Government of **Western Australia**
Department of **Health**

Public Health Review of Congenital Syphilis Cases in WA Jan 2019 – Dec 2023: Summary Report

Contents

1. Executive Summary

Infectious syphilis is a notifiable sexually transmissible infection (STI) which, predominantly due to risk of congenital syphilis, is a significant public health concern. In Western Australia (WA), the occurrence of a congenital syphilis case is a sentinel event and public health reviews for each case of congenital syphilis are conducted for the purpose of health system improvement and preventing future cases.

Twenty-one public health reviews were conducted for 17 (12 live, 5 stillbirths) cases of congenital syphilis and four "near miss"[1] cases notified between Jan 2019 and Dec 2023. The cases occurred in both regional (10 cases) and metropolitan (11 cases) public health regions, and 14 of the infants were Aboriginal.

People exposed to one or more of the following situations were over-represented in those who had a baby with congenital syphilis or a near miss: living in a remote area, experiencing homelessness, alcohol use, drug use and/or other complex social issues. Inability to access culturally safe antenatal care and comprehensive primary health care was frequently a factor contributing to delayed diagnosis and treatment of infectious syphilis in pregnancy resulting in congenital syphilis in the infant. Staff lack of syphilis outbreak knowledge and the importance of syphilis testing in pregnancy contributed to only a few cases, mostly before 2022.

Recommendations from congenital syphilis reviews are implemented under the governance of the WA Syphilis Outbreak Response Group (WA SORG). WA SORG uses a partnership approach to STI control and sexual health promotion. Key interventions include:

- all pregnant people are offered syphilis testing at first antenatal visit, 28 and 36 weeks (or at time of any preterm birth),
- establishment of surveillance systems for infectious syphilis case and contact management and for antenatal syphilis testing,
- public health units coordinating multi-disciplinary case management of pregnant people with infectious syphilis,
- development and timely updating of WA guidelines for managing syphilis, syphilis in pregnancy and congenital syphilis,
- availability of point-of-care testing in many hospitals, primary health care and Aboriginal community controlled health services across WA, and
- statewide and local community and patient syphilis education campaigns.

The first case of congenital syphilis associated with the current outbreak occurred in 2018, four years after the outbreak started in WA. Infectious syphilis notifications in WA peaked in 2021 then declined between 2021 and 2023. This indicates that WA's syphilis outbreak response, initiated in 2018 and informed by the findings and recommendations of congenital syphilis cases reviews, is beginning to control the outbreak. Given the potentially long lag time between a female of reproductive age acquiring syphilis and vertical transmission during pregnancy to an infant, it is hoped that congenital syphilis notifications will begin reducing soon. Notifications in females continue to decline and adherence with testing for syphilis three times during pregnancy continues to improve.

Meanwhile, alternative and co-designed models of care need to be explored with Aboriginal women, other affected communities and key stakeholders to ensure that pregnant people can access comprehensive and culturally safe primary health care services that include provision of holistic antenatal care.

[1] Defined as a diagnosis of infectious syphilis in a pregnant person, who did not receive adequate treatment, and baby was not diagnosed with congenital syphilis in the neonatal period.

2. Introduction

Infectious syphilis is a notifiable sexually transmissible infection (STI) which, predominantly due to risk of congenital syphilis, is a significant public health concern in Western Australia (WA). WA has experienced a marked increase in syphilis notifications over recent years which has included cases of congenital syphilis. This has resulted in a targeted and comprehensive response at both statewide and local levels. One component of this response has included public health reviews of the congenital syphilis cases (reviews).

The information included in the report relates to the reviews of 17 cases of congenital syphilis and four near misses (diagnosis of infectious syphilis in a pregnant person who did not receive adequate treatment, and baby was not diagnosed with congenital syphilis in the neonatal period), notified between 1st January 2019 and 31 December 2023.

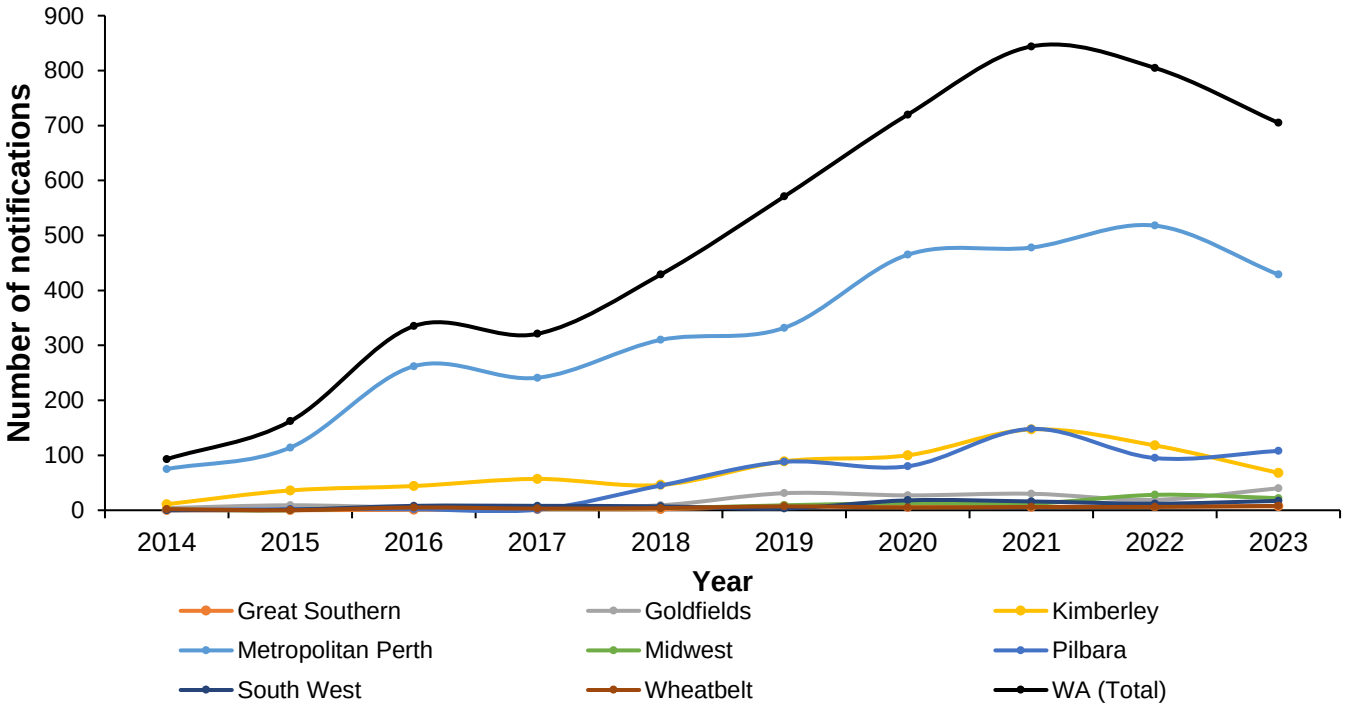
2.1 Overview of syphilis epidemiology and antenatal syphilis testing in WA

There has been an ongoing infectious syphilis outbreak affecting Aboriginal people in regional and remote Northern and Central Australia primarily in people aged 15 to 34 years. The outbreak began in northern Queensland in 2011 and reached the Northern Territory in 2013. The outbreak moved into the Kimberley region in mid-2014 with related clusters identified in mid-2018 in the Pilbara region and the Goldfields in early-2019.

In mid-2020 the Chief Health Officer authorised a statewide public health response to infectious syphilis in identified at-risk populations after increasing syphilis notifications in the Perth metropolitan area and South West region, the majority of which were not epidemiologically linked to the Kimberley, Pilbara or Goldfields.

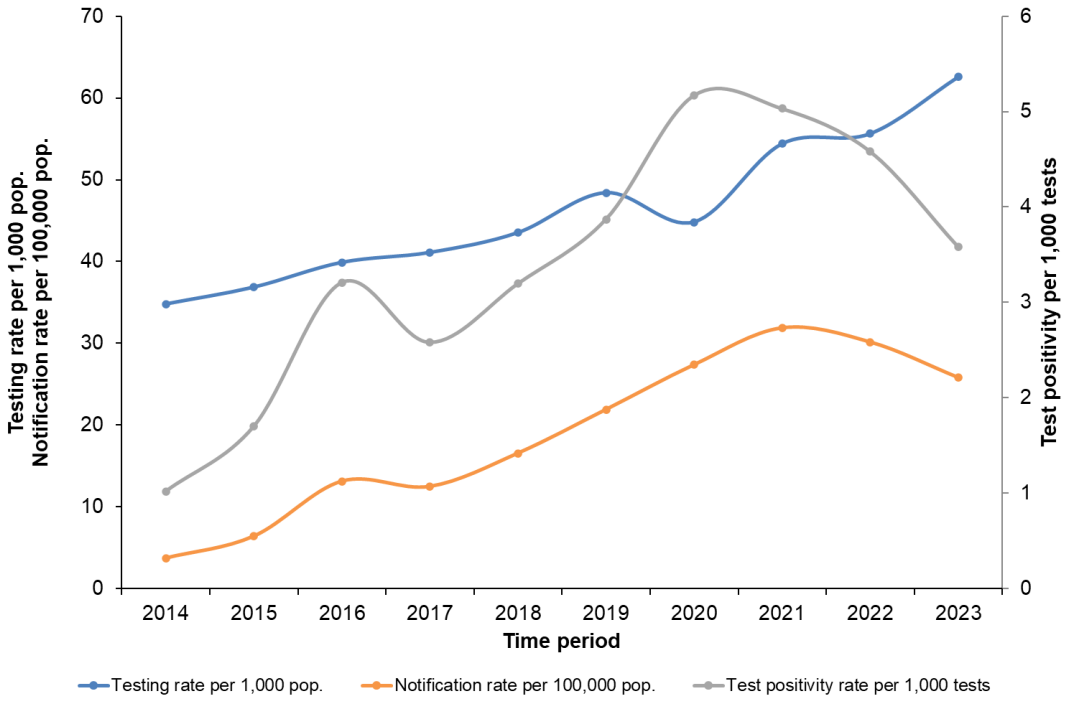
From 2014 to 2021, the annual number of infectious syphilis notifications in WA increased from 93 to 844 before decreasing to 705 in 2023 and annual infectious syphilis notifications in females increased from 11 to 320 before decreasing to 286 in 2023 (Figure 1). Over 90% of females notified with infectious syphilis were of reproductive age (15 to 44 years).

Figure 1. Number of infectious syphilis notifications by region, WA, 2014 to 2023.



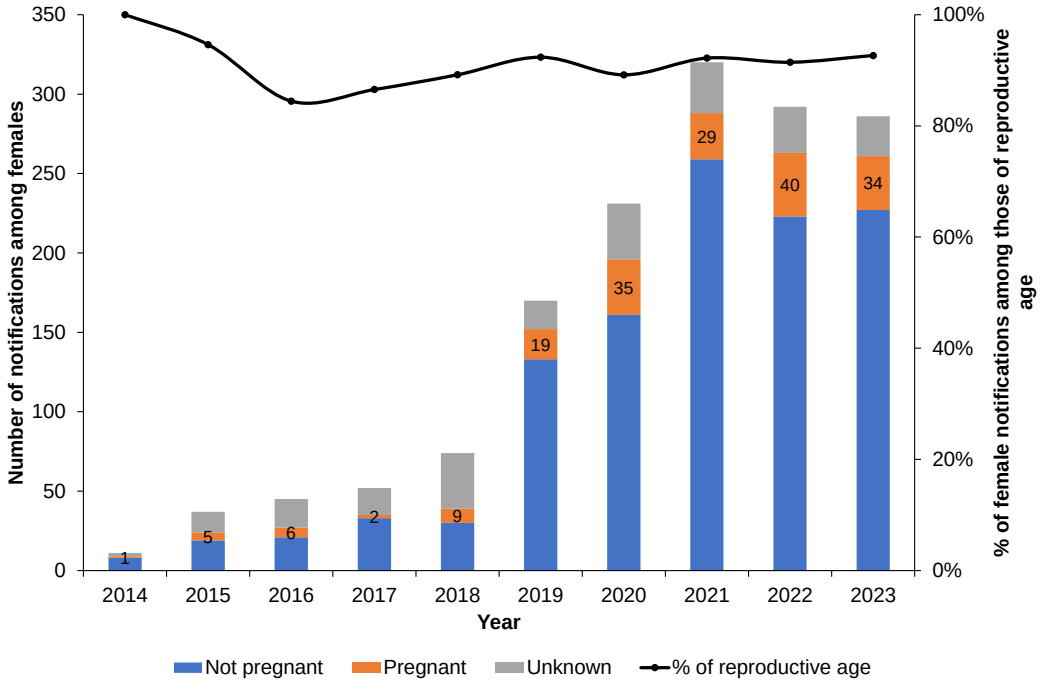
Consistent reduction in test-positivity rate since 2021 indicates that the decline in notification rate is due to reduced disease transmission (Figure 2).

