

# Infectious Syphilis in Females in Victoria: A Ten-Fold Rise

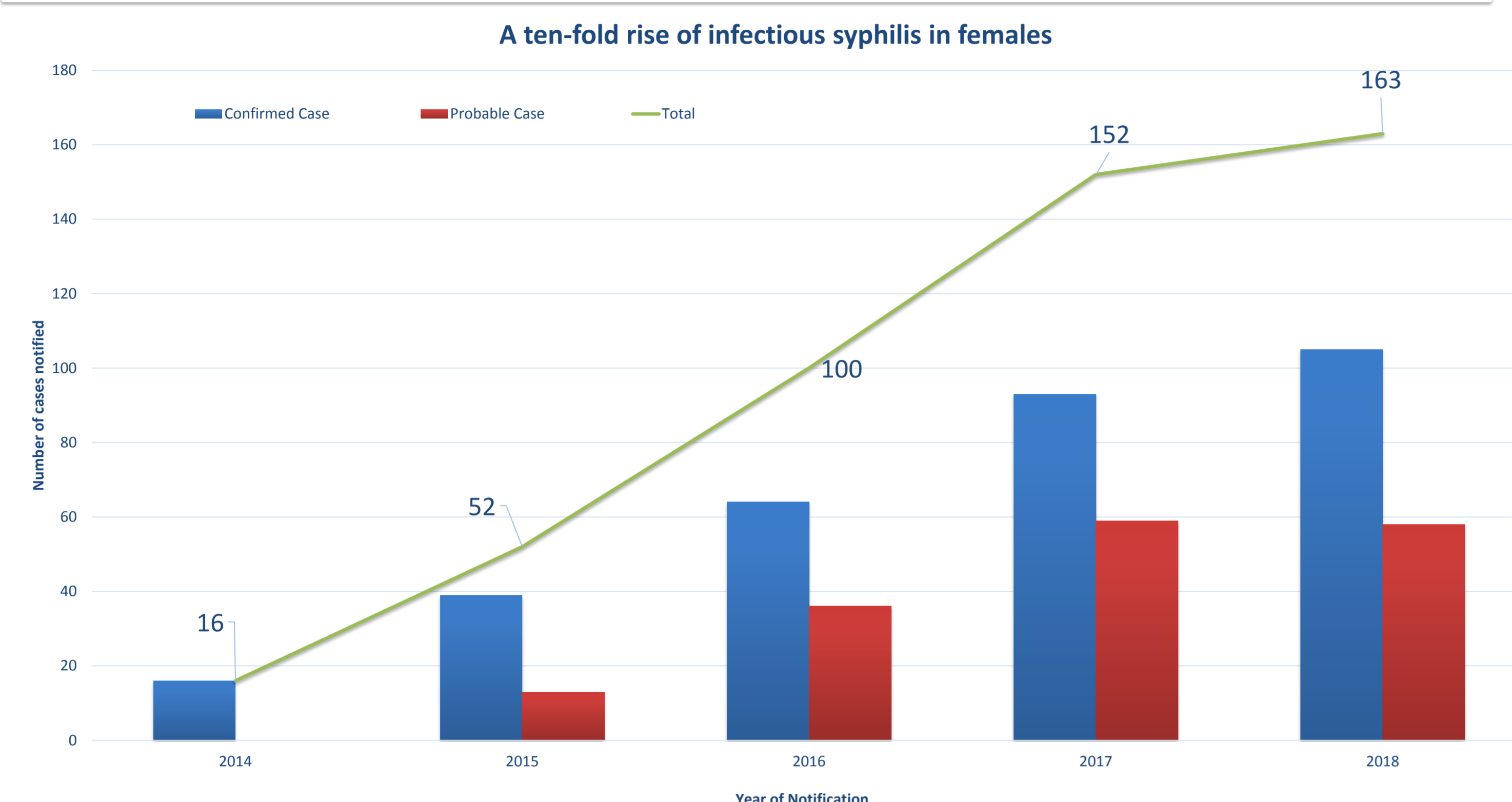
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## Background

Victoria has seen an increase in infectious syphilis cases among females from 2014–2018. Syphilis infection in females of reproductive age is of significant public health concern. Transplacental infection during pregnancy can occur resulting in congenital syphilis. For the first time since 2004, congenital syphilis has re-emerged in Victoria with two cases notified in 2017 and two cases in 2018. Congenital syphilis can lead to adverse health outcomes such as birth defects or stillbirth. Syphilis notifications among females were reviewed to understand the increase observed in Victoria.

