

Epidemiology of syphilis in Australia

Dr Skye McGregor | 17 September 2025

Kirby Institute, UNSW Sydney

Acknowledgment of country

Like to acknowledge the traditional owners of the land on which we meet today, the Kaurna People. I pay my respects to their Elders past and present and extend that respect to any Aboriginal and Torres Strait Islander people joining us today.

Conflict of interest

I have no conflicts of interest to declare

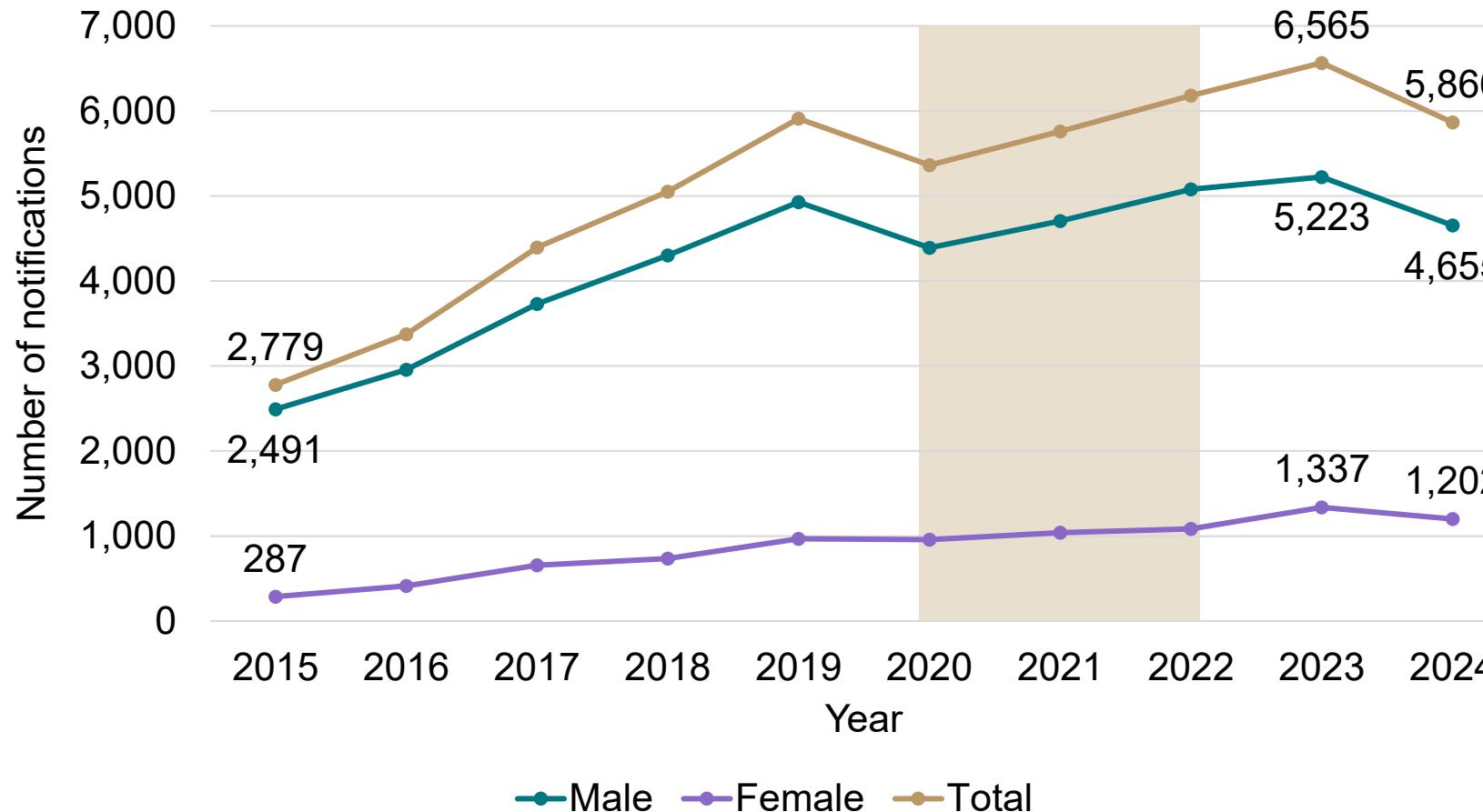
Background – syphilis

- Syphilis is a curable sexually transmitted infection caused by *Treponema pallidum*, with distinct clinical stages and potential for long-term complications and death if untreated
- WHO estimated 8 million adults aged between 15 and 49 years old acquired syphilis in 2022
- Congenital syphilis the second leading cause of preventable stillbirth globally