Figure 2. Syphilis testing rate, notification rate and test positivity rate in WA by time period, 2014-2023.



The number of pregnant people notified with infectious syphilis each year increased from one in 2014 to 40 in 2022 and 34 in 2023 (Figure 3).

Figure 3. Number of infectious syphilis notifications among females by pregnancy status and proportion of female infectious syphilis notifications in females of reproductive age (15 to 44 years), WA, 2014 to 2023.



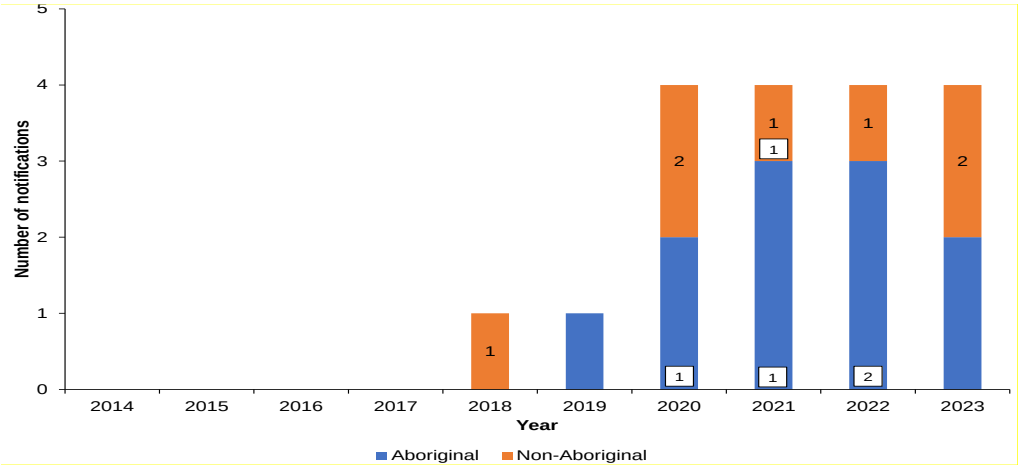
Of the 180 pregnant cases from 2014 to 2023, 94% were born in Australia, nearly three-quarters (74%) were Aboriginal, the majority (58%) lived outside metropolitan Perth and the median gestation at diagnosis was 14 weeks (Table 1).

Table 1. Characteristics of pregnant people diagnosed with infectious syphilis, WA, 2014 to 2024.

Characteristics	Number	Percent
Aboriginality		
Aboriginal	133	74%
non-Aboriginal	47	26%
Country of birth		
Australia	169	94%
Overseas	11	6%
Area of residence		
Metro	73	41%
Non-metro	105	58%
Gestation at diagnosis		
Median (weeks)	14	-
Range (weeks)	4 to 38	-

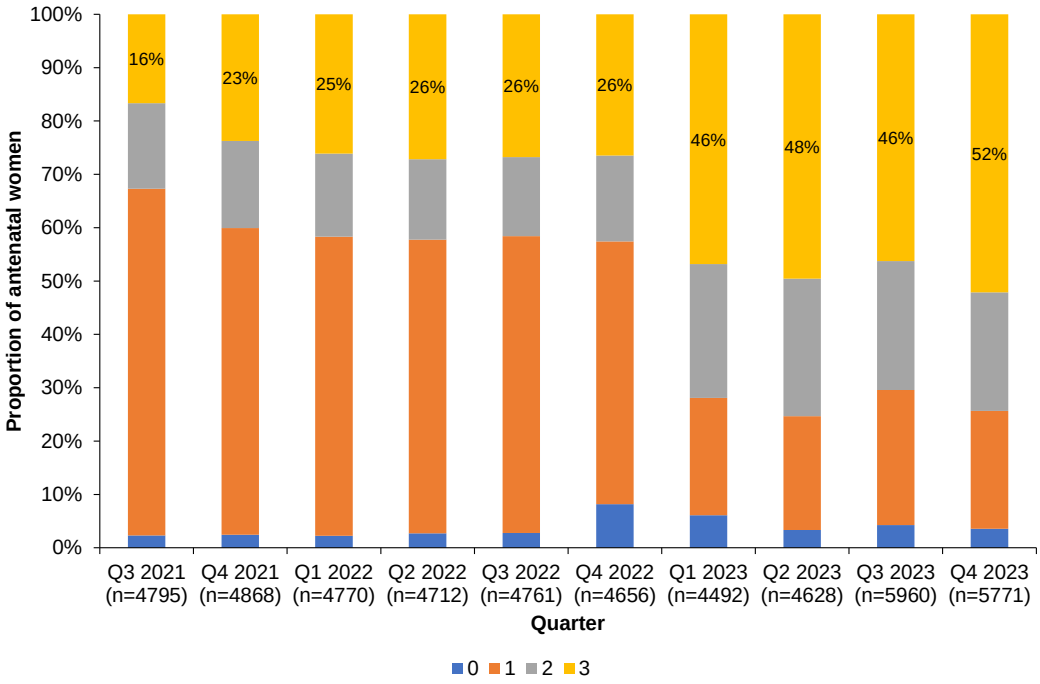
From 2014 to 2023, there were a total of 18 congenital syphilis notifications: 11 among Aboriginal infants and 7 among non-Aboriginal infants. Of these 18 congenital syphilis cases, 5 (4 Aboriginal and one non-Aboriginal) were stillborn infant (Figure 4).

Figure 4. Number of congenital syphilis notifications by Aboriginality and year, WA, 2014 to 2023 (stillbirths indicated in boxes).



Since March 2021 WA Health's Silver book – STI/BBV management guidelines (health.wa.gov.au) has recommended that all pregnant people in WA should be offered serologic testing for syphilis at the first antenatal visit, and 28 weeks and 36 weeks gestation (or at time of any preterm birth). The proportion of people who had undergone 3 syphilis tests in pregnancy increased from 16% in the third quarter (Q3) of 2021 to 52% in the final quarter (Q4) of 2023 (Figure 5). Improvement in the proportion of pregnant people tested for syphilis 3 times in pregnancy was greater in non-Aboriginal people (15% in Q3 2021, 53% in Q4 2023). There was some improvement in access to testing for syphilis 3 times in pregnancy for Aboriginal (27% in Q3 2021, 47% in Q4 2023) people (Appendix 1). Syphilis testing in pregnancy was highest in the Kimberley region (61% of Aboriginal and 76% of non-Aboriginal people tested for syphilis 3 times in pregnancy) and lowest in the Great Southern region which has not been engaged in the outbreak response for as long as some other regions (27% of Aboriginal people tested for syphilis 3 times in pregnancy) and the Midwest (28% of non-Aboriginal people tested for syphilis 3 times in pregnancy) (Appendix 1).

Figure 5. Proportion of pregnant people in WA tested for syphilis by number of tests, Q3 2021 to Q4 2023.



Note: Data from Q3 2021 to Q2 2023 collected through STORK and includes only data from public hospitals and homebirths. Mandatory reporting of antenatal syphilis testing commenced in July 2023. Data from Q3 2023 to Q4 2023 collected through STORK and MNS and includes data from public hospitals and home births, and private hospitals and homebirths.

3. Case Review Findings

Between 2019 and 2023, 21 reviews were conducted in accordance with the *WA Guidelines for review of congenital syphilis cases* (Appendix 2).

As shown in Table 2, nearly all mothers who delivered a baby with congenital syphilis or near miss from 2019 to 2023 were aged 20 to 37 years (95%) and had acquired their infection in Australia (90%). About one half (52%) resided in the Perth metropolitan area. Of the five mothers who delivered a stillborn baby with congenital syphilis, three (60%) were from a remote area and four (80%) were Aboriginal. All stillborn babies were Aboriginal.

Many mothers were affected by homelessness, unstable accommodation, alcohol and/or drug use and other complex social issues, e.g. foetal alcohol spectrum disorder (FASD), family and domestic violence, family substance use issues, sexual assault, children under the care of the Department of Child Protection and Family Services (DCPFS) involvement. These complex issues, in combination with widespread shortages of bulk-billed general practice appointments, often result in inequity of access to comprehensive, patient-centred primary health care, including antenatal care. Furthermore, these traumas can affect the mother's capacity to trust and be receptive to care offered by government, health care, social and other support services.

Table 2. Demographic and disease characteristics of mothers who delivered a baby with congenital syphilis or near miss, 2019 to 2023.

Maternal characteristics	Congenital syphilis live birth, n=12	Congenital syphilis stillbirth, n=5	Near miss, n=4	Total, n=21
Age (years)				
<20	0 (0%)	0 (0%)	1 (25%)	1 (5%)
20 to 29	9 (67%)	3 (60%)	1 (25%)	13 (62%)
30 to 39	3 (33%)	2 (40%)	2 (50%)	7 (33%)
Median, range	27.5, 20-36	29, 20-31	32, 19-37	28, 19-37
Residential location				
Metropolitan Perth	7 (58%)	2 (40%)	2 (50%)	11 (52%)
Rural (Great Southern, Midwest, South West, Wheatbelt WA Country Health Service [WACHS] regions)	1 (8%)	0 (0%)	1 (25%)	2 (10%)
Remote (Goldfields, Kimberley or Pilbara WACHS regions)	4 (33%)	3 (60%)	1 (25%)	8 (38%)
Aboriginality				
Aboriginal	7 (58%)	4 (80%)	2 (50%)	13 (62%)
Non-Aboriginal	5 (42%)	1 (20%) (baby Aboriginal)	2 (50%)	8 (38%)
Country of birth				
Australia	10 (83%)	5 (100%)	2 (50%)	17 (81%)
Other	2 (17%)	0 (0%)	2 (50%)	4 (19%)
Place of syphilis acquisition				
Australia	12 (100%)	5 (100%)	2 (50%)	19 (90%)
Other	0 (0%)	0 (0%)	2 (50%)	2 (10%)
Homeless/unstable accommodation				
Yes	5 (42%)	1 (20%)	1 (25%)	7 (33%)
No	7 (58%)	4 (80%)	3 (75%)	14 (67%)

