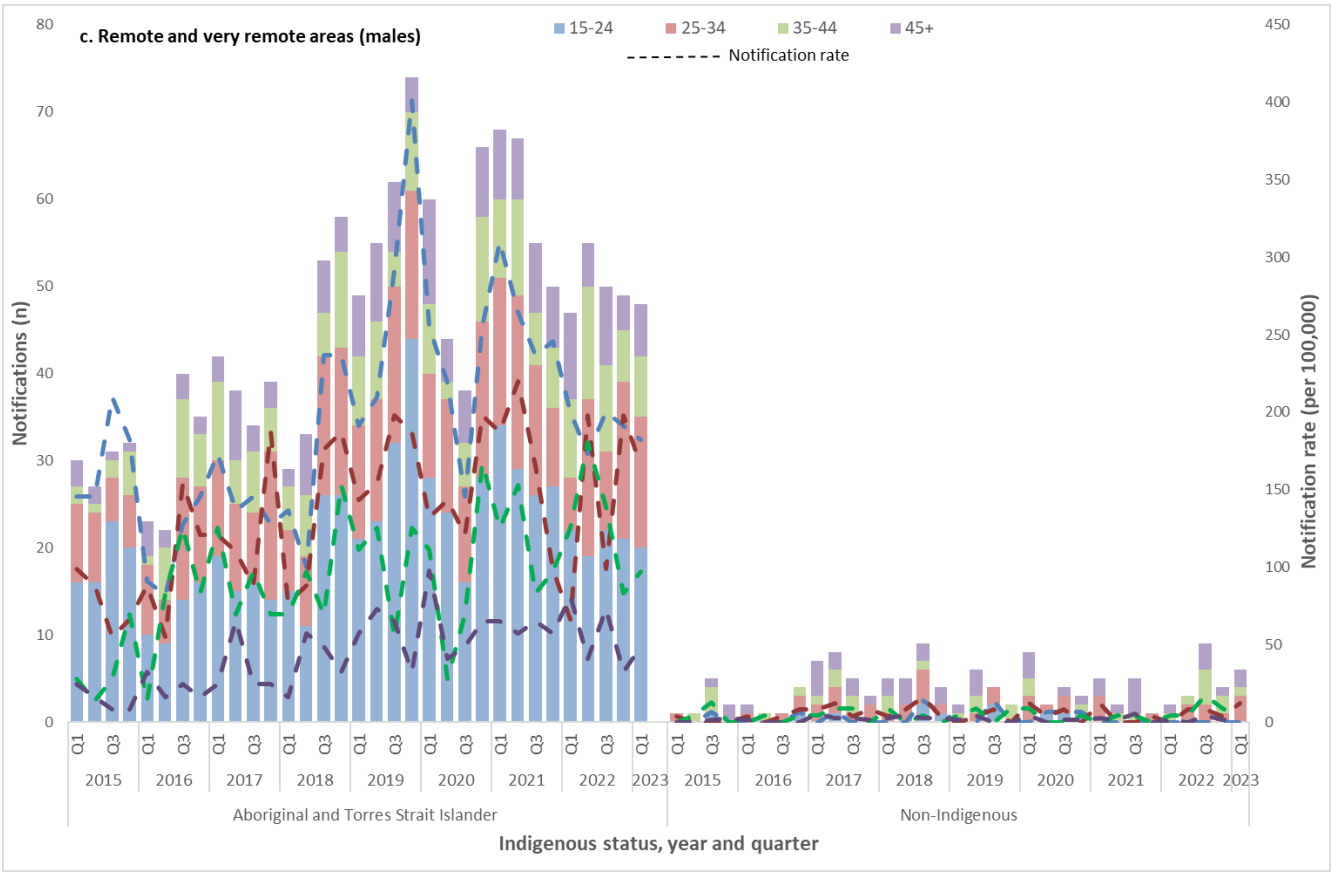
  Aboriginal and Torres Strait Islander women and men represented 94% of cases reported over the previous 12 months in remote and very remote areas of Australia. Across all remoteness areas, notification rates were highest in Aboriginal and Torres Strait Islander men and women, particularly in the 15-24 and 25-34 year age groups (Figures 2c and 3c).

[vi] Totals may not equal 100% due to rounding.

Figure 2 a-c: Notifications (n) and notification rate (per 100,000) of infectious syphilis reported in males, by Indigenous status, remoteness area, age, quarter and year, 2015 – Q1 2023 (a. Major cities, b. Inner and outer regional areas and c. Remote and very remote areas)*