Figure 1: Number of notified cases of infectious syphilis in females, Victoria, 2014-2018



## Methods

- In Victoria, syphilis is a notifiable condition by medical practitioners and laboratories.
- Enhanced surveillance data is collected for all infectious syphilis cases.
- Infectious syphilis notification data on females, for the period 2014 – 2018 were extracted from the Victorian Public Health Event Surveillance System.
- A descriptive analysis of all enhanced surveillance data (demographic characteristics and risk factors) was undertaken.

## Results

### Study population

- During 2014 to 2018 there were a total of 5442 infectious syphilis cases, 9% (n= 483) were females.
- The case definition changed in July 2015 to include a probable case definition. Since July 2015, 36% of the total cases in females met the probable case definition.
- Syphilis notifications among females were at the highest level in 2018 (n=163); a 10-fold increase compared to 2014 (n=16) (Figure 1).
- Males accounted for 91% cases (n=4938) however only a two-fold increase was observed in males during the study period.

### Female demographic characteristics

- The median age was 30 years and 87% were aged 20–49 years; reproductive age for females.
- 72.5% were Australian born compared to 18% overseas born and 9.5% unknown.
- 7% were Aboriginal and/or Torres Strait Islander people and were over-represented in this population. An increase was observed overtime from one case (6%) in 2014 to 13 cases (8%) in 2018.
- 80% of cases were residents of metropolitan Melbourne.

### Diagnosis

- Females were more likely to be diagnosed at a low-case-load GP clinics (45%) compared to a \*High case load GP clinics (11%) and Hospitals (7%) (Figure 2).
- Most females were tested due to patient request (24%) or presentation with symptoms of syphilis (23%). A small proportion of cases (6%) were tested due to antenatal screening (Figure 3).