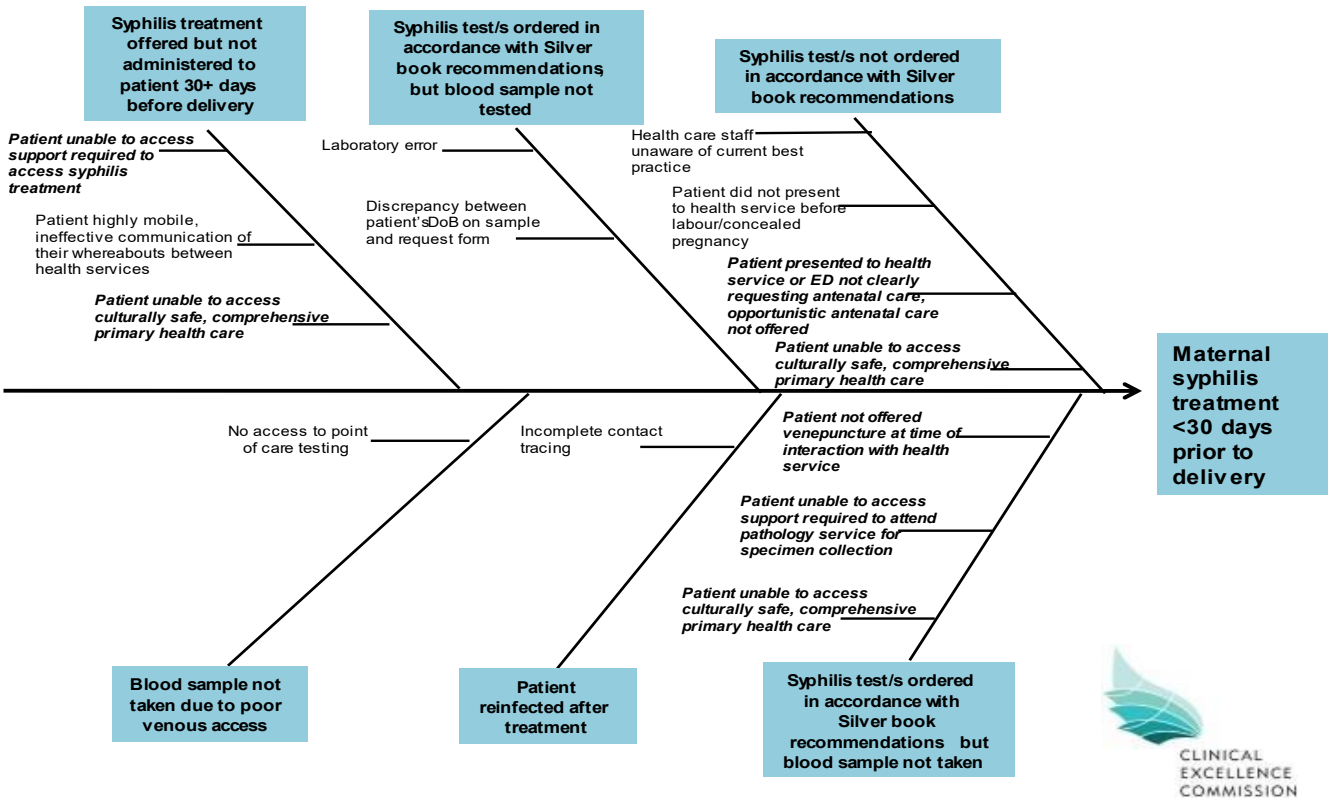
Maternal characteristics	Congenital syphilis live birth, n=12	Congenital syphilis stillbirth, n=5	Near miss, n=4	Total, n=21
Alcohol/other drug use during pregnancy				
Yes	7 (58%)	2 (40%)	1 (25%)	10 (48%)
No	5 (42%)	3 (60%)	3 (75%)	11 (52%)
Other complex social issues, e.g. pregnant mother has FASD, family and domestic violence, family substance use issues, sexual assault, DCPFS involvement				
Yes	8 (67%)	2 (40%)	1 (25%)	11 (52%)
No	4 (33%)	3 (60%)	3 (75%)	10 (48%)
Trimester in which mother first presented for health care				
1	9 (67%)	2 (40%)	3 (75%)	14 (67%)
2	2 (17%)	2 (40%)	1 (25%)	5 (24%)
3	1 (8%)	0 (0%)	0 (0%)	1 (5%)
At delivery	0 (0%)	1 (20%)	0 (0%)	1 (5%)
Tested for syphilis during pregnancy during trimester				
1	5 (42%)	0 (0%)	2 (50%)	7 (33%)
2	3 (25%)	1 (20%)	3 (75%)	7 (33%)
3	4 (33%)	0 (0%)	3 (75%)	7 (33%)
Trimester/time of syphilis diagnosis				
1	0 (0%)	0 (0%)	1 (25%)	1 (5%)
2	1 (8%)	0 (0%)	1 (25%)	2 (10%)
3	4 (33%)	0 (0%)	2 (50%)	6 (29%)
At delivery	6 (50%)	5 (100%)	0 (0%)	11 (52%)
>6 weeks post-partum	1 (8%)	0 (0%)	0 (0%)	1 (5%)
Syphilis treatment within 14 days of diagnosis				
Yes	10 (83%)	4 (80%)	3 (75%)	17 (81%)
No	2 (17%)	1 (20%)	1 (25%)	4 (19%)
Syphilis treatment 30+days prior to delivery				
Yes	0 (0%)	0 (0%)	1 (reinfected after treatment)	1 (5%)
No	12 (100%)	5 (100%)	3 (75%)	20 (95%)

Of the mothers who delivered a live or stillborn baby with congenital syphilis from 2019 to 2023, all but one (94%) were diagnosed with syphilis in the third trimester or later. None had received syphilis treatment more than 30 days prior to delivery (Table 2).

Qualitative analysis of review documents, including meeting minutes and case summaries, identified factors contributing to syphilis treatment not being completed 30 or more days before delivery. These factors are summarised in Figure 6. A common issue was the mother's inability to access antenatal care within the context of a culturally safe, comprehensive primary health care service. This is due to the siloed nature of many health services and their requirement for the patient to "fit into" the health service's requirements, rather than having the flexibility to provide patient-centred care that meets the patient's individual requirements. Presentation to an emergency department (ED) was a frequent "symptom" of this issue. There was significant variability in EDs interest in, and capacity to, provide opportunistic antenatal care and/or referral to antenatal care for pregnant people who presented to ED with non-urgent pregnancy-related conditions. This was despite the fact that the person was obviously pregnant, had received little/no antenatal care and was using the ED as a primary health care service because of limited access to a GP/primary health care.

Lack of staff knowledge about the syphilis outbreak and the importance of syphilis testing in pregnancy contributed to only a few cases, mostly before 2022.

Figure 6. Factors contributing to syphilis treatment not being completed 30 or more days before delivery (factors in italic font were identified in many cases).



Clinical management, including infection control, of all babies with congenital syphilis was implemented in accordance with the Child and Adolescent Health Service's guideline *Syphilis: Investigation and management of the neonate born to a mother with syphilis*.

The following vignettes are based on features common to many of the cases.

Vignette 1

Mariam, aged 29 years, and her partner are in Australia on overseas student visas and do not have access to Medicare. Her syphilis, hepatitis B and HIV tests at the first trimester antenatal visit were negative, she was not offered testing for chlamydia or gonorrhoea. She presented to ED at 20 weeks with vaginal discharge and was treated empirically with azithromycin for chlamydia which was detected in the high vaginal swab, no other STI tests were offered in ED and contact tracing was not mentioned. She did not mention the chlamydia infection at her 28 week check-up. Syphilis testing was requested along with the oral glucose tolerance test at 28 weeks but she did not present for the blood test due to a respiratory infection and financial barriers to accessing care. At her next presentation for antenatal care at 37 weeks, syphilis testing showed RPR 128 and positive treponemal antibody test. Syphilis treatment was commenced promptly but she delivered a baby with clinical features of congenital syphilis at 38 weeks. She reported her partner as being her only sexual contact during pregnancy. Questioning and testing of her partner indicated that he had probably acquired syphilis a few weeks before she presented with chlamydia, contact tracing was not possible because he reported that this person was no longer living in Australia.

Vignette 2

Abigail, aged 28 years, is from a remote region A. Her medical history includes FASD, methamphetamine, alcohol use and several hospital admissions for psychotic symptoms. She has 3 other children, all of whom are under the care of the DCPFS. She presented to a health service for homeless people in Perth at 10 weeks gestation to discuss options for this unplanned pregnancy. The health service did not take her blood but gave her a laboratory request form for routine first visit antenatal blood tests including syphilis. Due to the transient nature of their patients, the health service does not proactively follow up patients and was unaware that she had not presented to the laboratory specimen collection centre. Her next presentation at a health service was at a hospital ED in region B at 20 weeks gestation with soft-tissue injuries inflicted by her partner. Her pregnancy was noticed; blood was taken for a full set of first visit antenatal blood tests (point of care syphilis testing was not available at this hospital's ED), and she was given an appointment for the antenatal clinic. Three days later, when the syphilis test result (RPR 128 and positive treponemal antibody test) became available the regional public health unit (PHU) attempted to find her and were informed she was had left region B to escape her partner. An alert in the public hospital system notified the regional PHU that she was back in Perth 4 weeks later when she presented to a metropolitan ED at night with a sprained ankle, but she had left hospital before ED staff realised she needed syphilis treatment. Two weeks later she presented with symptoms of sepsis at a different metropolitan hospital and delivered a stillborn baby found to have congenital syphilis at post-mortem.

4. Statewide Public Health Actions to Date

Recommendations from congenital syphilis public health reviews are developed by attendees at the end of each meeting to address the gaps in healthcare for the discussed case/s. Recommendations are then reviewed by Communicable Disease Control Directorate (CDCD) to implement statewide recommendations. CDCD engages with relevant stakeholders regarding the feasibility and process of activating relevant recommendations. Key recommendations which were activated are noted below.

It may be determined through stakeholder engagement a recommendation is not actionable a as policy change for a range of reasons such as the recommendation has already been activated or the recommendation's desired impact could be better achieved using other strategies.

Some recommendations are for entities outside of CDCD, such as GPs or Department of Justice in which case CDCD communicates with the relevant entity so they may consider the recommendation and implement as appropriate.

4.1 WA Syphilis Outbreak Response Group

The WA Syphilis Outbreak Response Group was formed in August 2018 and is responsible for coordinating a statewide response to the increasing notifications of infectious syphilis that are being experienced in WA. The group is chaired by the Director of the CDCD and a nominated representative from the Aboriginal Health Council of WA (AHCWA).

The aim of the WA SORG is to control the outbreak of syphilis among communities and eliminate congenital syphilis in WA using partnership strategies that, wherever possible, are applicable to the sustainable control measures for STIs and promotion of sexual health in WA communities.

The WA SORG developed the original *Western Australian Syphilis Outbreak Response Action Plan* (the *Action Plan*) following a statewide consultation with key stakeholders in November 2018.This *Action Plan* was launched by the Minister for Health in Broome, July 2019. The five priority areas of the Action Plan are:

- prevention, education and community engagement
- workforce development
- testing, treatment and contact tracing
- surveillance and reporting
- antenatal and postnatal care.

Review findings and recommendations are tabled at WA SORG and were considered in the development of WA's updated *Action Plan* and accompanying monitoring framework which were published in 2023.

Review findings and recommendations also informed local action implemented by Syphilis Outbreak Response Teams (SORTs) located in each Western Australian region. Each SORT has a tailored action plan that closely aligns to the statewide action plan and guides the local response to syphilis outbreaks.

4.2 Strategy and investment

Antenatal and postnatal care remains one of the key priorities of the WA SORG and is integral in the prevention of congenital syphilis. A significant amount of work has been done in the area at both the statewide and local level with several initiatives still underway.

WA SORG has provided funding to the outbreak regions for localised syphilis outbreak response activities since 2019-20. One of the initiatives from this funding was the development of a *Baby Baskets Program* in the Pilbara, which was later adapted in the Goldfields. This program provides information and incentives for pregnant people to attend regular antenatal care in-line with syphilis testing guidelines. A case study and video presentation of the program is available on the WA Syphilis Outbreak Response site.

WA SORG funded Curtin University to conduct a research project on barriers and enablers of Aboriginal women to engage in antenatal services. Four key elements were identified as being integral to antenatal care access: building trust and community health literacy through delivery of health education in non-clinical settings, providing culturally responsive services, employment of community members at health services and ensuring continuity of care through service partnerships. The full report and policy brief are available on the SiREN website.

4.3 Prevention, education and community engagement

Statewide syphilis campaigns

The CDCD funds regular statewide campaigns with a focus on infectious and congenital syphilis.

A health promotion campaign ran between March 2023-June 2023 and targeted people aged 18 to 34 years in WA. The campaign used a range of mediums including cinema advertising, YouTube advertising, radio advertisement, posters, and electronic displays. Key outcomes of the campaign include:

- 119,702 people aged 18 to 39 years viewed the cinema advertisement, resulting in 12.6% of all people aged 18 to 39 years in WA having seen the advertisement
- Over 950,000 people saw the electronic displays in Perth Airports
- 913,899 people aged 18 to 34 years viewed the advertisement on YouTube
- 209,697 people aged 20 to 34 years viewed the advertisement on Snapchat, which a click through rate of 0.94% (market benchmark is 0.05%).
- Over the campaign period, 32,239 people in WA visited the *Healthysexual* website, with 4,131 visits to the syphilis page.

At time of writing, a new statewide syphilis-specific campaign was running which it started in December 2023 and will close in June 2024. This campaign includes bus-back advertising, electronic advertisements on Transperth property, posters in bathrooms and regional radio advertisement (see images in Appendix 4). Data regarding numbers of views will be available after 30 June 2024.

Health promotion resources

Several education resources have been created for consumers and health professionals to help raise awareness with regions adapting content to suit their target populations:

- WA Department of Health has created several posters and health promotion resources promoting antenatal syphilis testing and congenital syphilis prevention (Figure 7). The previous campaign posters are available in Appendix 5.