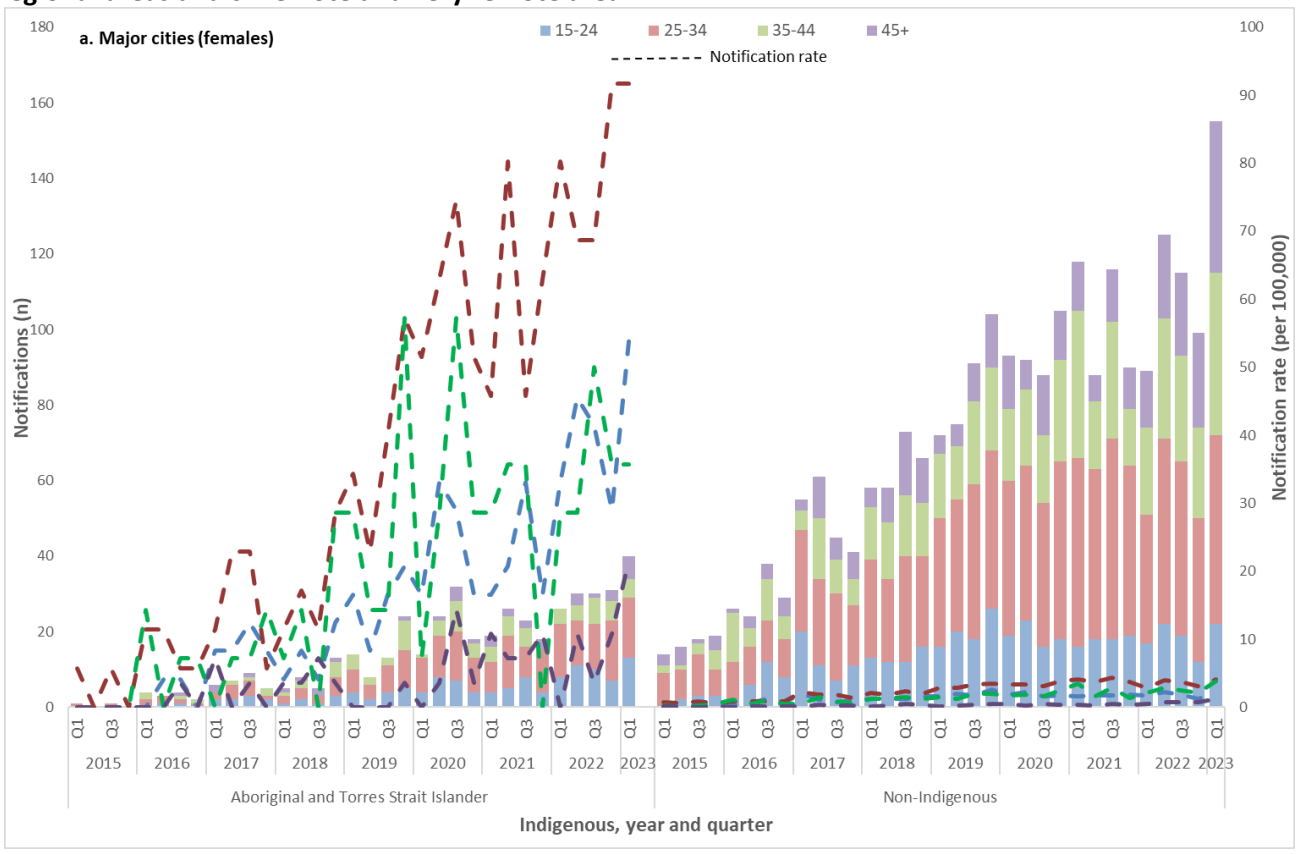


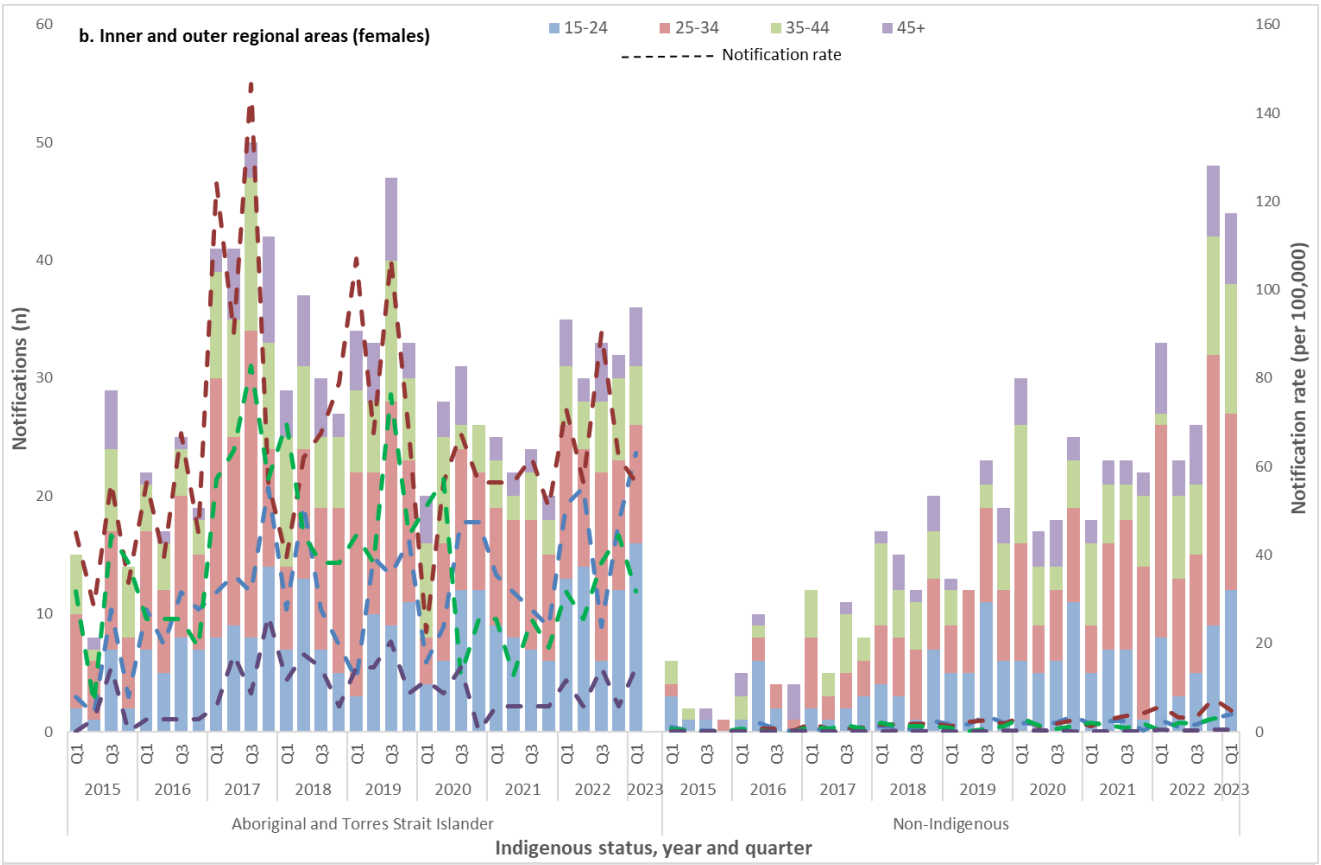


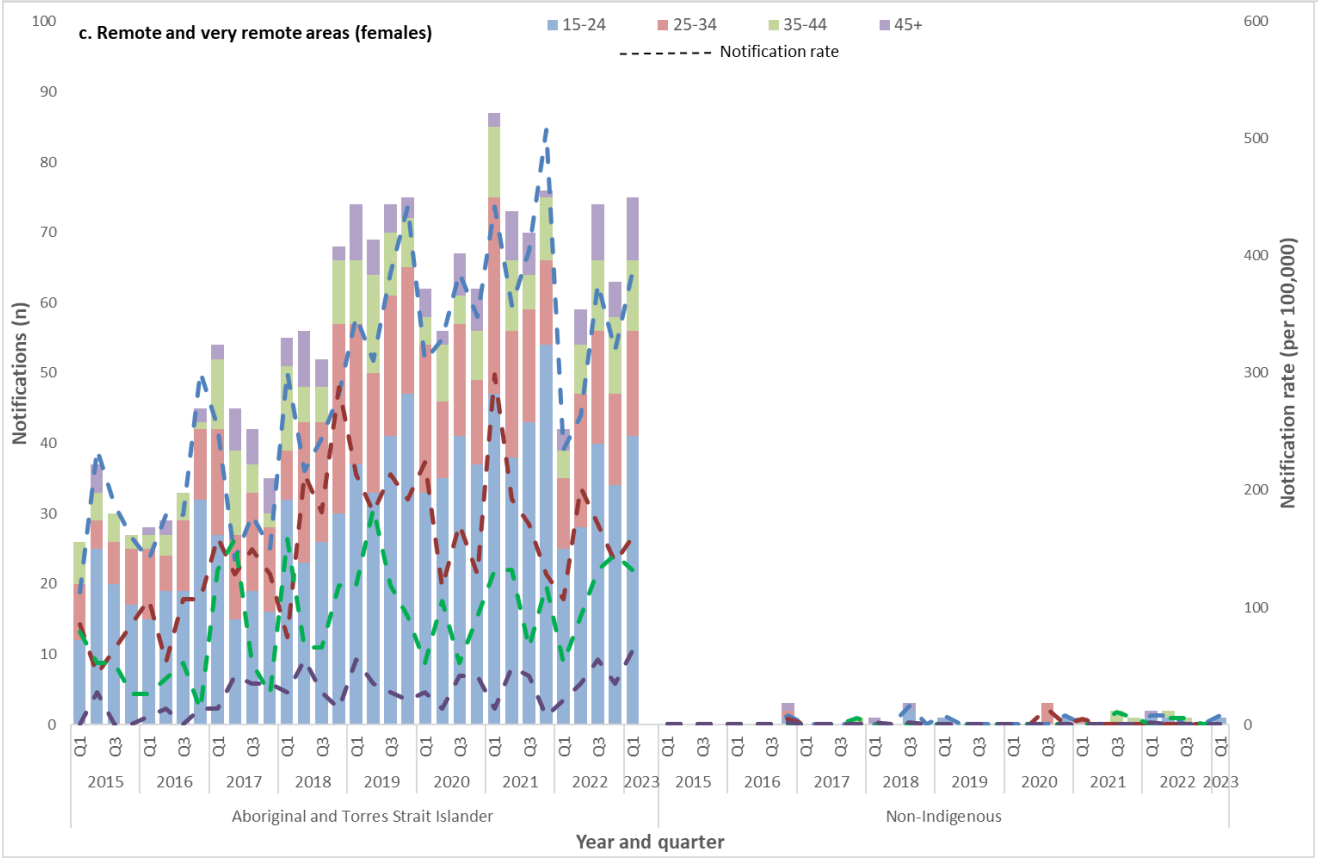


*Excludes cases for whom sex, age, Indigenous status and/or residential postcode were not reported

Figure 3 a-c: Notifications (n) and notification rate (per 100,000) of infectious syphilis reported in females, by Indigenous status, remoteness area, age, quarter and year, 2015 – Q1 2023 (a. Major cities, b. Inner and outer regional areas and c. Remote and very remote area*







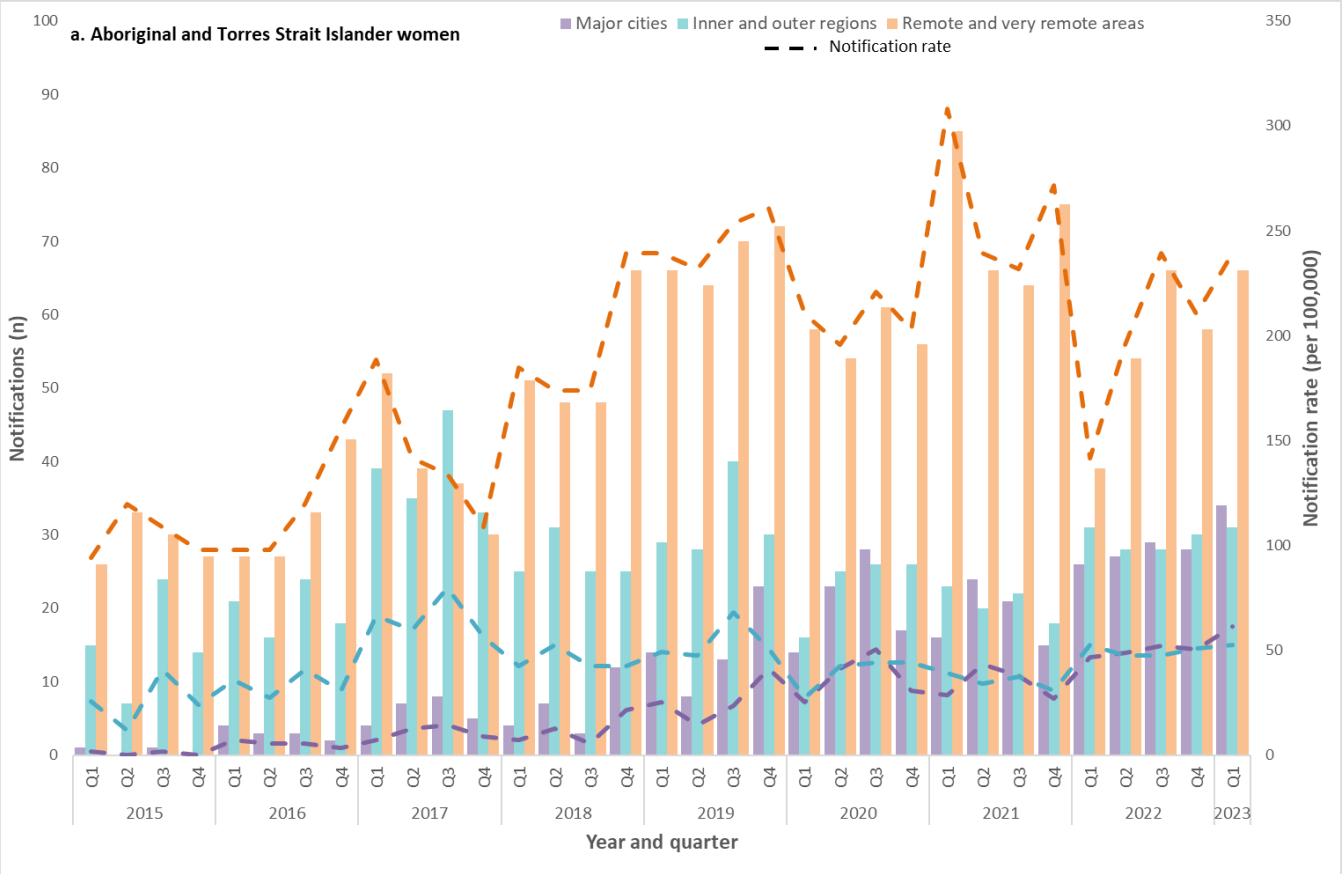
*Excludes cases for whom sex, age, Indigenous status and/or residential postcode were not reported.

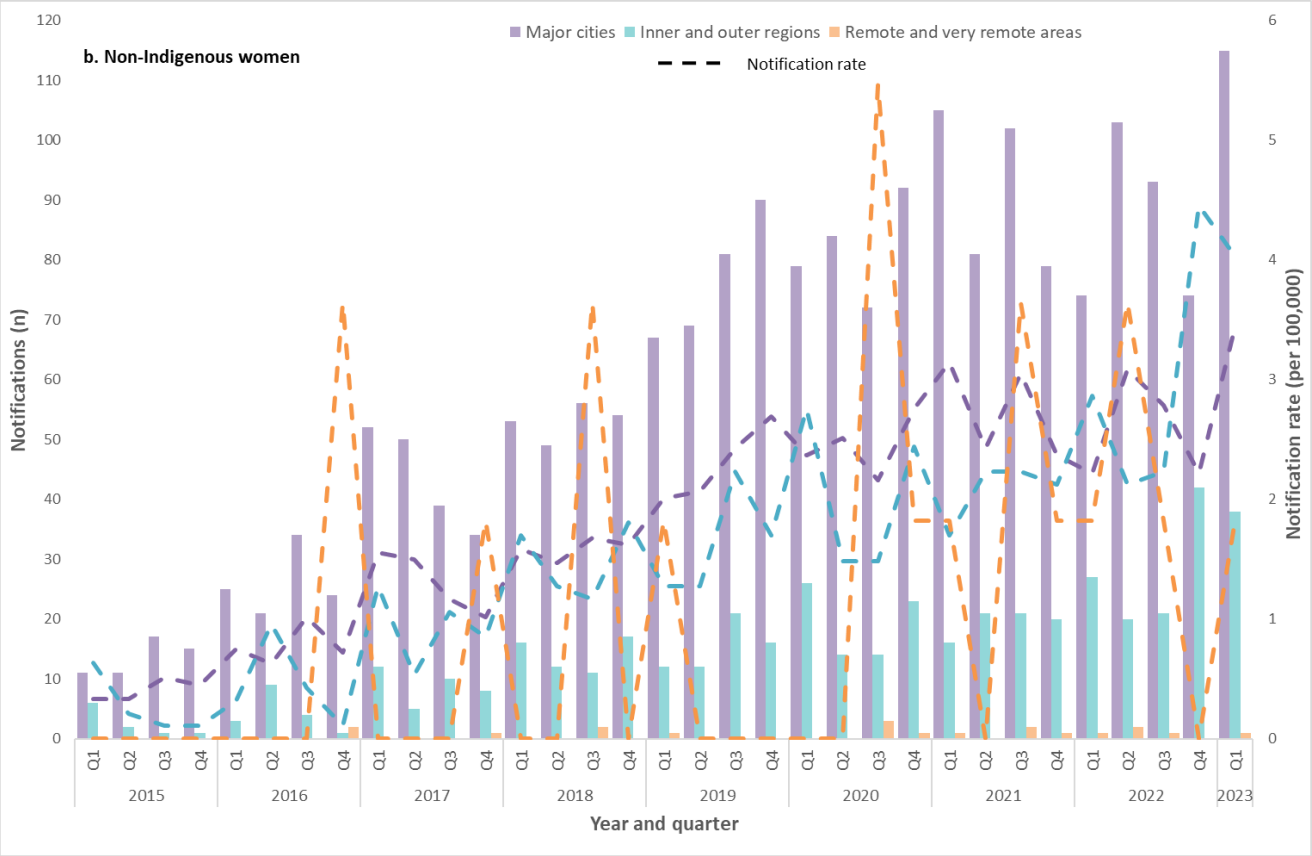
Indicator 1.2 - Rate of infectious syphilis among women of reproductive age (15-44 years)

Over the previous 12 months (Q2 2022 – Q1 2023) notifications of syphilis among Aboriginal and Torres Strait Islander women aged 15-44 years were predominately in residents of remote and very remote areas of Australia, consistent with historical trends (Figure 4a). The highest notification rates, as expected, were in remote and very remote areas with rates remaining the same in the previous 12 months compared to the preceding 12 months (Q2 2021 – Q1 2022) and a small decline of 1% compared with the 5-year mean. Inner/outer regional areas recorded the second highest rates in the previous 12 months, increasing from the preceding 12 months by 29% and 10% compared to the 5-year average. Notification rates in Aboriginal and Torres Strait Islander women residing in major cities of Australia increased by 37% compared to the preceding 12 months and 54% compared to the 5-year average.

