

# Letters

## Management of syphilis in pregnancy: What is the role of general practice?

Syphilis in pregnancy and resultant congenital syphilis are increasing in Australia, including among novel population groups.<sup>1</sup> General practitioners (GPs) are the first point of care for most of the affected women. Awareness of updated guidelines for the detection and management of syphilis in pregnancy and referral points is essential (Box 1).

Despite congenital syphilis being preventable with appropriate maternal treatment, 20 cases were notified nationally between 2011 and 2015, rising to 43 between 2016 and 2020.<sup>2</sup> In 2001–19, there were 33 congenital syphilis notifications in Queensland (eight in urban South East Queensland) and 12 related perinatal deaths.<sup>3</sup> In 2020, New South Wales, Northern Territory and Western Australia each had four congenital syphilis notifications; Victoria had three, and Queensland and South Australia each had two.<sup>2</sup>

Mother-to-child transmission of syphilis in pregnancy can cause preterm delivery, intrauterine growth restriction, miscarriage, stillbirth, neonatal death and congenital syphilis (with sequelae in childhood if untreated).<sup>4</sup> There is a high likelihood of mother-to-child transmission, especially with recent maternal infection, where the vertical transmission rate approaches 90%.<sup>4</sup> Emphasis should be on prevention of vertical transmission with early and possibly recurrent maternal testing in pregnancy,<sup>5</sup> effective maternal treatment and prevention of re-infection (including partner treatment)<sup>5</sup> and identification and management of at-risk infants.<sup>4</sup>

Women at increased risk of acquiring syphilis in pregnancy include those: who

identify as Aboriginal or Torres Strait Islander (woman or partner); experiencing an adolescent pregnancy; with a sexually transmitted infection in the current pregnancy or past 12 months; with

ongoing sexual links to high-prevalence countries (woman or partner); who have sexual contact with an infectious syphilis case; with a sexual partner who has sex with other men; with late, limited or no

---

### Box 1. Key updates for management of syphilis in pregnancy

---

#### Antenatal screening

- Thorough history-taking to identify risk factors for acquisition of syphilis<sup>5–8</sup>
- Repeat testing of at-risk mothers, with up to five tests during pregnancy: first trimester (routine),<sup>5–9</sup> 20 weeks,<sup>5</sup> 28–32 weeks,<sup>5–9</sup> 34–36 weeks<sup>5–8</sup> and delivery<sup>5–9</sup>

#### Maternal management of syphilis in pregnancy

- Discuss with expert practitioner/specialist in syphilis in pregnancy<sup>9</sup>
- Treat mother with stage-appropriate penicillin regimen
  - Early syphilis (<2 years' duration including primary, secondary or early latent) – single dose of long-acting 2.4 million units (1.8 g) benzathine benzylpenicillin G IM,<sup>5–9</sup> and second dose one week later if diagnosed in the third trimester<sup>8</sup>
  - Late latent syphilis/syphilis of unknown duration – three doses of long-acting 2.4 million units (1.8 g) benzathine benzylpenicillin G IM seven days apart<sup>1–4</sup>
- Contact tracing and treatment of partners<sup>5–9</sup>
- Monthly RPR monitoring following treatment<sup>5–8</sup>
- Counsel and test for other sexually transmissible infections<sup>8</sup>

#### Evaluation at birth

- Mother and infant paired RPR serology<sup>5–8</sup>
- Infant IgM testing<sup>5,6</sup>
- Placental histopathology and PCR<sup>5–7</sup>
- Thorough clinical examination of infant<sup>5–8</sup>
- Additional infant investigations as indicated<sup>5–8</sup> (eg FBE/ELFT, long bone radiographs and CSF/bodily fluid testing)
- Assessment of maternal therapy
  - Adequate maternal therapy if treatment with penicillin antibiotic is completed four weeks prior to delivery with a four-fold drop in RPR and no evidence of reinfection
  - Consider additional infant investigations or treatment if maternal therapy is inadequate<sup>5–8</sup>

#### Infant management at birth

- If infant assessment suggests congenital syphilis or if maternal therapy is inadequate, treat infant with 10 days of IV benzylpenicillin<sup>5–8</sup> (dosing regimen may vary between jurisdictions)
- Infant follow-up examination<sup>5,7</sup> and serology at three months,<sup>5,7,8</sup> six months<sup>5,7,8</sup> and 12 months<sup>5,8</sup> of age until non-reactive