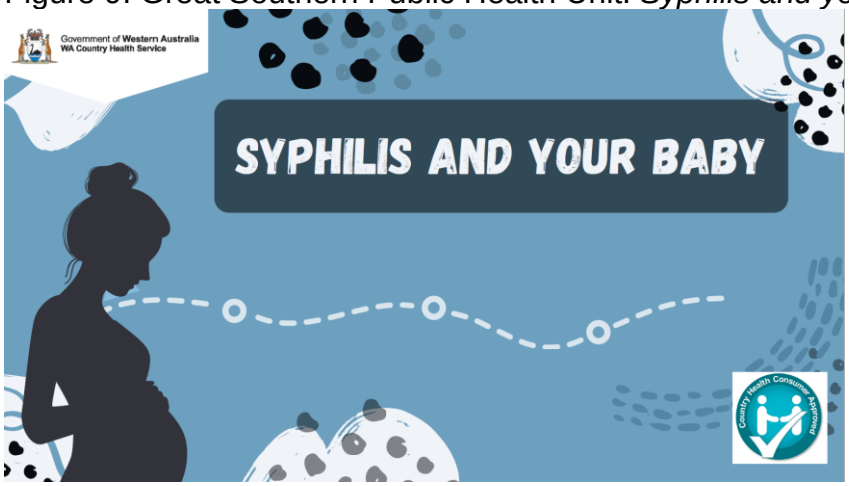
Figure 7. WA Department of Health syphilis-related posters, 2022/2023.

- AHCWA's *Go Along Philis* – a graphic flipchart for health practitioners, health promotion workers and other community-based workers (Figure 8).

Figure 8. AHCWA: *Go Along Philis* flipchart.

- *Syphilis and your baby* flipchart– The Pilbara, Goldfields, Great Southern and Metro PHUs created a graphic flipchart for health practitioners to have conversations with people in the metropolitan area who are pregnant or trying to get pregnant (Figure 9).

Figure 9. Great Southern Public Health Unit: *Syphilis and your baby* flipchart.



4.4 Workforce development

There has been increased investment into services to respond to the syphilis outbreak response. Funding has been provided for the recruitment of dedicated syphilis staff to implement a range of strategies aligned to the action plans. Several service providers are focussing on antenatal and postnatal care but there is also a large amount of crossover within other priority areas, especially prevention and testing activity.

Congenital syphilis and antenatal care have featured as part of the workforce development videoconference series. Related topics have included:

- Antenatal/postnatal testing, treatment, and management
- Congenital syphilis case reviews

The DoH has funded the development of an online learning module specifically for midwives, which was launched by the Australasian Society for HIV and Sexual Health Medicine (ASHM). In

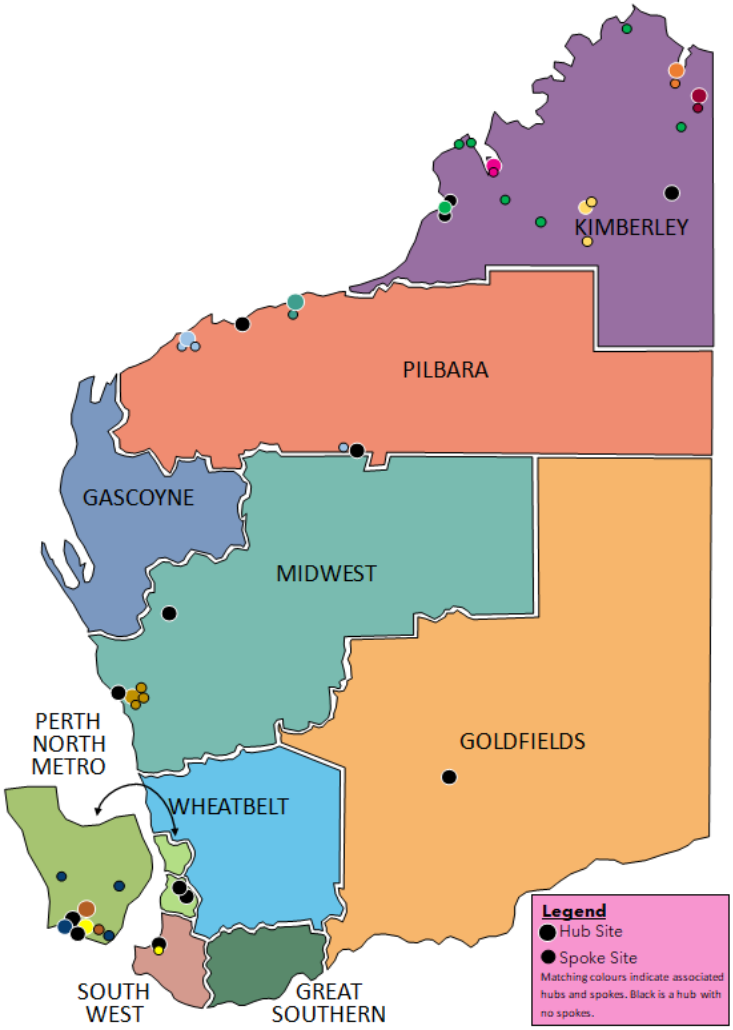
2019, as a response to the initial syphilis outbreak, ASHM also developed an online syphilis training website.

4.5 Testing, treatment and contact tracing

Testing guidelines have been updated to incorporate best practice syphilis testing in pregnancy protocols. These include the *Silver Book* and *Statewide Maternity Shared Care Guidelines*. Direct correspondence has been sent to relevant stakeholders and clinicians to ensure healthcare workers are aware of updated guidelines.

Another important initiative to improve WA syphilis testing in pregnancy is the use of syphilis point-of-care testing (PoCT). The statewide WA Syphilis PoCT program was rolled out in 2020 and now operational in 23 sites across the state (Figure 10 and Appendix 3). Sites enrolled in the program include maternity services, EDs, local PHUs, Aboriginal community-controlled health services (ACCHSs), prisons and non-government health services who provide healthcare support to marginalised communities. EDs, hospital-based maternity departments and primary health services providing antenatal care have been identified as important settings to provide syphilis PoCT to facilitate the early detection and treatment syphilis in the target populations and pregnant people. CDCD is implementing changes to the program requirements which will allow more health services, including maternity and antenatal care services, to enrol in the program. The National Aboriginal Community Controlled Health Organisation delivers a similar program for eligible ACCHSs. As of April 2024, there were 10 ACCHSs in WA offering syphilis PoCT.

Figure 10. Map of health services enrolled in the WA syphilis PoCT program, as of 10/4/2024.



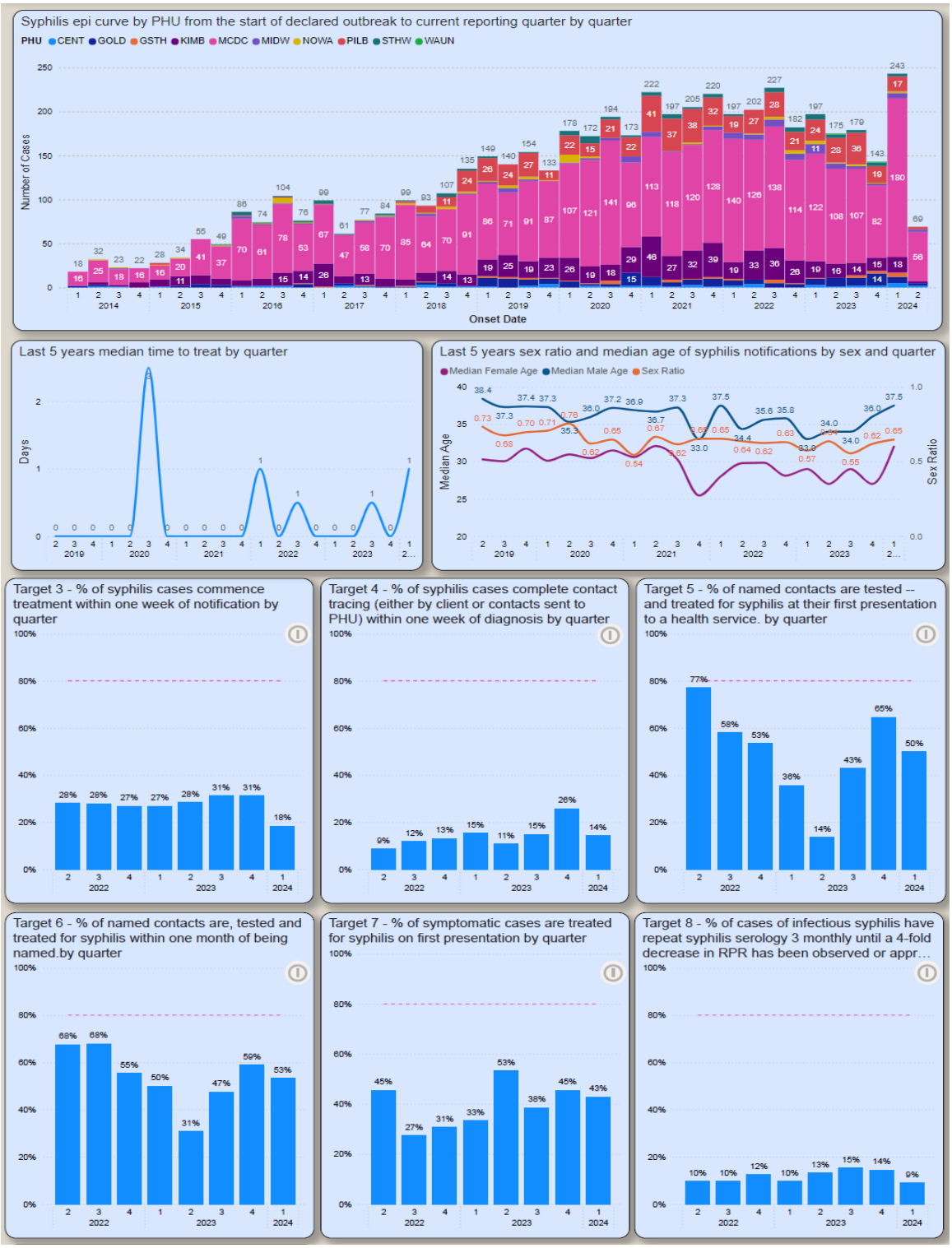
Structured Administration Supply Arrangements (SASAs) have been published to allow registered nurses (RNs), midwives and Aboriginal health practitioners (AHPs) to provide treatment for infectious syphilis. There has been ongoing work to advocate a reform to the *Health Insurance Act 1973* to allow RNs, Aboriginal health workers (AHWs) and AHPs to request STI testing that gains access to a Medicare rebate for pathology costs.

WA SORG advocated via the national Sexual Health and Blood Borne Virus Standing Committee for sexual health risk assessment to be specified in antenatal care Medicare Benefit Schedule item numbers as a standard part of comprehensive antenatal care, alongside mental health and domestic violence risk assessments which are currently specified in these item numbers. At time of writing, this cost-neutral recommendation was under consideration by the Commonwealth Department of Health.

4.6 Surveillance and reporting

A high priority of CDCD is development and continued improvement of a centralised syphilis case management system to facilitate effective public health management of high-risk patients and their contacts. This is particularly important for cases and contacts who are highly mobile. Figure 11 shows a few of the indicators displayed on the syphilis case management system's dashboard.

Figure 11. A selection of some indicators displayed on the syphilis case management system's dashboard.