Non-Indigenous women of reproductive age diagnosed with syphilis over the previous 12 months were predominately residents of major cities of Australia, consistent with historical trends (Figure 4b). Notification rates decreased for this group by 15% between the previous 12 months and the 12 months prior and increased by 19% compared to the 5-year average. Notification rates in inner/outer regional areas increased between the previous 12 months and the 12 months prior (36%) and compared to the 5-year average increased by 50%. Notification rates in remote and very remote Australia have fluctuated, noting that overall notifications in these areas are low for non-Indigenous women.

Figure 4a-b: Notifications (n) and notification rate (per 100,000) of infectious syphilis reported in females aged 15-44 years, by Indigenous status, remoteness area, quarter and year, 2015 – Q1 2023 (a. Aboriginal and Torres Strait Islander and b. non-Indigenous)*





*Excludes cases for whom sex, age, Indigenous status and/or residential postcode were not reported.

Indicator 1.3 - Proportion of infectious syphilis notifications in men reporting sexual exposure with men only

Indicator 1.4 - Proportion of infectious syphilis notifications in men reporting sexual exposure with both men and women

Enhanced data (sexual exposure: same sex, opposite sex and both sexes) are used to report against indicators 1.3 and 1.4.

Completeness of enhanced sexual exposure data

Completeness of sexual exposure in males notified with infectious syphilis fluctuated between 2015 and Q1 2023, ranged from 63% and 87% (average 73%).

Same sex only was the most frequently reported sexual exposure across all years, representing on average 55% of notifications overall, followed by opposite sex only (13%) and both sexes (4%). The proportion of cases reporting same sex only exposure fluctuate across the reporting period with the highest in 2015 (68%) and lowest in 2020 (47%), noting higher proportions of unknown cases in more recent years (Figure 5).

Although men reporting sexual exposure with both men and women represented the lowest proportion of all cases during the reporting period (range 3 -6%), notifications reported for this category of sexual exposure increased by 19% between 2015 and 2022.

Figure 5: Number of infectious syphilis notifications among men and proportion (%) of cases by sexual exposure and year 2015 – Q1 2023

Target 2: Eliminate congenital syphilis

Indicator 2.1 - Number of congenital syphilis notifications

Indicator 2.2 - Notification rate of congenital syphilis per 100,000 live births

Indicator 2.3 - Number of congenital syphilis cases that were reported to have died from the condition

Seventy-three (73) cases of congenital syphilis were reported between 2016 and Q1 2023, 36 were reported in Aboriginal and Torres Strait Islander infants, 30 were non-Indigenous and 7 had an unknown Indigenous status (Figure 6). Among the 36 Aboriginal and Torres Strait Islander cases, 33% (12/36) were residents of major cities, 28% (10/36) from inner/outer regional areas and 39% (14/36) from remote/very remote areas. Eighty-seven per cent (87%, 26/30) of non-Indigenous cases were residents of major cities and 13% (4/30) from inner/outer regional areas. Five (5) of the cases with an unknown Indigenous status were reported from major cities (71%, 5/7), one was a resident of an inner/outer regional area (14%, 1/7) and the remaining case did not have a residential location reported (14%, 1/7)[vii].

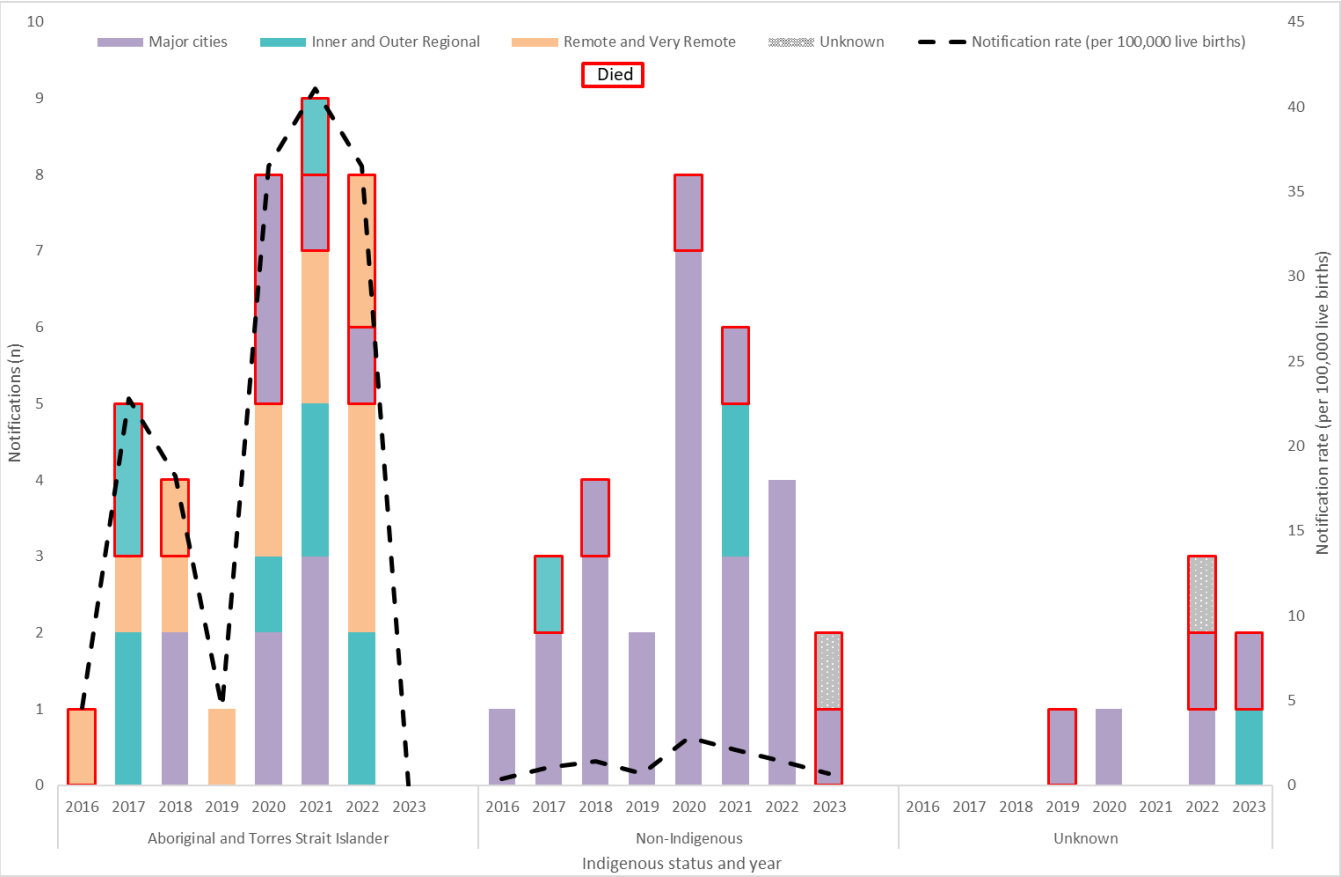
Aboriginal and Torres Strait Islander infants are disproportionately represented in the notification data, with rates per 100,000 live births on average almost 20 times that of non-Indigenous infants, noting that rates have fluctuated in both groups over time.

Twenty-two (22) congenital syphilis associated deaths were reported between 2016 and Q1 2023, 12 (55%, 12/22) were Aboriginal and Torres Strait Islander infants, 6 (27%, 6/22) were non-Indigenous and 4 (18%, 4/22) had an unknown Indigenous status. Of the Aboriginal and Torres Strait Islander infants that died, 5 (42%, 5/12) were reported in major cities, 3 (25%, 3/12) from inner/outer regional areas and 4 (33%, 4/12) from

[vii] Totals may not add up to 100% due to rounding.

remote/very remote areas. Of the non-Indigenous infants, 4 (67%, 4/6) were reported in major cities, 1 (17%, 1/6) was a resident of an inner/outer regional area and the remaining case (17%, 1/6) did not have a residential area reported[viii]. Of the 4 cases with an unknown Indigenous status 3 (75%, 3/4) were from major cities and 1 (25%, 1/4) did not have a residential location reported.

Figure 6: Notifications (n) and notification rate (per 100,000 live births) of congenital syphilis reported by Indigenous status, remoteness area, and year, 2016 – Q1 2023



Indicator 2.4 - Proportion of syphilis notifications among women who were pregnant at time of diagnosis

Pregnancy status was available from 7 jurisdictions between 2020 and 2023, 6 in 2020 and 4 between 2017 and 2019. Given the high proportion of cases with an unknown pregnancy status and retrospective changes to the data, trends overtime should be interpreted with caution.

Please note there may be differences with previous reports due to pregnancy status being reclassified in some women and the inclusion of new historical data from jurisdictions. In addition, previous reports have included data from the NT; however these data have been excluded due to known data issues.