---

CSF, cerebrospinal fluid; ELFT, electrolytes and liver function tests; FBE, full blood examination; IgM, immunoglobulin M; IM, intramuscular; IV, intravenous; PCR, polymerase chain reaction; RPR, rapid plasma reagin

---

antenatal care; who engage in high-risk sexual activity and substance use (particularly methamphetamines).<sup>5,9</sup>

Clinicians across multiple disciplines are involved in the care of pregnant women with syphilis and infants who are at risk,<sup>1</sup> which adds to the complexity of management. GPs are ideally placed to identify women and coordinate care, but expectations of their role should be clear. Since 2018, many Australian jurisdictions have updated or produced new guidelines for the management of syphilis in pregnancy (Box 1). Concerted efforts must be made to increase clinician awareness of guidelines and updates and the increasing incidence of syphilis in pregnancy.

**Mandy Wu BSc,  
MBBS, DCH, FRACP**  
General Paediatrician,  
Brisbane, Qld;  
The University of Queensland,  
Brisbane, Qld

**Judith A Dean RN/RM,  
BN, MPHTM, PhD**  
Senior Research Fellow,  
The University of Queensland,  
Brisbane, Qld

**Mandy Seel BMBS, MPH, FRACGP,  
FACRRM, FAFPHM, AFACHSM**  
Public Health Physician,  
Metro North Public Health Unit,  
Brisbane, Qld

**Sumudu Britton BSc,  
MBBS (Hons), FRACP, PhD**  
Infectious Diseases Specialist,  
Royal Brisbane and Women's Hospital,  
Brisbane, Qld;  
The University of Queensland,  
Brisbane, Qld

**Clare Nourse MB Bch, BAO,  
DCH, MRCPI, FRACP, MD**  
Paediatric Infection Specialist,  
Queensland Children's Hospital,  
Brisbane, Qld;  
The University of Queensland,  
Brisbane, Qld

## References

1. Kirby Institute. HIV, viral hepatitis and sexually transmissible infections in Australia: Annual surveillance report 2018. Sydney, NSW: The Kirby Institute, 2018.
2. Department of Health. National Notifiable Diseases Surveillance System. Canberra, ACT: DoH, 2021. Available at [www9.health.gov.au/cda/source/rpt\\_4.cfm](http://www9.health.gov.au/cda/source/rpt_4.cfm) [Accessed 1 March 2021].
3. Communicable Diseases Branch. Notifications of syphilis in Queensland: 2019 Report. Brisbane, Qld: Queensland Health, 2020. Available at [www.health.qld.gov.au/\\_data/assets/pdf\\_file/0040/959809/syphilis-in-queensland-2019.pdf](http://www.health.qld.gov.au/_data/assets/pdf_file/0040/959809/syphilis-in-queensland-2019.pdf) [Accessed 1 March 2021].
4. Keuning MW, Kamp GA, Schonenberg-Meinema D, Dorigo-Zetsma JW, van Zuiden JM, Pajkrt D. Congenital syphilis, the great imitator – Case report and review. *Lancet Infect Dis* 2020;20(7):e173–79. doi: 10.1016/S1473-3099(20)30268-1.
5. Queensland Clinical Guidelines. Syphilis in pregnancy. Guideline No. MN18.44- V3-R23. Brisbane, Qld: Queensland Health, 2018. Available at [www.health.qld.gov.au/\\_data/assets/pdf\\_file/0035/736883/g-sip.pdf](http://www.health.qld.gov.au/_data/assets/pdf_file/0035/736883/g-sip.pdf) [Accessed 1 March 2021].
6. Department of Health. Syphilis: CDNA national guidelines for public health units. Canberra, ACT: DoH, 2018.
7. Centre for Disease Control. Congenital syphilis guidelines for the Northern Territory: Assessment and management of syphilis in pregnancy and the neonatal period. Casuarina, NT: Department of Health, 2015.
8. Department for Health and Wellbeing. South Australian perinatal practice guideline: Syphilis in pregnancy. Adelaide, SA: Government of South Australia, 2018.
9. Department of Health. Clinical practice guidelines: Pregnancy care. Canberra, ACT: DoH, 2020. Available at [www.health.gov.au/resources/pregnancy-care-guidelines/part-f-routine-maternal-health-tests/syphilis](http://www.health.gov.au/resources/pregnancy-care-guidelines/part-f-routine-maternal-health-tests/syphilis) [Accessed 9 June 2021].

correspondence [ajgp@racgp.org.au](mailto:ajgp@racgp.org.au)