Surveillance of antenatal syphilis testing was enabled by inclusion of antenatal syphilis testing in the Midwives Notification System on 1 July 2023. This data is reported in the Healthcare Quality Intelligence Unit's Maternity Dashboard (accessible by WA Health employees). The dashboard reports the following indicators:

1. Syphilis test before 28 weeks – Proportion of women who had a syphilis test before 28 weeks
2. Syphilis test 28 to 35 weeks – Proportion of women who gave birth at 28+ weeks gestation who had a syphilis test between 28 and 35 weeks
3. Syphilis test 36+ weeks Proportion of women who gave birth at 36+ weeks gestation who had a syphilis test at 36 weeks
4. Syphilis testing missing data – Proportion of women with "unknown" or "not stated" for one or more of the syphilis tests they were eligible to received given their gestation at time of delivery (indicator of completeness of data collection)

4.7 Other key achievements

Localised Syphilis Outbreak Response Team activities:

- Antenatal syphilis screening audits were conducted to assess compliance with guidelines and identify gaps in screening.
- PHUs engage regularly with local maternity services to provide education and advocate for increase syphilis screening.
- Review the local epidemiology and testing data to consider initiatives to improve testing and awareness of the syphilis outbreak.
- Implementation of syphilis PoCT in Midwest maternity services. The regions worked with relevant teams and staff, such as maternity Aboriginal liaison officers, to promote screening and follow up with at risk clients.
- Implementation of a "pink pathology testing pack" in Karratha ED to facilitate comprehensive antenatal screening of pregnant people presenting to ED for any reason and have not received antenatal care.
- Perth Metropolitan Perth's PHU implemented monthly multi-stakeholder case management meetings for people who are diagnosed with syphilis during pregnancy. Neonate management plans are created in partnership with clinical experts for metropolitan maternity services to advise and guide testing and treatment requirements for the neonate.[2]
- Creation of local resources for health and general public professionals and focused on increasing awareness of the syphilis outbreak and the importance of antenatal testing.
- Expansion of the Integrated Case Management Program's scope to include providing a consultancy service to PHUs regarding people whose complex psychosocial needs are preventing them from engaging in timely clinical management of their syphilis infection.
- Development and publication of *Guidelines for the management of notifiable infectious disease transmission risk behaviours in Western Australia*.

5. Conclusions

Review of 17 congenital syphilis (12 live, 5 stillbirths) and four near miss cases between 2019 and 2023, indicated that people with one or more of the following characteristics were over-represented: from a remote area, experiencing homelessness, alcohol use, drug use and/or other complex social issues.

[2] MacKenzie H, McEvoy SP, Ford TJ. Managing Risk for Congenital Syphilis, Perth, Western Australia, Australia. *Emerging Infectious Diseases*. 2023;29(10):2093-2101. doi:10.3201/eid2910.230432.

Inability to access to culturally safe antenatal care and comprehensive primary health care was a frequent factor contributing to delayed diagnosis and treatment of infectious syphilis in pregnancy resulting in congenital syphilis in the infant.

Lack of staff knowledge about the syphilis outbreak and importance of syphilis testing in pregnancy contributed to only a few cases, mostly before 2022. These factors contrast with those reported in a qualitative study involving 34 Queensland health care workers that identified poor communication between health staff and between health staff and their patients, inadequate data systems that allow cases to "disappear", a lack of knowledge about "key state guidelines" and how to treat syphilis as the main perceived barriers to optimal syphilis treatment in pregnancy.[3]

Many of the review recommendations have been implemented under the governance of the WA SORG which uses a partnership approach to STI control and sexual health promotion. Key interventions include:

- all pregnant people being offered syphilis testing at the first antenatal visit, 28 and 36 weeks,
- establishment of surveillance systems for infectious syphilis cases, contact management, and antenatal syphilis testing,
- PHUs coordinating multi-disciplinary case management of pregnant people with infectious syphilis,
- development and timely updating of WA guidelines for managing syphilis, syphilis in pregnancy and congenital syphilis,
- availability of point of care testing in many hospitals, primary health care and ACCHSs across WA, and
- statewide and local syphilis education campaigns.

The first case of congenital syphilis associated with the current outbreak occurred in 2018, four years after the outbreak started in WA. Infectious syphilis notifications in WA peaked in 2021 then declined between 2021 and 2023, indicating that WA's syphilis outbreak response, initiated in 2018 and informed by the findings and recommendations of reviews, is beginning to control the outbreak. Given the potentially long lag time between a female of reproductive age acquiring syphilis and vertical transmission during pregnancy to an infant, it is hoped that congenital syphilis notifications will begin reducing soon as notifications in females continue to decline and adherence with testing for syphilis three times during pregnancy continues to improve.

Meanwhile, alternative models need to be explored in consultation with Aboriginal women, other affected communities and key stakeholders to ensure that pregnant people can access comprehensive and culturally safe primary health care services that include provision of holistic antenatal care.

[3] Fowler JA *et al*. Barriers to optimal management of syphilis in pregnancy and congenital syphilis in south-east Queensland: a qualitative investigation. *Sexual Health*. 2023;20(6): 506–513. doi:10.1071/SH23119

Appendix 1

Table A Number and proportion of antenatal women in WA tested for syphilis by Aboriginality and number of tests, Q3 2021 to Q4 2023.

Aboriginality	Number of tests	Q3 2021		Q4 2021		Q1 2022		Q2 2022		Q3 2022		Q4 2022		Q1 2023		Q2 2023		Q3 2023		Q4 2023	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Aboriginal	0	16	4.3%	14	3.6%	15	3.6%	25	5.5%	24	5.6%	52	12.9%	20	4.9%	13	3.0%	35	6.8%	28	5.9%
	1	139	37.3%	134	34.4%	163	39.4%	159	35.2%	150	35.0%	151	37.6%	80	19.7%	105	23.9%	115	22.4%	113	23.7%
	2	84	22.5%	78	20.0%	91	22.0%	85	18.8%	96	22.4%	87	21.6%	124	30.5%	110	25.1%	157	30.6%	110	23.1%
	3	99	26.5%	131	33.6%	116	28.0%	148	32.7%	123	28.7%	97	24.1%	132	32.5%	162	36.9%	206	40.2%	225	47.3%
	Total	373	100.0%	390	100.0%	414	100.0%	452	100.0%	428	100.0%	402	100.0%	406	100.0%	439	100.0%	513	100.0%	476	100.0%
non-Aboriginal	0	90	2.2%	96	2.3%	85	2.1%	91	2.3%	98	2.4%	293	7.6%	220	5.9%	125	3.2%	218	4.0%	178	3.4%
	1	2706	65.6%	2448	58.5%	2284	56.2%	2198	55.7%	2301	57.3%	1944	50.1%	795	21.4%	785	20.4%	1394	25.6%	1162	21.9%
	2	615	14.9%	656	15.7%	587	14.4%	551	14.0%	541	13.5%	593	15.3%	890	24.0%	964	25.0%	1284	23.6%	1172	22.1%
	3	627	15.2%	919	22.0%	1023	25.2%	1021	25.9%	1027	25.6%	1025	26.4%	1749	47.1%	1916	49.8%	2551	46.8%	2783	52.6%
	Total	4125	100.0%	4183	100.0%	4066	100.0%	3948	100.0%	4019	100.0%	3878	100.0%	3714	100.0%	3851	100.0%	5447	100.0%	5295	100.0%

Figure A. Proportion of Aboriginal antenatal women in WA tested for syphilis by number of tests, Q3 2021 to Q4 2023.

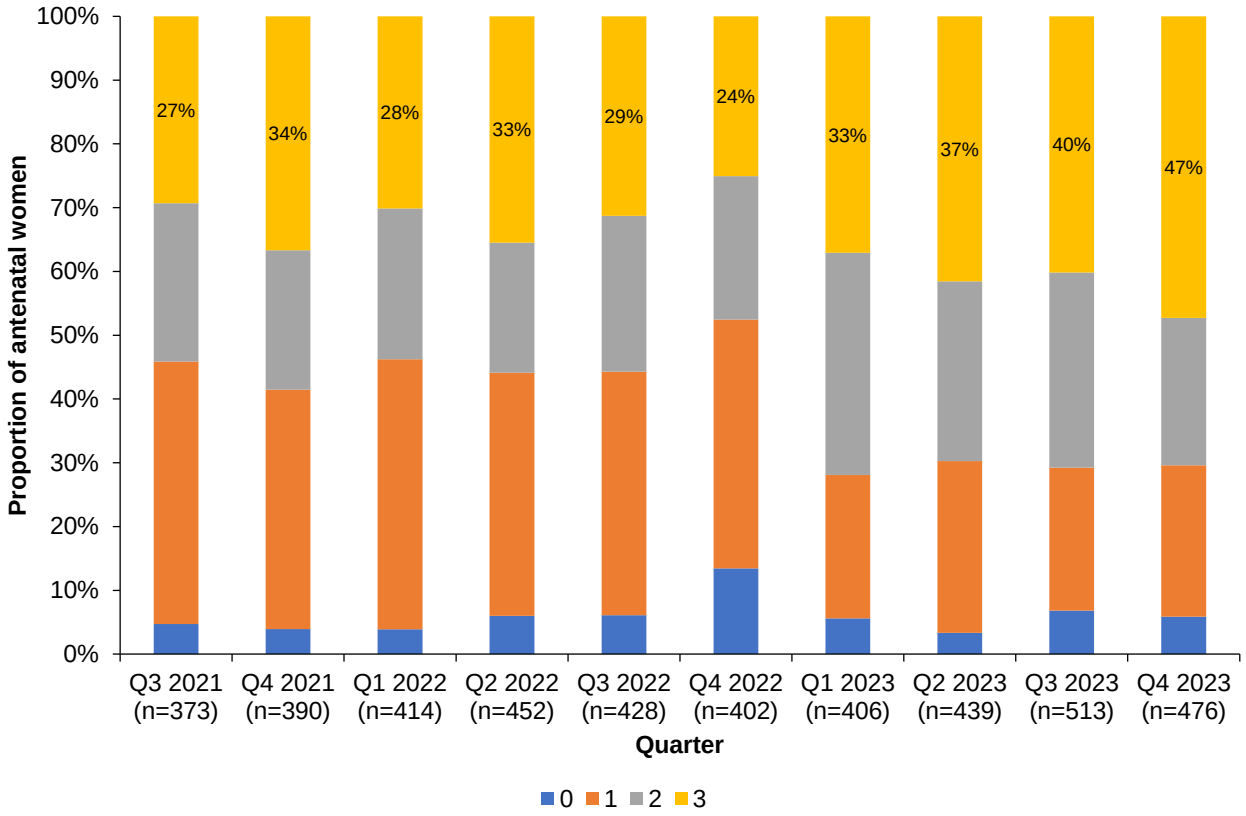


Figure B. Proportion of non-Aboriginal antenatal women in WA tested for syphilis by number of tests, Q3 2021 to Q4 2023.

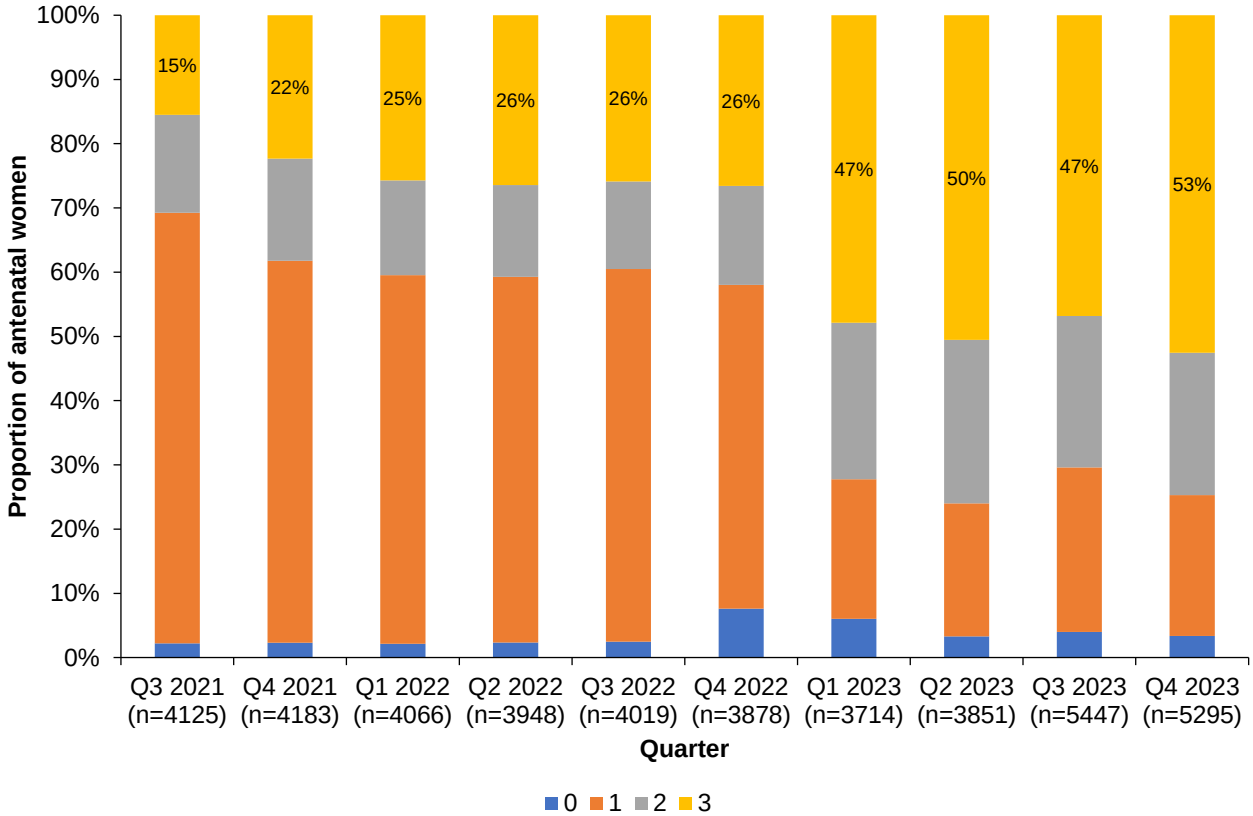


Figure C. Proportion of Aboriginal antenatal women in WA tested for syphilis by residential region and number of tests, Q4 2023.