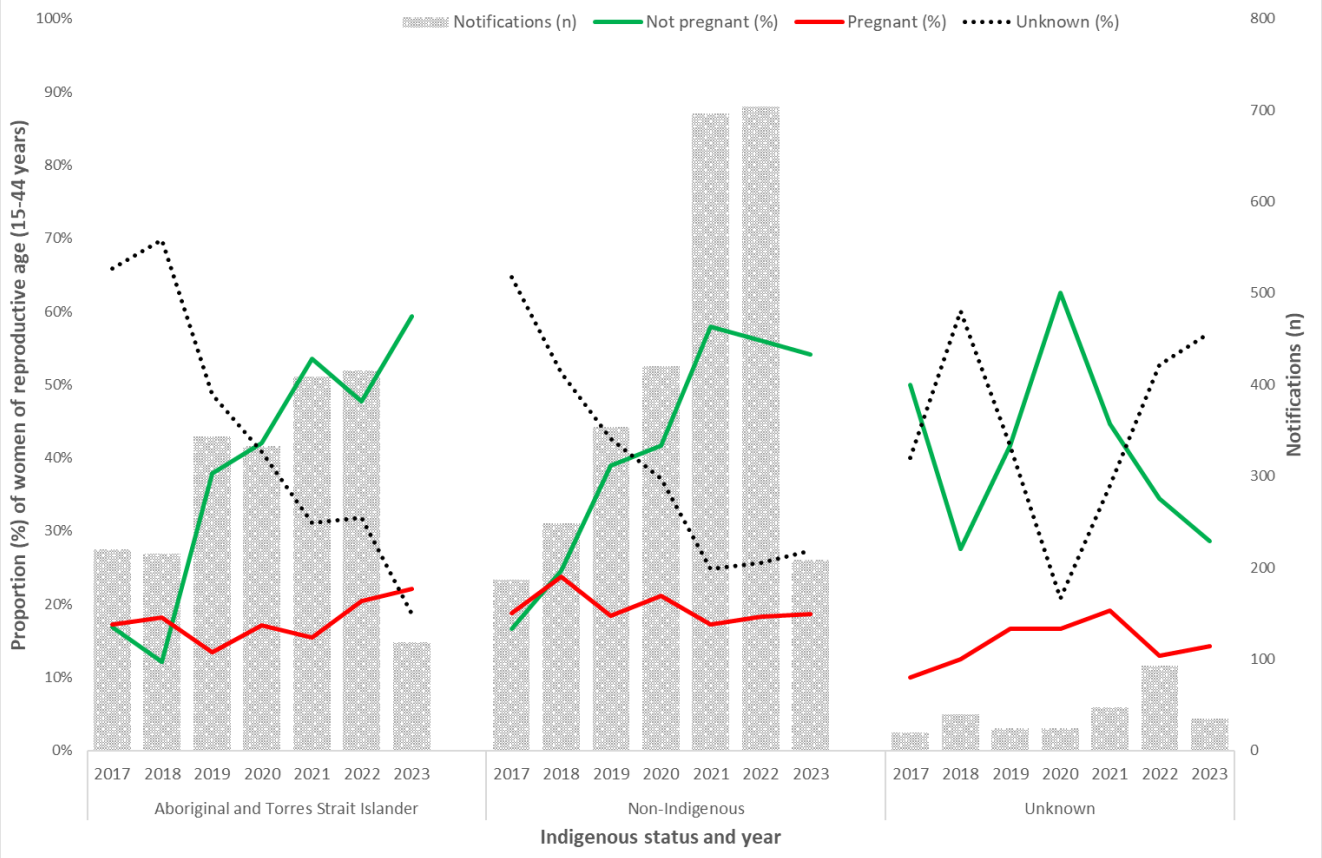
In the first quarter of 2023, of the syphilis notifications among Aboriginal and Torres Strait Islander women of reproductive age (15-44 years), 22% were pregnant at the time of diagnosis, 59% were not pregnant and 19% had an unknown pregnancy status (Figure 7). In previous years, the proportion of Aboriginal and Torres Strait Islander women pregnant at time of syphilis diagnosis was lower than Q1 2023, ranging between 13% and 20%, noting that the number of jurisdictions reporting data each year varied.

Among non-Indigenous women of reproductive age in Q1 2023, 19% were pregnant at the time of diagnosis, 54% were not pregnant and 27% had an unknown pregnancy status (Figure 7). In previous years, the proportion

[viii] Totals may not add up to 100% due to rounding.

of non-Indigenous women pregnant at time of syphilis diagnosis ranged between 17% and 24%, noting that the number of jurisdictions reporting data each year varied.

Figure 7: Number of syphilis notifications among women of reproductive age (15-44 years) and proportion (%) of cases pregnant at time of syphilis diagnosis, by Indigenous status and year, 2017-Q1 2023



Indicator 2.5 - Number of women giving birth to an infant with congenital syphilis who were diagnosed with syphilis in pregnancy by gestation period

Indicator 2.6 - Number of women giving birth to an infant with congenital syphilis who were diagnosed with syphilis late[ix] in pregnancy

Enhanced data are used to report against indicators 2.5 and 2.6.

Completeness of enhanced congenital syphilis data

Between 2016 and Q1 2023, 97% (71/73) of congenital syphilis cases had enhanced data available at the time of writing, including information about the mother of the infant diagnosed with congenital syphilis.

Of the 71 congenital syphilis cases reported between 2016 and Q1 2023 with enhanced data, (10%, 7/71) mothers giving birth to an infant with congenital syphilis were diagnosed in the 2nd trimester, 15 (21%, 15/71) in the 3rd trimester, 19 (27%, 19/71) on the day of delivery, 25 (35%, 25/71) post-birth and 5 (7%, 5/71) had an unknown stage of pregnancy at the time of syphilis diagnosis (Table 1).

Seventy-seven per cent (77%, 55/71) of mothers giving birth to an infant with congenital syphilis were diagnosed late in pregnancy, including 11 mothers diagnosed in the 3rd trimester less than 30 days prior to delivery.

[ix] 'Late diagnosis' is defined as a syphilis diagnosis less than 30 days prior to delivery, at birth (day of delivery) or post birth.

Table 1: Number of women giving birth to an infant with congenital syphilis, by gestation period mother was diagnosed with syphilis and year, 2016 – Q1 2023

Mothers gestation period at syphilis diagnosis	2016	2017	2018	2019	2020	2021	2022	2023
1st Trimester	0	0	0	0	0	0	0	0
2nd Trimester	1	0	0	0	1	0	3	2
3rd Trimester	1	2	3	2	2	3	2	0
At birth (Day of delivery)	0	2	2	0	6	5	3	1
Post-birth	0	3	2	2	8	7	3	0
Unknown	0	1	1	0	0	0	3	0
Total	2	8	8	4	17	15	14	3
Late diagnosis	**0**	**6**	**7**	**3**	**15**	**15**	**8**	**1**

Target 3: Control outbreaks among Aboriginal and Torres Strait Islander peoples in Queensland, the Northern Territory, Western Australia and South Australia

An outbreak of infectious syphilis began in northern Queensland in January 2011, extending to the Northern Territory in July 2013, the Kimberley in Western Australia in June 2014, and South Australia in November 2016.

The AHPPC, in consultation with affected jurisdictions, Aboriginal Community Controlled Health Services (ACCHS) and key stakeholders, developed a National Strategic Approach and Action Plan to address the disproportionately high rates of syphilis and other BBV and STI in regional and remote Aboriginal and Torres Strait Islander communities. The Strategic Approach and Action Plan were endorsed by the Australian Health Ministers Advisory Council in December 2017.

Further information on the outbreak and response activities are available on the Department of Health and Aged Care website.

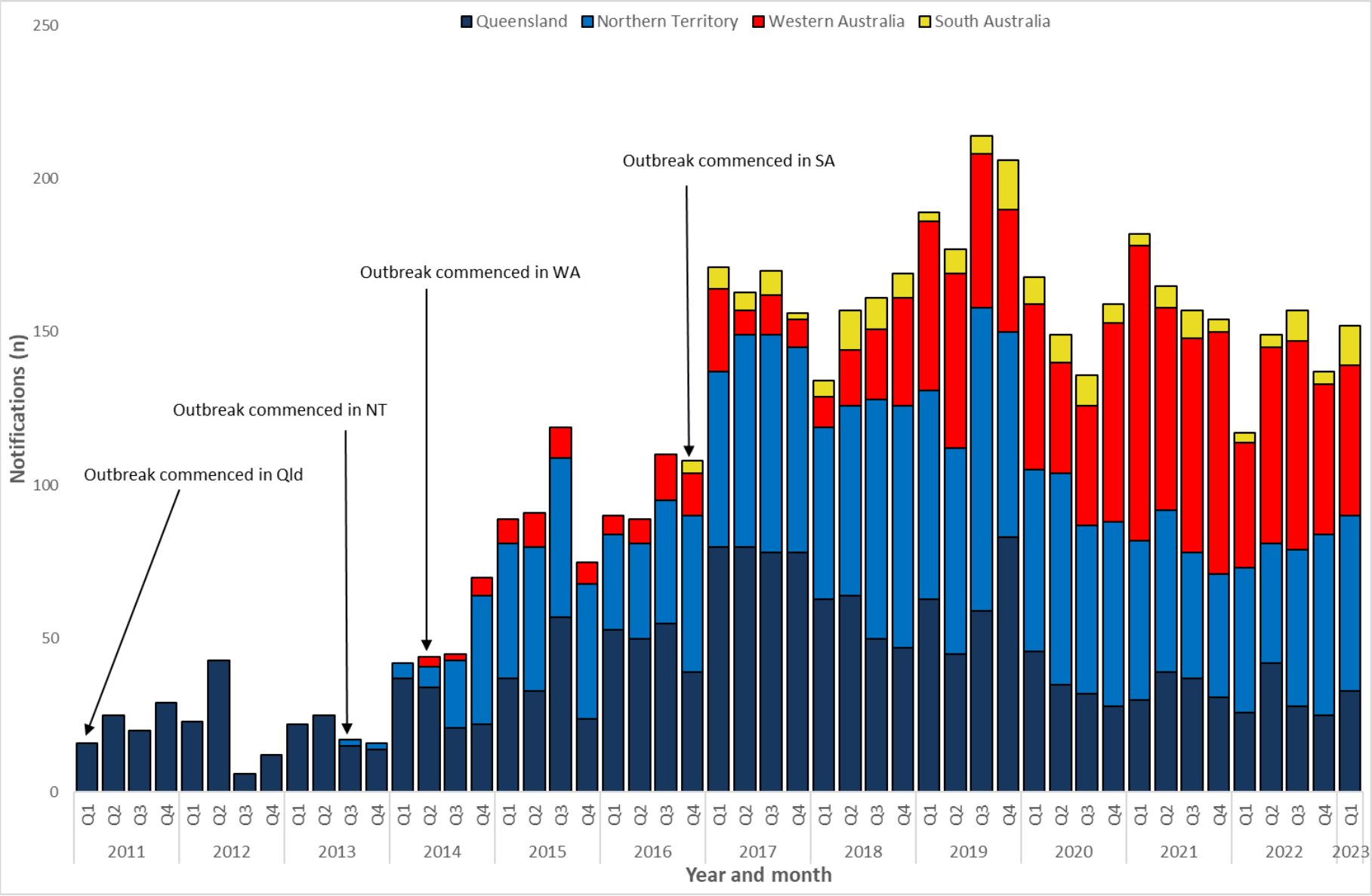
Indicator 3.1 - Number of outbreak associated infectious syphilis notifications

Since the commencement of the outbreak on 1 January 2011 to 31 March 2023, a total of 5,392 infectious syphilis outbreak cases (category 1 and 2[x]) were reported from 4 jurisdictions (Figure 8, Table 2):

- 1,994 from Queensland;
- 1,979 from the Northern Territory;
- 1,217 from Western Australia;
- 202 from South Australia.

[x] Outbreak cases are reported as either category 1 or category 2: category 1 cases include Aboriginal and Torres Strait Islander people residing in an outbreak declared region at the time of diagnosis, and; category 2 cases include people who are a sexual contact of a confirmed outbreak case which includes Aboriginal and Torres Strait Islander people who do not reside in an outbreak area at the time of diagnosis and non-Indigenous people regardless of where they reside. **All data are provisional and subject to change due to ongoing case investigation**.