Figure 2: Who is diagnosing

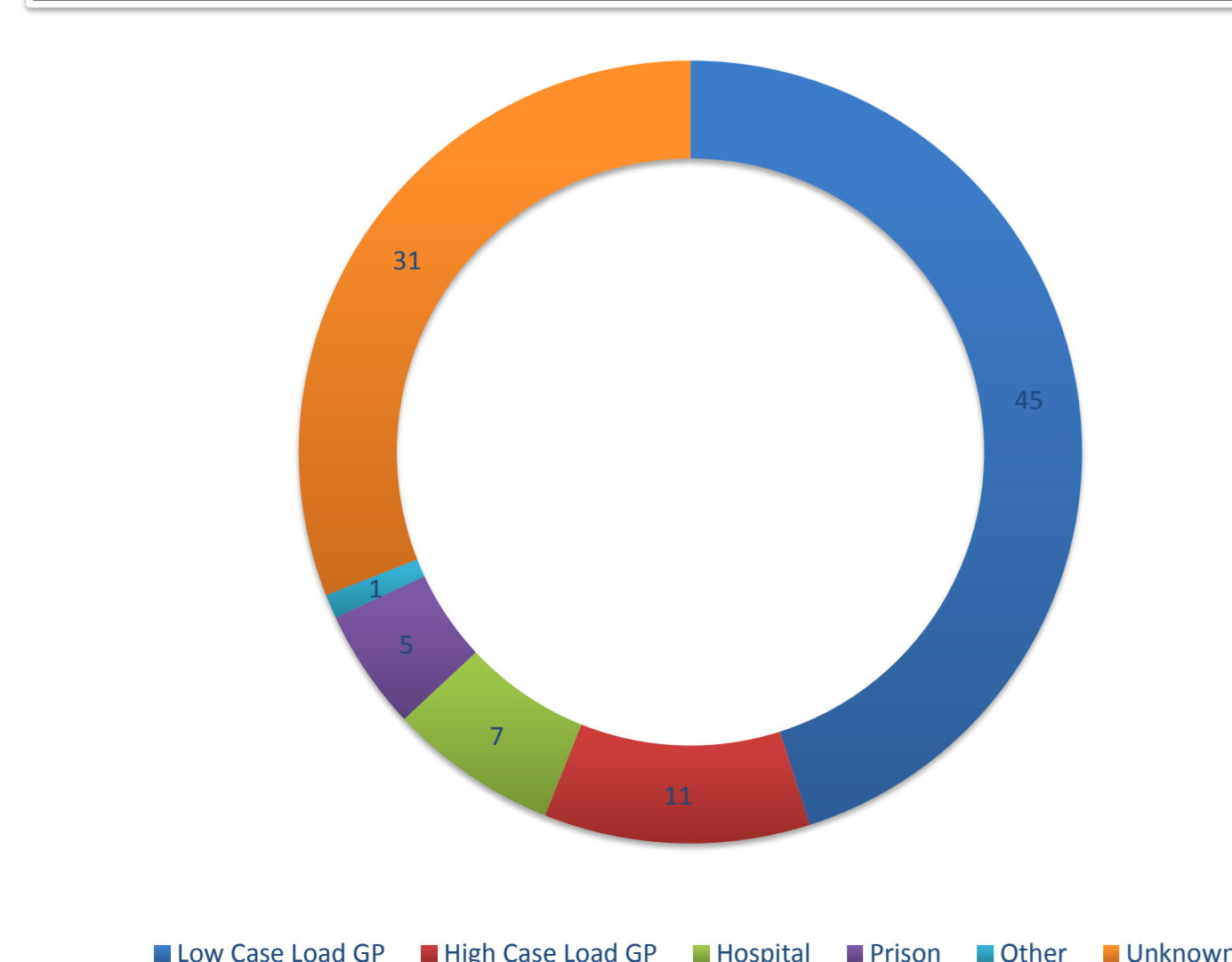
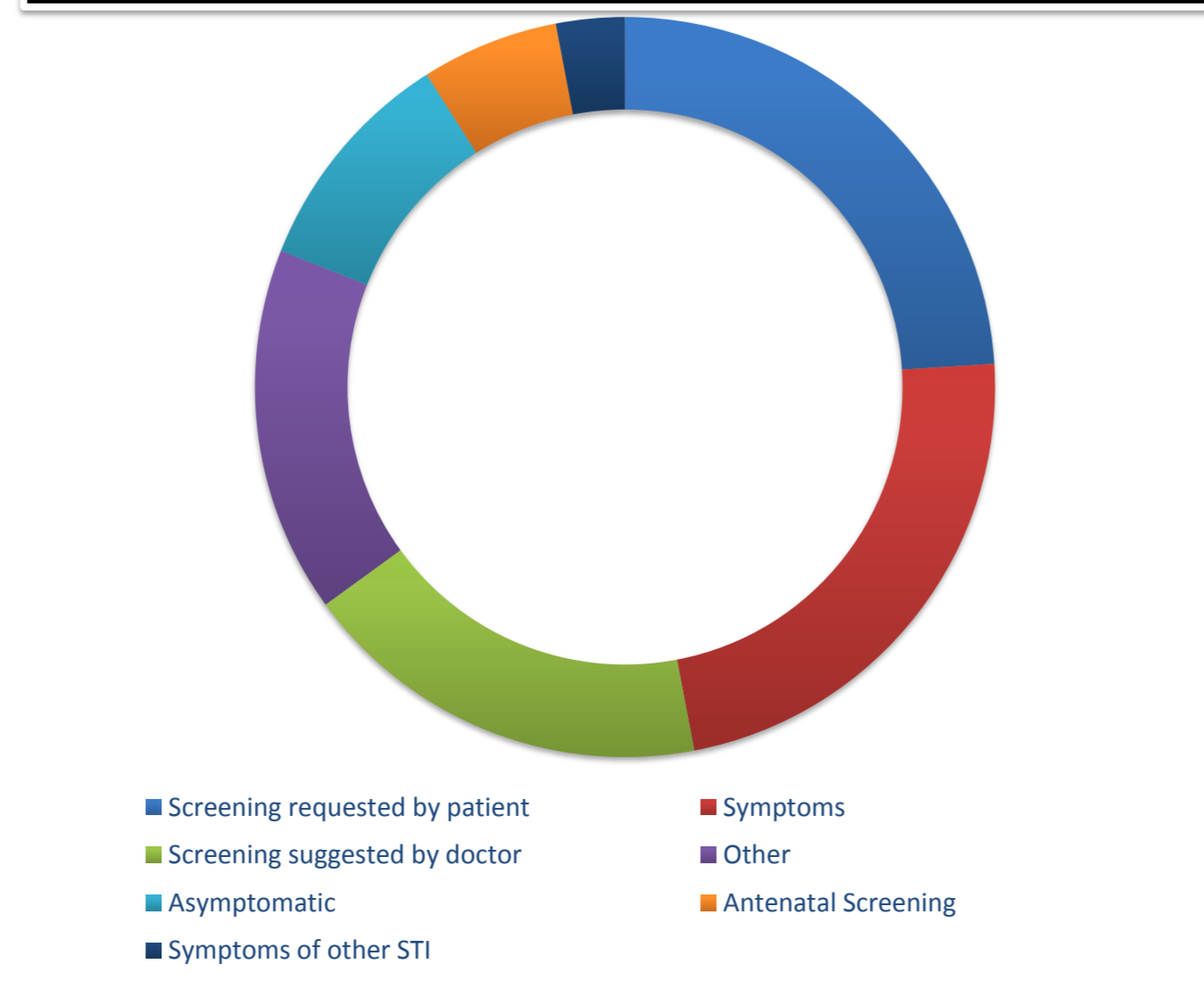