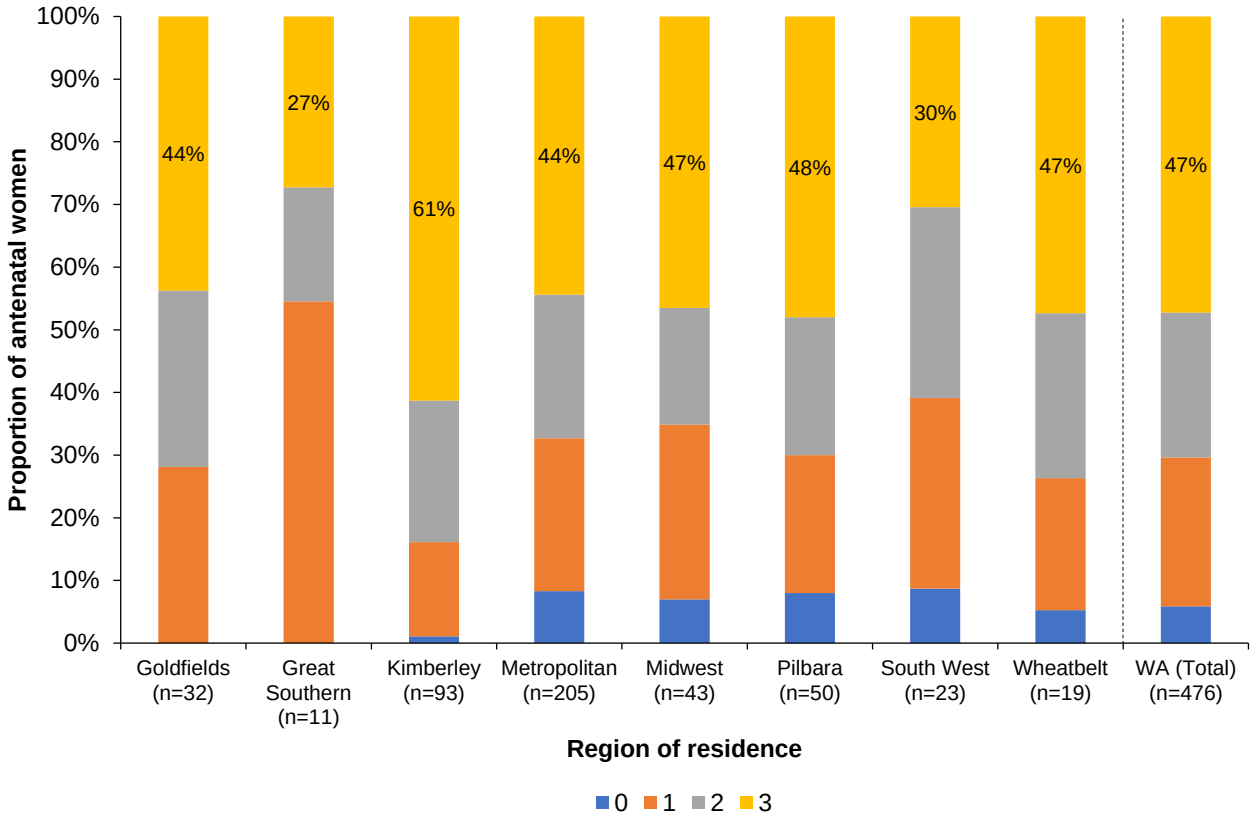
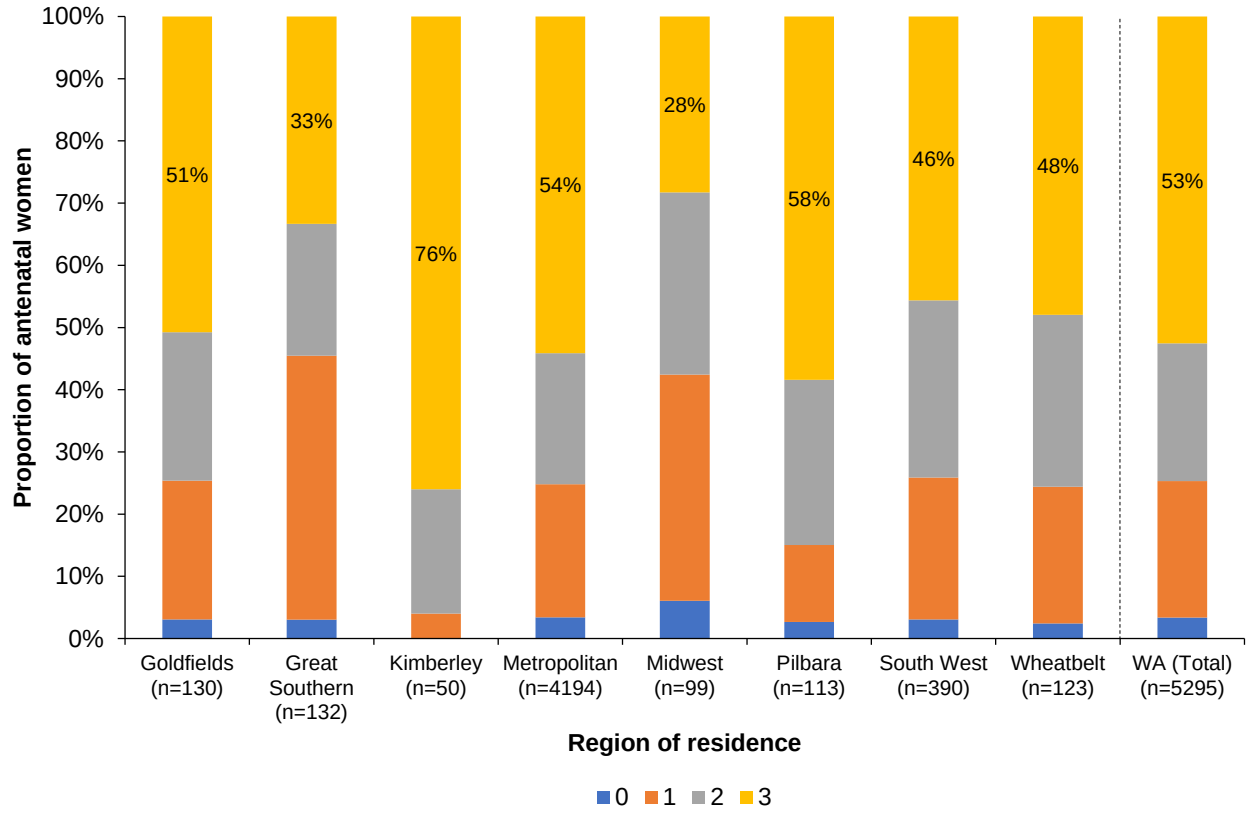


Figure D. Proportion of non-Aboriginal antenatal women in WA tested for syphilis by residential region and number of tests, Q4 2023.



Appendix 2

Government of Western Australia
Department of Health

Communicable Disease Control Directorate
Guideline

Guideline for the public health review of congenital syphilis cases

Guideline 0021 / April 2024

health.wa.gov.au

These guidelines have been released by the Communicable Disease Control Directorate, Public and Aboriginal Health Division, Western Australian Department of Health, to provide consistent and evidence informed advice to agencies involved in the prevention of infections and management of communicable diseases in Western Australia.

ACKNOWLEDGEMENT OF COUNTRY AND PEOPLE

The Communicable Disease Control Directorate at the Department of Health acknowledge the Aboriginal people of the many traditional lands and language groups of Western Australia. We acknowledge the wisdom of Aboriginal Elders both past and present and pay respect to Aboriginal communities of today.

1. Definitions / Acronyms

Term	Definition
Communicable Diseases Network Australia (CDNA)	The organisation that provides national public health advice for the prevention and control of communicable diseases.
Near-miss of congenital syphilis	A diagnosis of infectious syphilis in a pregnant woman, who did not receive adequate treatment, and baby was not diagnosed with congenital syphilis in the neonatal period.
Western Australia Syphilis Outbreak Response Group (WA SORG)	The governance group activated under direction of the Chief Health Officer, which oversees the activities to control the WA syphilis outbreak.

2. Purpose

The aim of these guidelines is to describe the requirements for congenital syphilis public health reviews within Western Australia (WA).

3. Introduction / Background

The occurrence of a case of congenital syphilis is a sentinel event reflecting potential missed opportunities for prevention in the public health, antenatal and primary healthcare systems. Therefore, it is important to review each case of congenital syphilis for the purpose of health system improvement and preventing future avoidable cases.

These guidelines were prepared by the WA Syphilis Outbreak Response Group (WA SORG) based on public health investigations of congenital syphilis cases conducted in and after 2019 and the feedback received from review participants.

3.1 Establishment of congenital syphilis public health reviews

In 2018, the WA SORG established a process for reviewing all congenital syphilis notifications whereby the Chief Health Officer (CHO) activated adhoc advisory groups under the *Public Health Act 2016*. In 2023, the Director of the Communicable Disease Control Directorate (CDCD) was delegated authority to activate congenital syphilis public health reviews.

3.2 Purpose of congenital syphilis public health reviews

The purpose of the congenital syphilis public health reviews is to:

- to review the clinical and public health management of a congenital syphilis case or ‘near miss’ of congenital syphilis (defined as a diagnosis of infectious syphilis in a pregnant woman, who did not receive adequate treatment, and baby was not diagnosed with congenital syphilis in the neonatal period)
- identify areas for health service improvement
- identify need, if any, to update relevant clinical and public health guidelines
- raise awareness and educate health care staff about syphilis.

4. Requirements (of the Guideline)

4.1 Activation of a congenital syphilis public health review

Upon receipt of a notification of congenital syphilis, the Director of the CDCD will write to the Chief Executive (CE) of the health service provider to request a public health review of the case.

The review is to be conducted within eight weeks of notification of a confirmed, or near miss case of congenital syphilis, to ensure adequate recall of the event.

If the number of notifications received for one HSP exceeds one per month, the HSP may request permission from the Director of CDCD to review the cases together under one review where stakeholders involved are similar.

4.2 Clinical incident investigation

The CHO has directed that all cases of congenital syphilis are investigated as a clinical incident (in addition to the congenital syphilis public health review), and entered as a clinical incident into the Clinical Incident Management system with a severity code relevant to the case.

4.3 Participants

4.3.1 Chairperson

This person should be familiar with the clinical guidelines, syphilis outbreak and the local context in which the case occurred. Usually this is a public health physician from the HSP that received the notification.

4.3.2 Secretariat

This person should be appointed from the CDCD workforce.

4.3.3 Essential participants

1) Primary health care providers involved in antenatal care of the case's mother or who provide antenatal care in the mother's usual place of residence.
2) Obstetric and infectious disease care providers involved in the mother's management.
3) Paediatric care providers involved in the case's management.
4) Other service providers involved in the management of the case or the case's mother or whom the case or the case's mother was referred to, e.g. Department of Child Protection and Family Support.
5) HSP staff involved in public health management, including contact tracing/partner notification and follow-up syphilis testing.
6) Heads of health service providers involved in any aspect of the case's, or the case's mother's, clinical or public health management.
7) WA Department of Health CDCD staff involved in statewide disease surveillance and/or sexually transmissible infection (STI) control programs, as appropriate.
8) Clinical risk management and quality improvement staff in the health service/s responsible for the mother's antenatal care and mother's and baby's care at time of delivery.
9) If the case or case's mother is Aboriginal, from a culturally and linguistically diverse background or a member of a marginalised or disadvantaged group, appropriate health practitioners, liaison officers and representatives of appropriate community-based advocacy groups.*
10) Specialist obstetric, paediatric, midwifery, public health laboratory and other relevant experts not involved in public or clinical management of the case or case's mother, as appropriate.