Figure 8: Notifications of category 1 infectious syphilis outbreak cases notified in Aboriginal and Torres Strait Islander people residing in affected regions of Queensland, the Northern Territory, Western Australia, and South Australia from commencement of the outbreak in each jurisdiction to Q1 2023



Across the 4 outbreak jurisdictions, 54% (2,856/5,275) of all category 1 cases were female and 46% (2,418/5,275) were male, with a male to female ratio of 0.8:1 suggesting predominately heterosexual transmission overall, noting the variability across specific outbreak regions and jurisdictions (Figure 9 a-d, Table 2).

On 19 November 2020, the Multi-Jurisdictional Syphilis Working Group endorsed the expansion of the 'target age group' from 15-29 years to 15-34 years[xi]. This change came into effect from February 2021. Overall, 72% (3,798/5,275) of all outbreak cases were reported in 15–34-year-olds, with the proportion of cases in this age group across the outbreak period (Q1 2011 – Q1 2023) ranging between 68% and 82% (Figure 9a-d).

Table 2: Characteristics of infectious syphilis outbreak cases notified in Aboriginal and Torres Strait Islander people residing in affected regions[xii] of Queensland, the Northern Territory, Western Australia, and South Australia to Q1 2023

	Queensland (five HHSs)	**Northern Territory** (seven regions)	**Western Australia** (three regions)	**South Australia** (three regions)
Category 1				
Outbreak commencement month/year	January 2011	July 2013	June 2014	November 2016
Total number of cases	1,934	1,942	1211	188
% Male / % Female	46% / 54%	46% / 54%	44%/56%	53% / 47%
% 15-34 year age group	70%	74%	74%	63%
Category 2				
Aboriginal and Torres Strait Islander people[xiii]	15	14	6	0
Non-Indigenous people[xiv]	45	23	0	14

[xi] Multijurisdictional Syphilis Outbreak Surveillance Report: February 2021

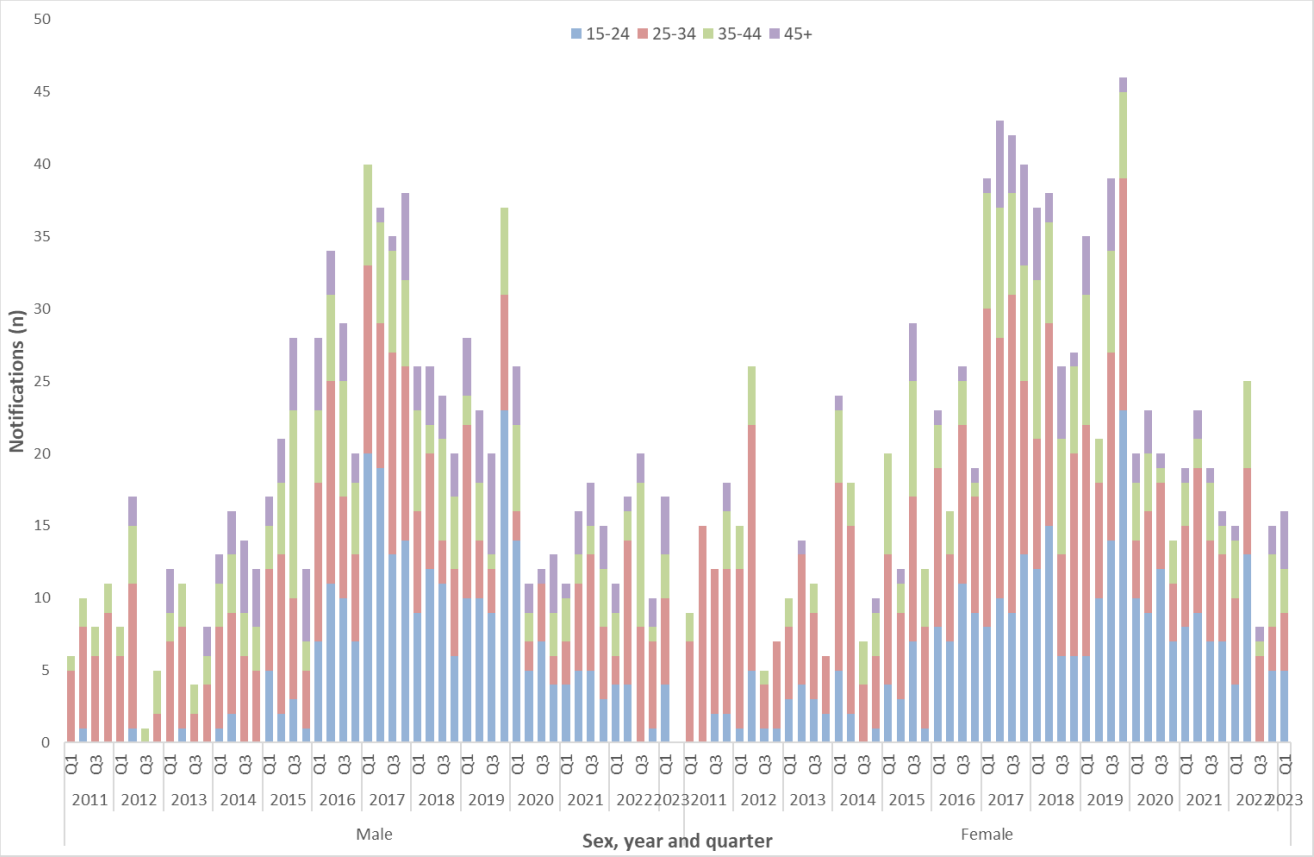
[xii] Qld - North West Hospital and Health Service (HHS) area (from 1 January 2011); Torres and Cape Hospital and Health Service area (from 1 December 2012); Cairns and Hinterland Hospital and Health Service area (from 1 August 2013); Townsville Hospital and Health Service area (from 1 January 2014); Central Queensland Hospital and Health Service area (from 1 June 2017) NT - Alice Springs Rural and Urban or Barkly district (from 1 July 2013); Katherine district (from 1 May 2014); East Arnhem district (from 1 November 2015); Darwin Rural and Urban (from 1 January 2017); WA - Kimberley region (from 1 June 2014); Pilbara region (from 1 February 2018); Goldfields region (from 1 January 2019); SA - Far North and Western and Eyre regions (from 15 November 2016); Adelaide (from 1 February 2018).

[xiii] Aboriginal and Torres Strait Islander people who are sexual contacts of a confirmed outbreak case and reside outside an outbreak declared region at the time of diagnosis.

[xiv] Non-Indigenous people who are sexual contacts of a confirmed outbreak case and reside in or out of an outbreak declared region at the time of diagnosis.

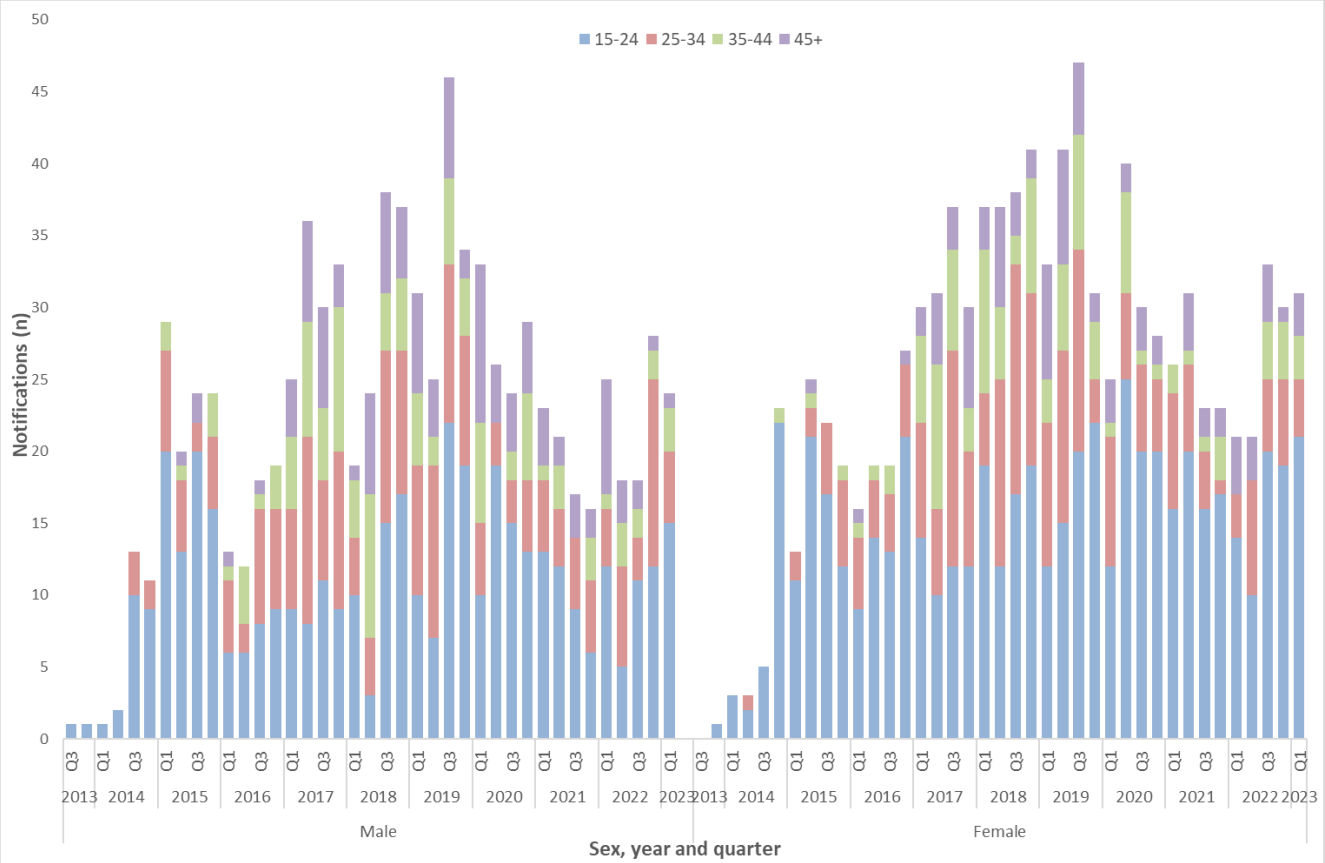
Figure 9 a-d: Notifications (n) of category 1 outbreak associated syphilis cases, by age*, sex, jurisdiction, year, and quarter from commencement in each jurisdiction to Q1 2023 (a. Queensland, b. the Northern Territory, c. Western Australia and d. South Australia)[xv]

a. Queensland (2011 – Q1 2023)