Figure 3: Reason for testing



\*High case load clinics are defined as sexual health clinics and GP clinics who diagnose and manage high volumes of STI.

## Results

### Clinical information for all females (n=483)

- Most females (70%) reported acquiring their infection from a sexual partner of the opposite sex, 3% reported same-sex sexual partners, and 1% reported sexual contact with both a male and a female partner (Table 1).
- 32% of females reported acquiring their infection from a casual sexual partner compared to 29% who reported acquisition from a regular sexual partner (Table 2).
- 2.9% of cases (n=14) were among people living with HIV.
- A re-infection was reported for 10% (n=49) of cases.
- In 2017, 7% (n=10) reported a pregnancy at diagnosis compared to 12% (n=19) in 2018.
- For the first time since 2004, congenital syphilis has re-emerged in Victoria with two cases notified in 2017 and two cases in 2018; with no new cases reported since November 2018.

Table 1: Sexual exposure

Sexual Orientation	n	%
Person(s) of opposite sex only	336	70
Person(s) of same sex only	16	3
Person(s) of both sexes	4	1
Unknown	127	26
<b>Total</b>	<b>483</b>	<b>100</b>

Table 2: Sexual partner

The infection was acquired from	n	%
Casual Partner	159	32
Regular Partner	146	29
Client (case is a sex worker)	30	6
Sex worker	6	1
Unknown	155	31
<b>Total#</b>	<b>496</b>	<b>100</b>

\*Cases may have reported multiple sexual partner type

## Public health response

- Increased and improved follow up of all syphilis notifications in females of reproductive age ( $\leq 50$  years) from 2017 onwards to ensure all women notified:
  - Are linked into primary healthcare or referred for specialist advice and treatment.
  - Have received adequate treatment for the appropriate stage of syphilis (including sexual partners where relevant).
  - With known perinatal infections have rapid and intensive follow-up throughout pregnancy (until treatment is received) and through to birth if necessary (including monitoring of syphilis serology and treatment in babies born to women diagnosed with syphilis during pregnancy).
  - Have complete enhanced surveillance data by contacting the medical practitioner and or laboratories.
- Urgent follow-up (within 24 hours) and investigation of suspected congenital syphilis cases to ensure:
  - Appropriate care and treatment of both the child and mother.
  - Contact tracing of the mother's sexual partners where relevant.
- Intensive contact tracing of cases that may have received inadequate treatment or are lost to follow-up.
- Referrals to Melbourne Sexual Health Centre Doctor's advice line for all medical practitioners seeking treatment and disease management advice.
- Issuing of a Chief Health Officer Advisory alert.
- Establishment of a Congenital Syphilis Incident Management Team (IMT) to prevent congenital syphilis in Victoria through a sustained and coordinated response.

### Key actions include:

- Development of a comprehensive risk communications strategy targeting clinicians and women in order to raise awareness about congenital syphilis.
- A Congenital Syphilis Forum to engage key stakeholders across the health system to discuss the re-emergence of congenital syphilis, best clinical practice, identify and address systemic issues.

## Discussions and Conclusion

- There has been a 10-fold rise of infectious syphilis in females since 2014. The increase seen in Victoria could be multifactorial including the change in case definition.
- Although syphilis is traditionally considered to be an infection that affects gay and other men who have sex with men, 1 in 10 syphilis cases in Victoria are now in women. The study highlights a shift into the female and heterosexual population.
- With more than 1 in 10 females diagnosed with syphilis during pregnancy, targeted interventions are necessary to prevent congenital syphilis.
- Females with syphilis are mostly diagnosed by GPs, suggesting opportunities to improve GP education on prevention, early diagnosis, treatment strategies and contact tracing.

A multidisciplinary innovative approach including culturally appropriate prevention initiatives is required to address systemic issues contributing to the increase of syphilis among females in Victoria.

## Acknowledgement

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