*Appointment of participants/observers who are from the same community as the case/s, who are attending to solely provide a peer experience, need to be carefully considered. Some communities are small and interconnected, and there is a high possibility that the case/s discussed may be known to invited peer/s. The risks of a confidentiality breach should be

minimised by the chairperson briefing these participants about expectations and the conditions of confidentiality prior to the review.

4.3.4 Optional participants

Observers from other health services, as appropriate, and with agreement of the chairperson and essential participants.

4.4 Preparation of case presentation and epidemiology update

The chairperson, with support from the secretariat, should:

1) Contact essential participants in section 4.3.3 to collate a timeline and summary of the case's mother's care and the clinical and public health management of the case and the case's mother's care after the diagnosis of congenital syphilis was made. This will require liaison with the CE of the service providers involved.
2) Request a representative of the relevant HSP to prepare a brief update of syphilis epidemiology relevant to the case.
3) Select participants and observers and send out formal invitations with the confidentiality agreement (Appendix A).
4) Request the secretariat to ensure that each participant and observer has returned a signed confidentiality agreement prior to the agenda papers being sent.

4.5 Medical records

Medical records for the case and case's mother, and, where appropriate, the case's biological father, should be obtained and made available to participants. The chairperson and secretariat will need access to medical records at least five (5) working days before the review to summarise the relevant parts of the medical records in a de-identified timeline to disseminate prior to the review and to present at the review.

4.6 Confidentiality

Patient identified information should NOT be recorded in the agenda, timeline or minutes. Case names or initials should not be used in writing or verbally in the review meeting or any associated documents.

4.7 Suggested review agenda

The congenital syphilis public health review agenda should include:

- An Acknowledgement of Country
- A reminder regarding confidentiality agreements and the chairperson should state "A reminder to all attendees, as outlined in the confidentiality agreement, at any time if you become aware of any conflict of interest, or realise you know, or suspect you know, the case/s discussed at the review today in a social capacity, you must notify myself and the secretariat immediately."
- Epidemiological update and case presentation

- Discussion of mother's and case's care, what gaps exist and what recommendations can be made to address these gaps. Recommendations should be specific about what to address and who should action.

A congenital syphilis public health review template agenda is available in Appendix B.

4.8 Actions required after the review

1) The secretariat will draft the minutes and circulate to attendees for endorsement/input within 10 working days of the review.
2) Once endorsed, the finalised minutes and recommendations will be distributed to all participants. It is expected that organisations represented at the review take the review recommendations to their CE/appropriate managers for implementation.
3) The recommendations from the review will be sent to the WA SORG co-Chairs for distribution to appropriate Working Groups and relevant stakeholders.
4) CDCD will meet internally within 4 weeks of the review completion to discuss the recommendations of the review and what are the next steps/action to be taken at a system manager level.
5) A copy of the review minutes and recommendations will be sent (within 10 working days of finalising) to the CHO for noting and for the CHO to share with the CE of the HSP.
6) CDCD or HSP may write to other health service providers and non-government organisations to share the findings and recommendations of the review.
7) CDCD will prepare a report at least every two years collating recommendations from public health reviews over the past two years.

5. Relevant Legislation

- *Public Health Act 2016*

6. Additional Resources

- WA Syphilis Outbreak Response
- WA Health Severity Assessment Codes.

7. Guideline Contact

Enquiries relating to this Guideline may be directed to:

Sexual Health and Bloodborne Virus Program

Directorate: Communicable Disease Control Directorate

Email: shbbvp@health.wa.gov.au

8. Document Control

Guideline number	Version	Published	Review Date	Amendments
0021	V.1.	03/04/2024	03/04/2025	Original version

9. Approval

Approved by	Dr Paul Armstrong, Director Communicable Disease Control Directorate, Department of Health
Approval date	03/04/2024

10. References

1. WA Health. Silver book: STI/BBV management guidelines [Internet]. 2020 [cited 2024 Mar 21]. Available from: https://ww2.health.wa.gov.au/Silver-book/
2. Australian Government, Department of Health. Pregnancy Care Guidelines [Internet]. 2020 [cited 2024 Mar 21]. Available from: Citedhttps://beta.health.gov.au/resources/pregnancy-care-guidelines
3. Communicable Diseases Network Australia. Syphilis CDNA National Guidelines for Public Health Units [Internet]. 2018 [cited 2024 Mar 21]. Available from: https://www.health.gov.au/sites/default/files/2023-11/syphilis-cdna-national-guidelines-for-public-health-units.pdf

11. Appendices

Appendix A – Confidentiality Agreement

Government of **Western Australia**
Department of **Health**

CONFIDENTIALITY AGREEMENT

Title:	**Congenital syphilis review advisory committee 2024**

I ..... (please print full name)

of ..... (please print organisation details)

(Declaration of Confidentiality)

1. Agree to keep all information and documents relating to the investigation(s) I participate in from 1 January to 31 December 2024 confidential, and not to disclose or communicate the same to any person or persons except during my duties without the prior written approval of **WA Department of Health;**

2. Agree to share the **endorsed recommendations as soon as possible with appropriate parties within the organization on whose behalf I am attending the review**. If I need to share other review documents, I will seek written approval from the review's chairperson via the review's secretariat and provide justification for my request.

3. Agree not to make copies of, or take any extracts of information except with written approval of the chairperson (with exception to the endorsed recommendations, outlined in 2);

4. Agree to comply with all processes and protocols established by the **WA Department of Health** from time to time to maintain the confidentiality of information and documentation relating to the review(s). The processes and protocols will include those for the security of documentation, communications between the **WA Department of Health** (and its officers, employees and consultants/service providers) and other parties;

5. Agree to return all documents, papers and other materials given to me relating to the reviews(s) to the advisory committee's chair immediately when requested to do so;

6. Agree to notify the chairperson and secretariat and **withdraw from the review immediately** if at any point during the review process, I become aware that I know or might know the case/s in a social capacity or identify any conflict of interest. I understand that I remain bound by the confidentiality agreement after my withdrawal.

7. Acknowledge that breach of confidentiality and unauthorised disclosure are subject to the provisions and penalties contained in the *Public Sector Management Act 1994* and *The Criminal Code*. Unlawful disclosure of official information is a criminal offence punishable by up to 3 years imprisonment;

This declaration is made by me on the understanding that I will not be taken to have breached its terms if I am legally required to disclose the information referred to.

Signed:	Dated:
Witnessed:	Dated:

Appendix B – Congenital syphilis public health review template agenda

1	Acknowledgement of country
2	Welcome, introduce participants and observers and outline their roles.
3	Reminder regarding signing of confidentiality agreements. Chairperson to state "A reminder to all attendees, as outlined in the confidentiality agreement, at any time if you become aware of any conflict of interest, or realise you know, or suspect you know, the case/s discussed at the review today in a social capacity, you must notify myself and the secretariat immediately."
4	State purpose of the congenital syphilis public health review: • to review the clinical and public health management of a congenital syphilis case • identify service gaps and areas for service improvement • identify need, if any, to update relevant clinical and public health guidelines • raise awareness and educate health care staff about syphilis.
5	Epidemiology update and case presentation • Update of syphilis epidemiology relevant to the case • Summary and timeline
6	Questions to be asked 1) When and at which health services did the mother receive antenatal care? 2) Was the mother offered, and did she undergo, routine syphilis testing undertaken at intervals recommended in the WA Silver book[1]? If not, was another set of guidelines used, e.g. National Pregnancy Care Guidelines[2]? 3) If the mother had symptoms or examination findings consistent with syphilis, was testing and treatment offered in accordance with the WA Silver book[1]? 4) At what gestation was the mother diagnosed with syphilis and was the time interval between diagnosis and treatment consistent with best practice guidelines? (Infectious syphilis should be treated as soon as possible and ideally within two (2) days as recommended in the Communicable Diseases Network Australia (CDNA) syphilis SoNG[3].) 5) What was the time interval between the mother being treated for syphilis and the baby's delivery? (Considered adequate if at least 30 days.) 6) Was contact tracing/partner notification undertaken in a timely manner? Were named contacts tested and treated for syphilis empirically at the time of presentation within one (1) month of being named? 7) Following the syphilis diagnosis, was the mother's ante- and post-natal care and follow-up in relation to repeat syphilis testing in accordance with the CDNA syphilis SoNG[3] and/or local guidelines? 8) Has management of the baby been in accordance with current best practice guidelines for managing congenital syphilis? (Aspects of management which

	should be discussed could include, but are not limited to, investigations, treatment, and medical referral/transfer.) 9) Were the health service's infection control guidelines followed during management of the case? 10) What aspects of the mother and baby's syphilis-related care were managed well? 11) What aspects of the mother and baby's syphilis-related care could be improved? 12) How could this case of congenital syphilis have been prevented? (It is recommended that the review group undertake this task towards the end of the review and the chair summarises these factors in a cause-and-effect diagram to be included in the meeting minutes (Appendix C)) 13) What actions does the Review Committee recommend at the local, state and national levels to prevent future cases of congenital syphilis? 14) What actions does the Review Committee recommend at the local, state and national levels to ensure best practice management of any future cases of congenital syphilis? 15) Any other discussion points/recommendations.
7	Conclusions and agreed action plan including documentation of who is responsible for each of the Review Committee's recommendations.

Appendix C – Cause-and-effect diagram

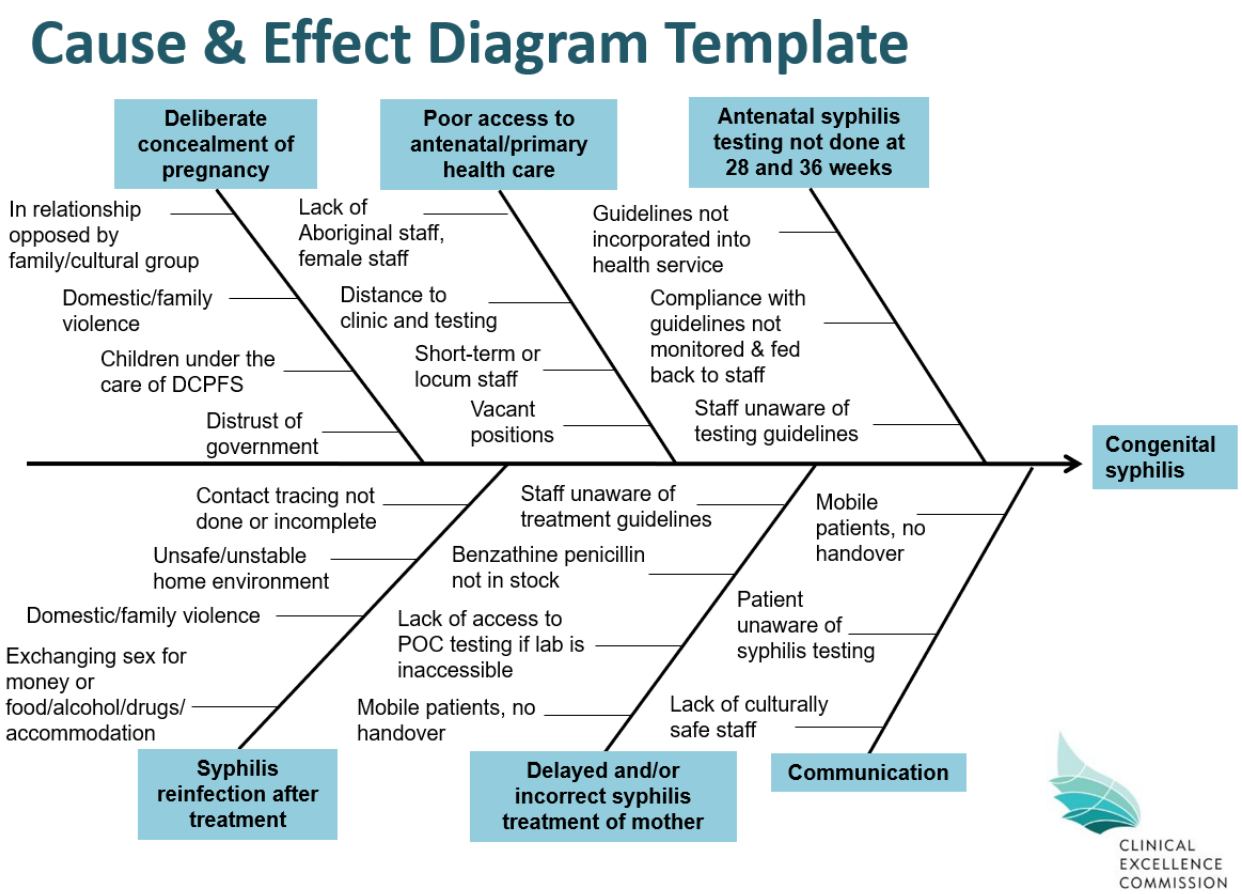


Figure 1. Example cause and effect diagram. Note this is an example only and does not include all possible factors