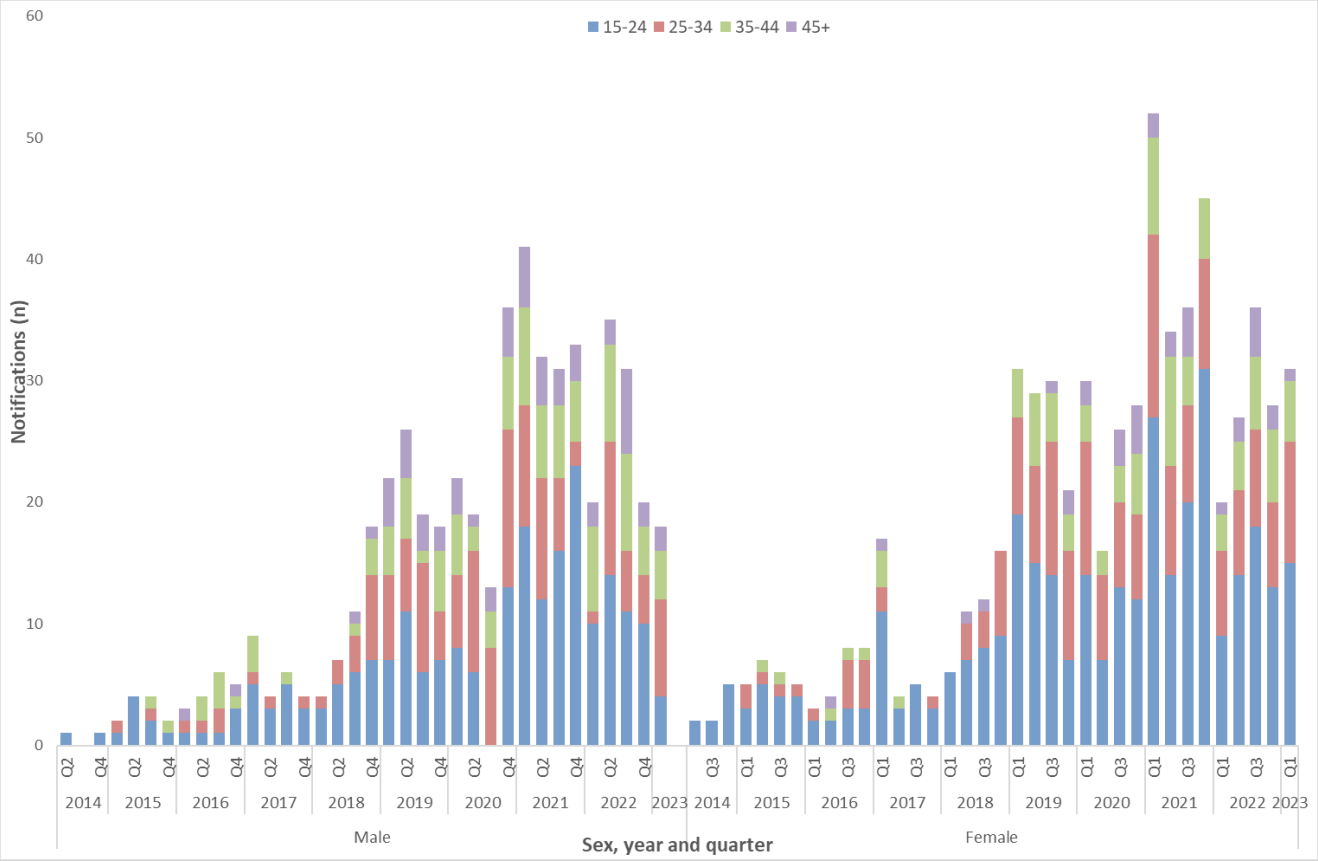


[xv] Qld - North West Hospital and Health Service (HHS) area (from 1 January 2011); Torres and Cape Hospital and Health Service area (from 1 December 2012); Cairns and Hinterland Hospital and Health Service area (from 1 August 2013); Townsville Hospital and Health Service area (from 1 January 2014); Central Queensland Hospital and Health Service area (from 1 June 2017) NT - Alice Springs Rural and Urban or Barkly district (from 1 July 2013); Katherine district (from 1 May 2014); East Arnhem district (from 1 November 2015); Darwin Rural and Urban (from 1 January 2017); WA - Kimberley region (from 1 June 2014); Pilbara region (from 1 February 2018); Goldfields region (from 1 January 2019); SA - Far North and Western and Eyre regions (from 15 November 2016); Adelaide (from 1 February 2018).

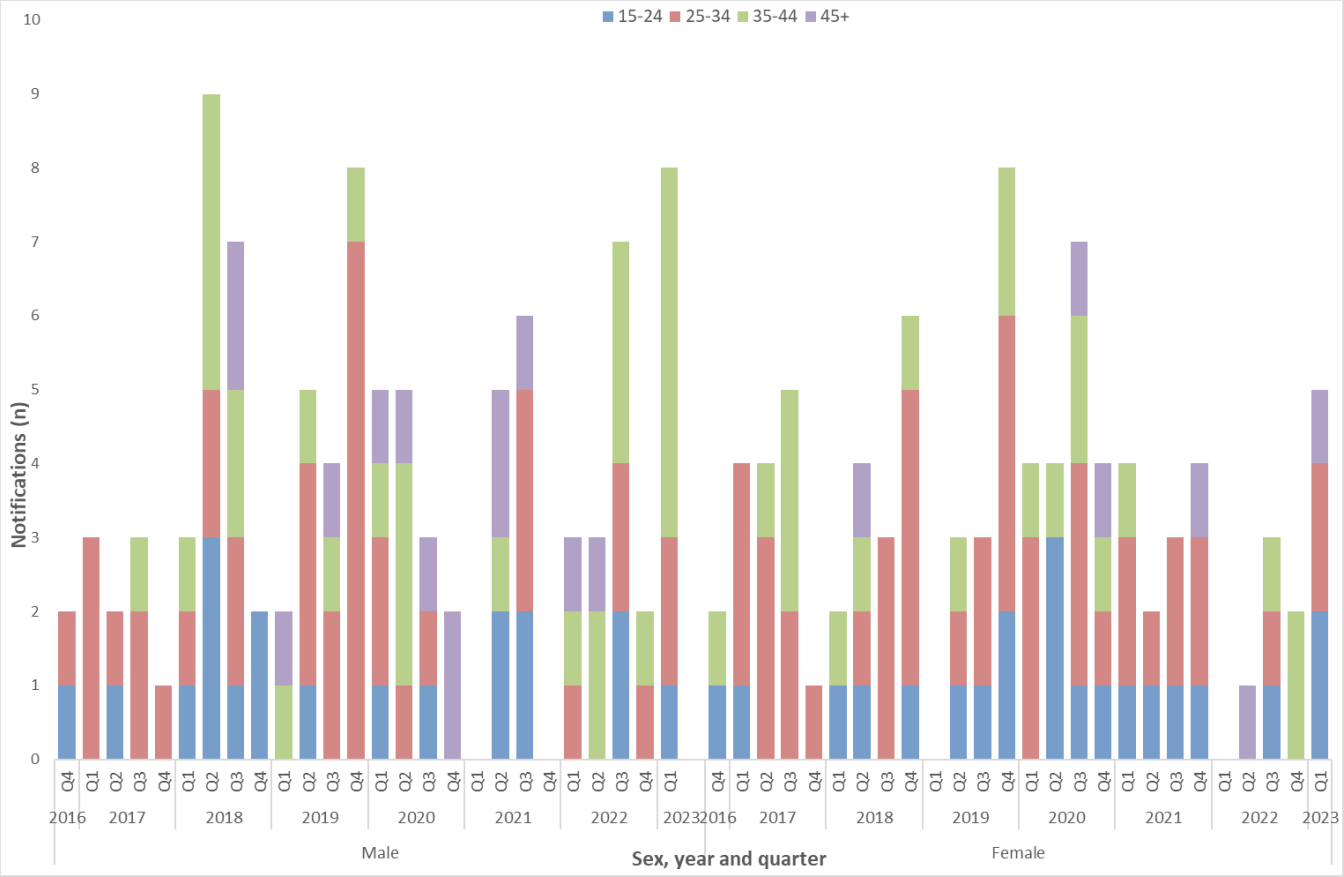
b. Northern Territory (2013 – Q1 2023)



c. Western Australia (2014 – Q1 2023)



d. South Australia (2016 – Q1 2023)



*Excludes cases aged <15 years of age.

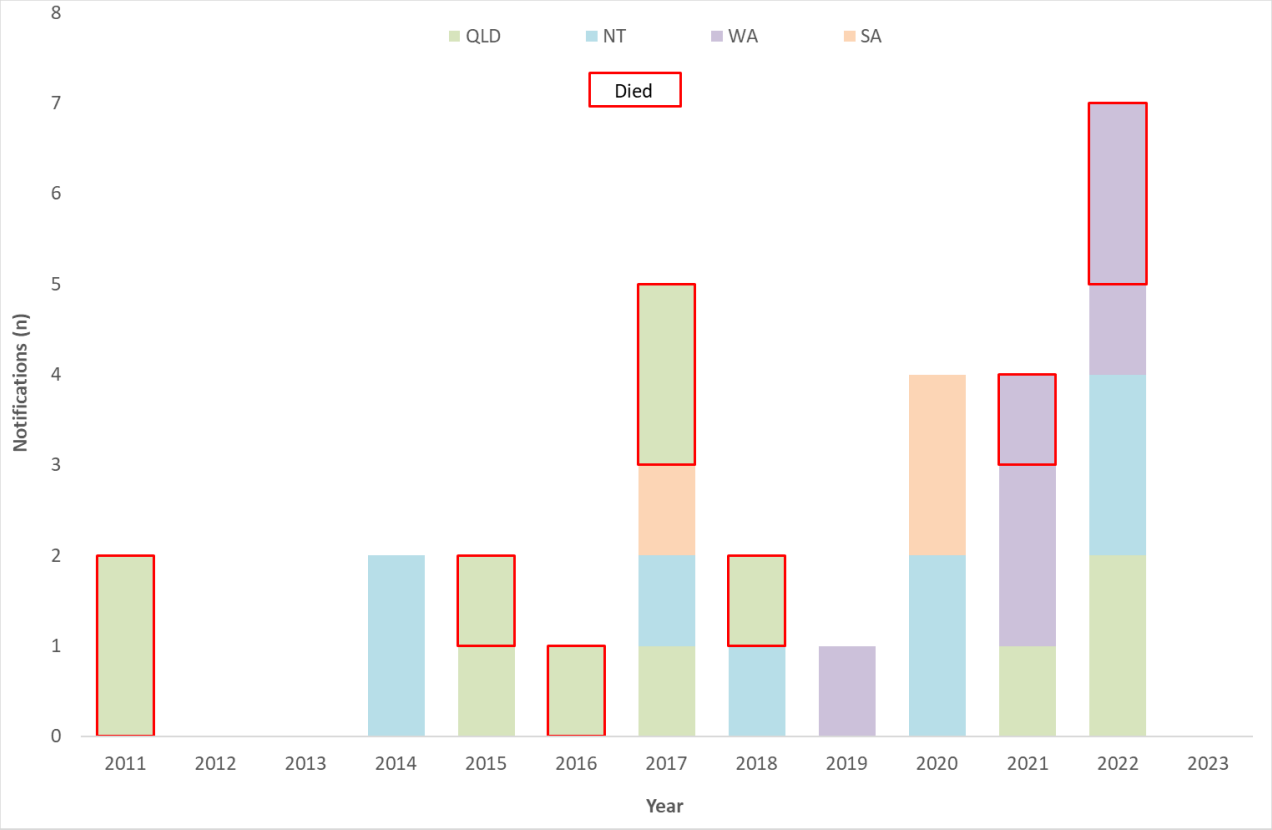
Indicator 3.2 - Number of outbreak associated congenital syphilis notifications

Indicator 3.3 - Number of outbreak associated congenital syphilis cases that were reported to have died from the condition

Since the commencement of the outbreak in Q1 2011 to Q1 2023, there were 30 outbreak associated cases of congenital syphilis reported, 12 from Queensland, 8 from the Northern Territory, 7 from Western Australia and 3 from South Australia. Ten (10) of these cases were reported to have died from the condition, 7 from Queensland and 3 from Western Australia (Figure 10).

Please note that two cases (1 in 2013 and 1 in 2014) previously reported as outbreak cases of congenital syphilis from the NT have been excluded from the analysis and figure 10 below as they no longer meet the outbreak case definition.

Figure 10: Notifications (n) of outbreak associated congenital syphilis cases and reported deaths, by jurisdiction, and year, 2011 – Q1 2023



Indicator 3.4 - Proportion of outbreak associated infectious syphilis notifications among women who were pregnant at time of diagnosis

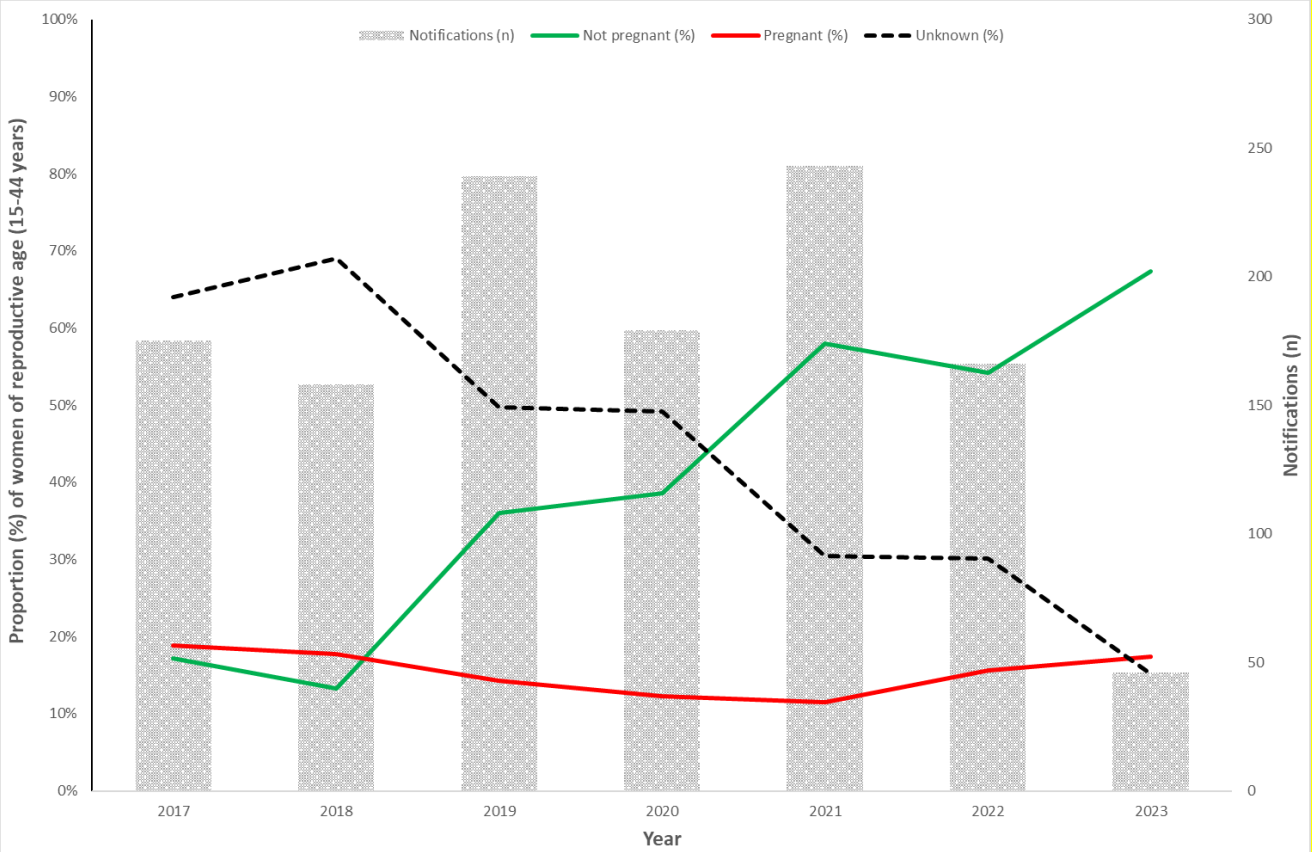
Pregnancy status was available for all 3 outbreak jurisdictions from 2020 onwards (Queensland, Western Australia, and South Australia). Between 2017 and 2019, pregnancy status was available for 2 out of 4 jurisdictions (Queensland and Western Australia). Given the high proportion of cases with an unknown pregnancy status and retrospective changes to the data, trends over time should be interpreted with caution.

Please note there may be differences with previous reports due to pregnancy status being reclassified in some women and the inclusion of new historical data from jurisdictions. In addition, previous reports have included data from the NT; however these data have been excluded due to known data issues.

In quarter 1 2023 of the outbreak associated notifications of infectious syphilis among women of reproductive age (15-44 years) reported in Queensland, Western Australia, and South Australia, 17% were pregnant, 67% were not pregnant and 15% had an unknown pregnancy status (Figure 11)[xvi].

[xvi] Totals may not add up to 100% due to rounding.

Figure 11: Proportion (%) of outbreak associated syphilis notifications among women of reproductive age (15-44 years), by pregnancy status at time of syphilis diagnosis and year, 2017 – Q1 2023



Indicator 3.5 - Cumulative number of syphilis tests delivered through participating ACCHS in outbreak affected jurisdictions

Indicator 3.6 - Proportion of people attending participating ACCHS who received a syphilis test

On 1 August 2018, the test and treat model to curb the syphilis outbreak commenced at ACCHS in Townsville (Queensland), Cairns (Queensland) and Darwin (Northern Territory). These sites were chosen in consultation with the jurisdictions and the National Aboriginal Community Controlled Health Organisation (NACCHO). On 1 September 2018, the second phase commenced in ACCHS in Katherine (Northern Territory), East Arnhem (Northern Territory) and the Kimberley east (Western Australia). On 1 May 2019, the third phase commenced with additional services in the West Arnhem (Northern Territory), Pilbara (Western Australia) and Kimberley west (Western Australia). The first ACCHS in South Australia were funded as part of the third phase (Western and Eyre, Far North and Adelaide). The fourth phase commenced from May 2020 at ACCHS in Mt Isa (Queensland), and Tennant Creek (Northern Territory). The below data summarises syphilis testing data and coverage for participating ACCHS, noting that data are missing for some services[xvii].

Please note there may be differences with previous reports due to changes in reporting periods from monthly to quarterly; retrospective revision of data and; completeness of historical data.

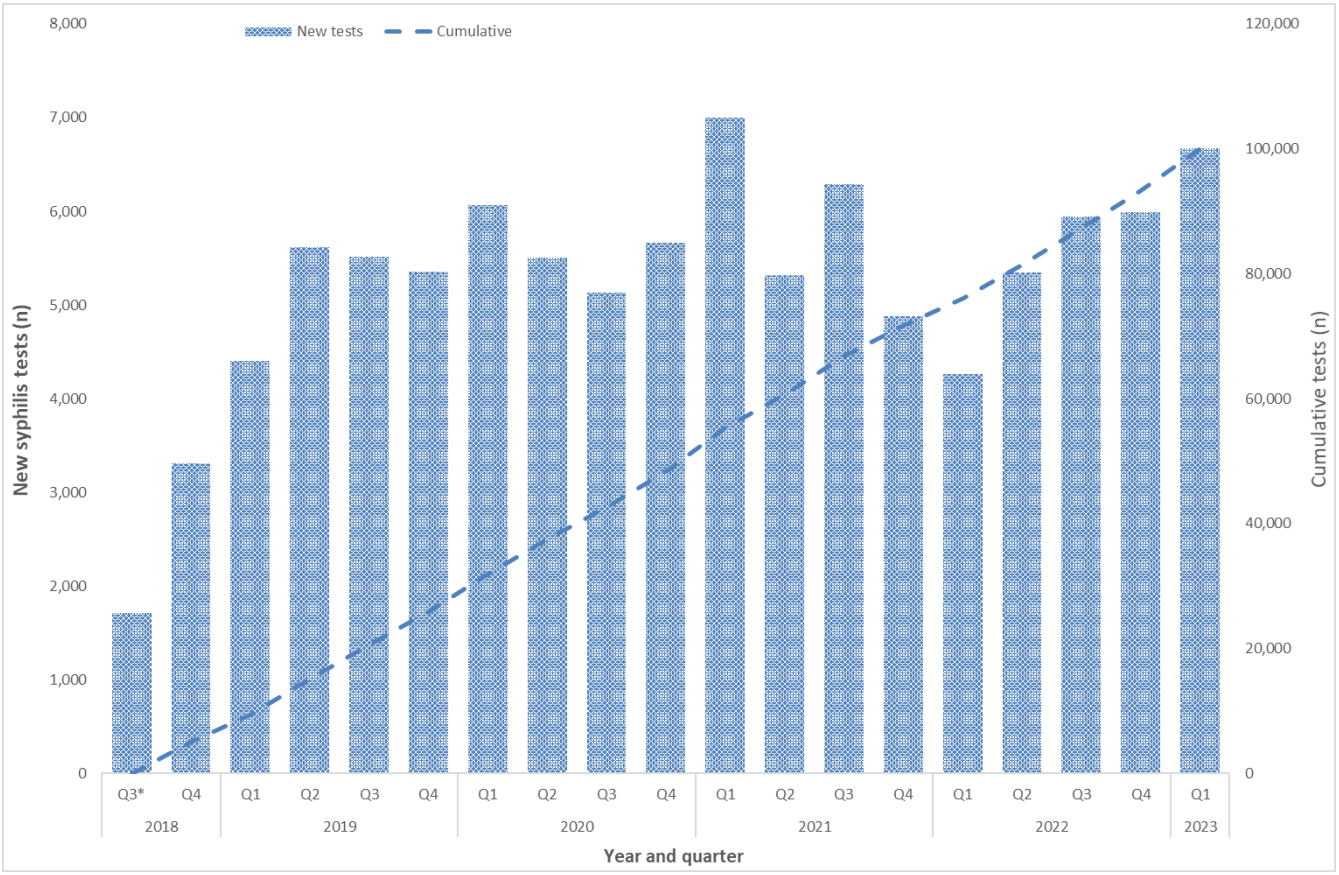
[xvii] Note these data do not include state based funded PoCT programs

As at Q1 2023, through participating ACCHS (Figures 12 and 13 a-b):

- 99,957 syphilis tests, point-of-care tests (PoCT) and/or serological tests, were delivered from the commencement of phase 1 of the test and treat model rollout on 1 August 2018. On average 5,261 new tests are performed each quarter (Figure 12).
- the quarterly testing coverage for clients attending the service was 15%, higher than the quarterly average for the preceding 12 months (13%, Q2 2022 – Q1 2023) (Figure 13a).
- the quarterly testing coverage for the target age group (15-34 years) of clients attending the service was 25%, higher than the quarterly average for the preceding 12 months (22%) (Figure 13b).

Please note that at the time of writing data were missing for some services and therefore testing numbers reported are likely to be an underestimate of all tests delivered.