Adapted from: 4.NSW Health Clinical Excellence Commission. Cause and effect diagram. https://www.cec.health.nsw.gov.au/CEC-Academy/quality-improvement-tools/cause-and-effect-diagrams

Appendix 3

WA Syphilis Point-of-Care Testing Services enrolled in the WA Department of Health program, accurate as of 10/04/2024 (not inclusive of WA ACCHSs enrolled in the National Aboriginal Community Controlled Health Organisation's program)

Legend:	WA Health	Department of Justice	ACCHS or Non-government

Primary Site	Satellite Sites		
Goldfields			
Goldfields Public Health Unit	Laverton Hospital		
Kimberley			
Broome Community Health	Broome Hospital Maternity Ward		
Derby Community Health	Derby Maternity		
Fitzroy Crossing Community Health	Fitzroy Crossing Hospital	Wangkatjungka Clinic	
Halls Creek Community Health			
Kimberley Population Health Unit - Remote Services	Looma Clinic	Lombadina Clinic	One Arm Point Clinic
	Noonkunbah Clinic	Warmun Clinic	Kalumburu Clinic
Wyndham Community Health	Wyndham Hospital		
Kununurra Community Health	Kununurra Hospital		
Broome Regional Prison			
Metropolitan Perth / South West			
360 Health Street Doctor			
Boorloo Public Health Unit			
Derbarl Yerrigan Health Service (East Perth)	Derbarl Yerrigan Health Service (Maddington)	Derbarl Yerrigan Health Service (Midland)	Derbarl Yerrigan Health Service (Mirrabooka)
Homeless Healthcare	The Hub	Street Health	
Melaleuca Women's Prison			
Peer Based Harm Reduction WA (Perth)	Peer Based Harm Reduction WA (Bunbury)		
Sexual Health Quarters – Northbridge Clinic	Sexual Health Quarters – Magenta Clinic		

South West Aboriginal Medical Service			
Midwest			
Geraldton Regional Aboriginal Medical Service			
Geraldton Regional Aboriginal Medical Service Murchison Outreach Service			
Midwest Public Health Unit (Geraldton)	Midwest Public Health Unit (Carnarvon)	Geraldton Hospital Maternity Ward	Geraldton Hospital Emergency Department
	iCare Team		
Pilbara			
Hedland Health Campus	Maternity Ward		
Karratha Health Campus	Emergency Department	Maternity Ward	Newman Clinic
Mawarnkarra Aboriginal Health Service			
Newman Hospital ED			

Appendix 4

Image 1. WA Department of Health pregnancy-specific syphilis campaign advertisement used on social media, December 2023-June 2024.

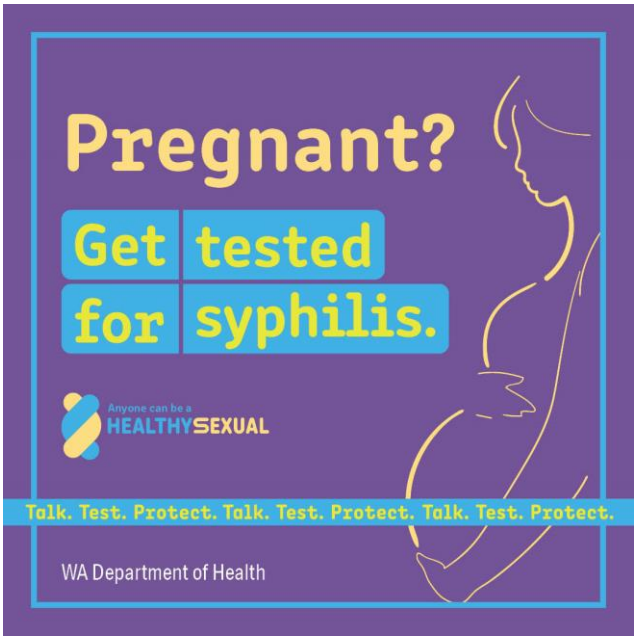


Image 2. WA Department of Health syphilis campaign advertisement used on social media December 2023-June 2024.

Image 3. WA Department of Health pregnancy-specific syphilis campaign advertisement on display in the Perth Underground Train Station, December 2023-June 2024.

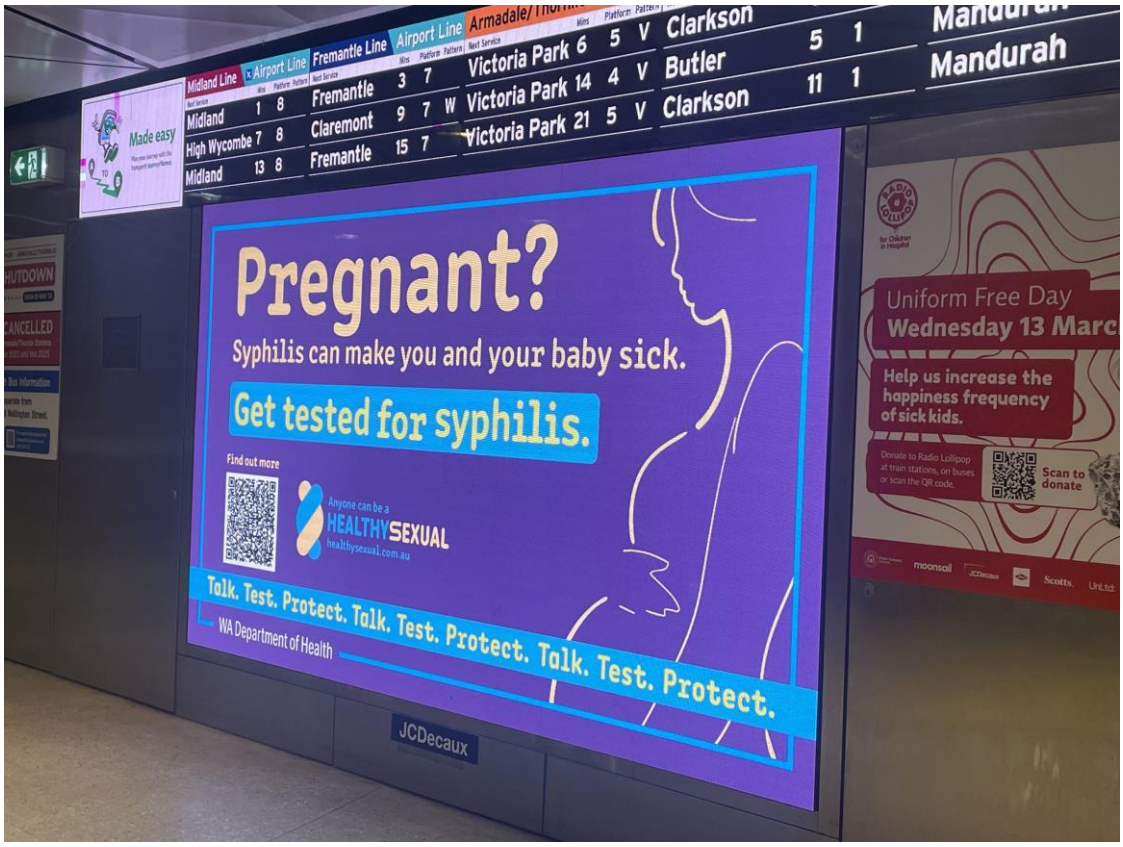


Image 4. WA Department of Health pregnancy-specific syphilis campaign advertisement on display on the back of a Transperth bus, December 2023-June 2024.

Image 5. WA Department of Health syphilis campaign advertisement in the December Medical Forum magazine, print and online versions

Image 6: WA Department of Health syphilis-related posters, 2021/2022.

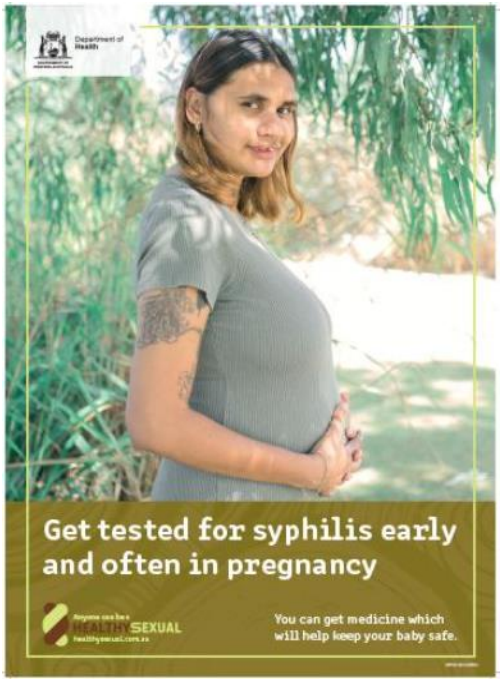
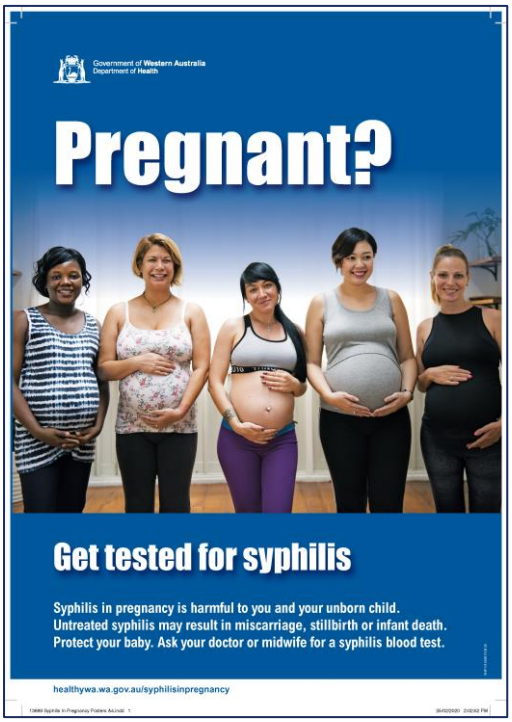
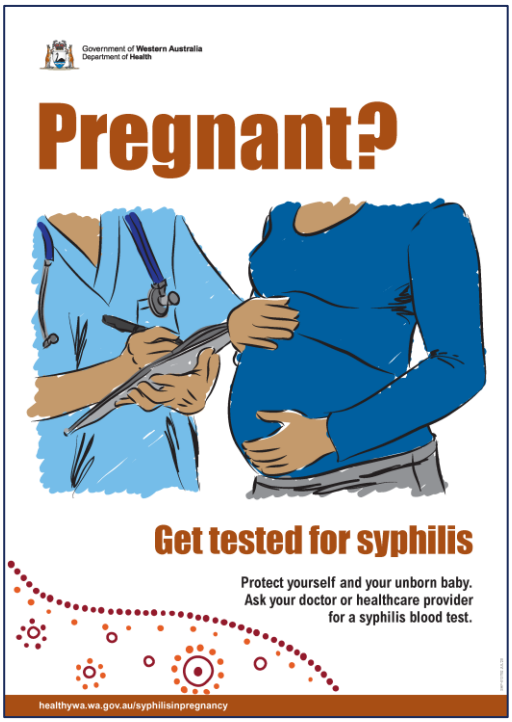


Image 7: WA Department of Health syphilis-related posters, 2020/2021





This document can be made available in alternative formats on request for a person with disability.