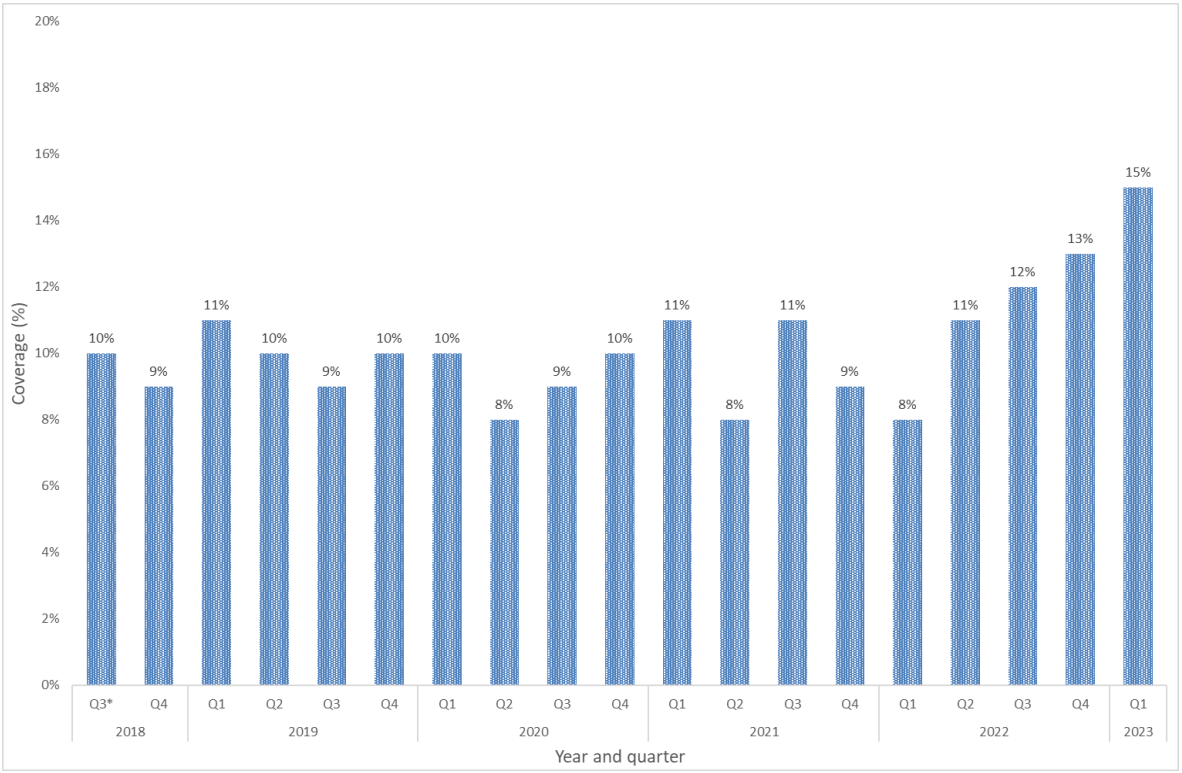
Figure 12: Cumulative number of syphilis tests (PoCT and/or serology) delivered through participating ACCHS to Aboriginal and Torres Strait Islander peoples, by quarter and year, Q3 2018* – Q1 2023



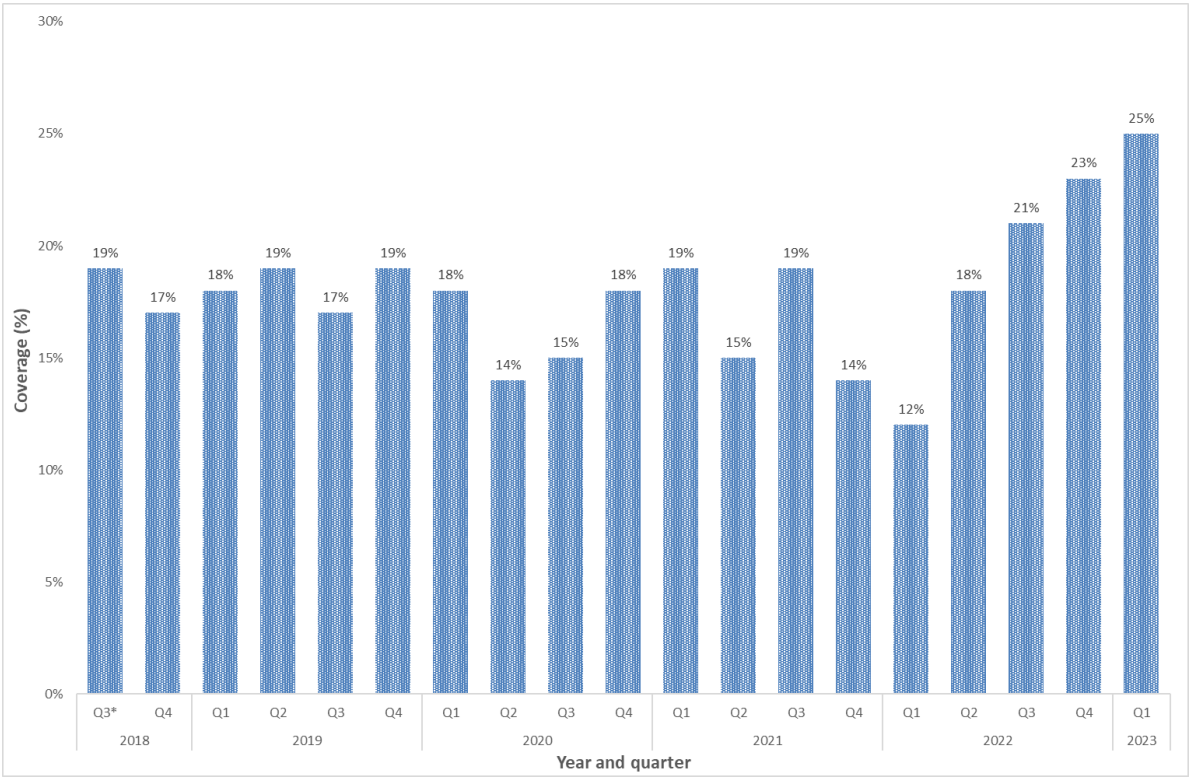
*Q3 2018 includes data for August and September only.

Figure 13 a-b: Proportion of Aboriginal and Torres Strait Islander clients attending participating ACCHS who received a syphilis test (PoCT and/or serology), quarter and year, Q3 2018* – Q1 2023[xviii]
(a. all age groups b. target age group 15-34 years)

a. All age groups



b. Target age group (15-34 years)



*Q3 2018 includes data for August and September only.

[xviii] Excludes testing data for individuals for whom age was not reported.

Methodological notes

Data were extracted from the NNDSS on 13 June 2023, by diagnosis date. Due to the dynamic nature of the NNDSS, data in this extract are subject to retrospective revision and may vary from data reported in published NNDSS reports and reports of notification data by states and territories. Data are to 31 December 2022 unless otherwise specified.

In general, notification data represent only a proportion of the total cases occurring in the community, that is, only those cases for which health care was sought, a test conducted and a diagnosis made, followed by a notification to health authorities. The degree of under-representation of all cases is unknown and is most likely variable by disease and jurisdiction.

In interpreting these data it is important to note that changes in notifications over time may not solely reflect changes in disease prevalence or incidence. Changes in testing policies; screening programs including the preferential testing of high-risk populations; the use of less invasive and more sensitive diagnostic tests; and periodic awareness campaigns, may influence the number of notifications that occur annually.

Data elements

- 'Diagnosis year' was used to define the period of analysis. This date represents either the onset date or where the date of onset was not known, the earliest of the specimen collection date, the notification date, or the notification received date.
- 'Residential postcode' reported to the NNDSS was used to allocate notifications of infectious and congenital syphilis to *remoteness areas* (as defined by the Australian Bureau of Statistics). Where a postcode was not reported the notification was excluded from remoteness area analysis.
    - Tasmania and Northern Territory do not have major cities as defined by the Australian Bureau of Statistics. Tasmanian "major cities" refers to inner regional areas and in the Northern Territory refers to outer regional areas.
- 'Residential postcode' usually reflects the residential location of a case at the time of testing and does not necessarily represent the place where the disease was acquired.
- The 'population denominator' used to calculate remoteness area rates and rates by sex and age (per 100,000 population) was extracted from the Australian Bureau of Statistics Census Table Builder (based on 2016 Census data) on 23 March 2023.
- The determination of the *Indigenous status* is by descent, self-identification, and community acceptance. While completeness of the Indigenous status field is generally high, it should be interpreted with caution as completeness of this field varies from year to year and jurisdiction to jurisdiction.
- 'Syphilis testing data' have been provided by participating ACCHS. A participating service refers to clinics currently funded by the Australian Government Department of Health and Aged Care to deliver point of care testing in syphilis outbreak regions. Services extract data from local clinical information management systems reporting to the Australian Government Department of Health and Aged Care. Data are provided for the reporting month, and cumulatively for the previous 12 months. 'Testing coverage' is calculated using as the denominator 'clients attending the service' (at participating ACCHS) during the reporting period.

Case definitions

The CDNA national surveillance case definitions for infectious and congenital syphilis, including any historical edits, are available at: https://www.health.gov.au/casedefinitions.

The outbreak case definition classifying cases reported under 'Target 3: Control outbreaks among Aboriginal and Torres Strait Islander peoples in Queensland, the Northern Territory, Western Australia and South Australia' is defined:

> Nationally, an infectious syphilis outbreak case is defined as: any person who is newly diagnosed with confirmed or probable infectious syphilis according to the CDNA national surveillance case definition for infectious syphilis, **AND**, is an Aboriginal or Torres Strait Islander person who resides in any of the following outbreak declared regions as defined and documented by that jurisdiction, at or after the dates indicated: Qld - North West Hospital and Health Service area (from 1 January

2011); Torres and Cape Hospital and Health Service area (from 1 December 2012); Cairns and Hinterland Hospital and Health Service area (from 1 August 2013); Townsville Hospital and Health Service area (from 1 January 2014); Central Queensland Hospital and Health Service area (from 1 June 2017) NT - Alice Springs Rural and Urban or Barkly district (from 1 July 2013); Katherine district (from 1 May 2014); East Arnhem district (from 1 November 2015); Darwin Rural and Urban (from 1 January 2017); WA - Kimberley region (from 1 June 2014); Pilbara region (from 1 February 2018); Goldfields region (from 1 January 2019); SA - Far North and Western and Eyre regions (from 15 November 2016); Adelaide (from 1 February 2018) (category 1 outbreak cases) OR, is a sexual contact of a confirmed outbreak case (category 2 outbreak cases).

Acknowledgements

We, the Department of Health and Aged Care, acknowledge the Traditional Owners and Custodians of Country throughout Australia. We recognise the strength and resilience of Aboriginal and Torres Strait Islander peoples and acknowledge and respect their continuing connections and relationships to country, rivers, land and sea. We acknowledge the ongoing contribution Aboriginal and Torres Strait Islander peoples make across the Health system and wider community. We also pay our respects to Elders past, present and future and extend that respect to all Traditional Custodians of this land.

The Department of Health and Aged Care acknowledges the Communicable Diseases Network Australia; the work of public health officers involved in the collection of surveillance data; state and territory public health communicable disease surveillance managers and data managers; participating Aboriginal Community Controlled Health Services, and; all public and private laboratories that support laboratory surveillance in Australia.

Contact

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