Background – congenital syphilis

- WHO estimated 700 000 congenital syphilis cases and 390 000 adverse birth outcomes globally in 2022
 - 150 000 early fetal deaths and stillbirths
 - 70 000 neonatal deaths
 - 55 000 preterm or low-birth weight births
 - 115 000 infants with a clinical diagnosis of congenital syphilis

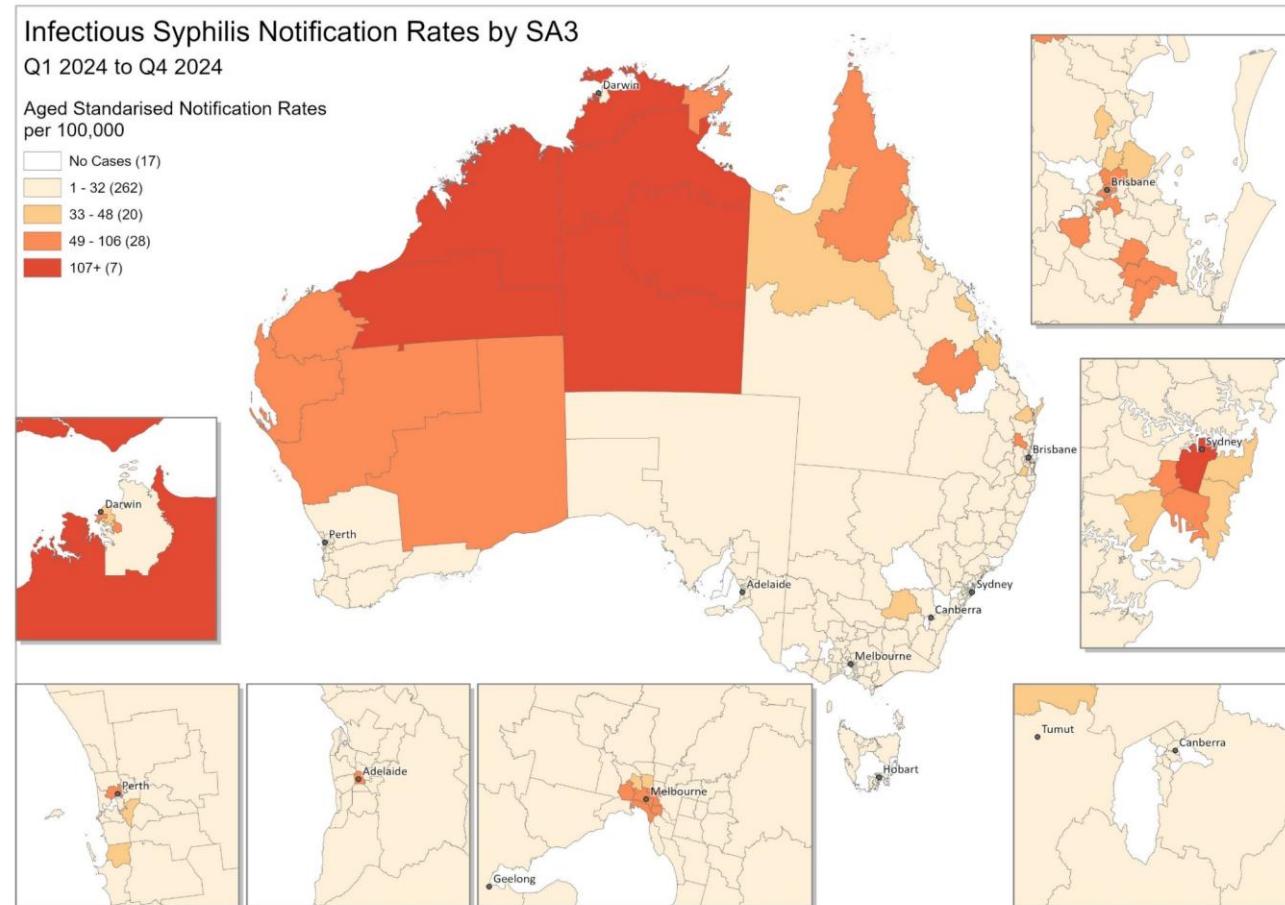
Infectious syphilis notifications, by gender, 2015–2024



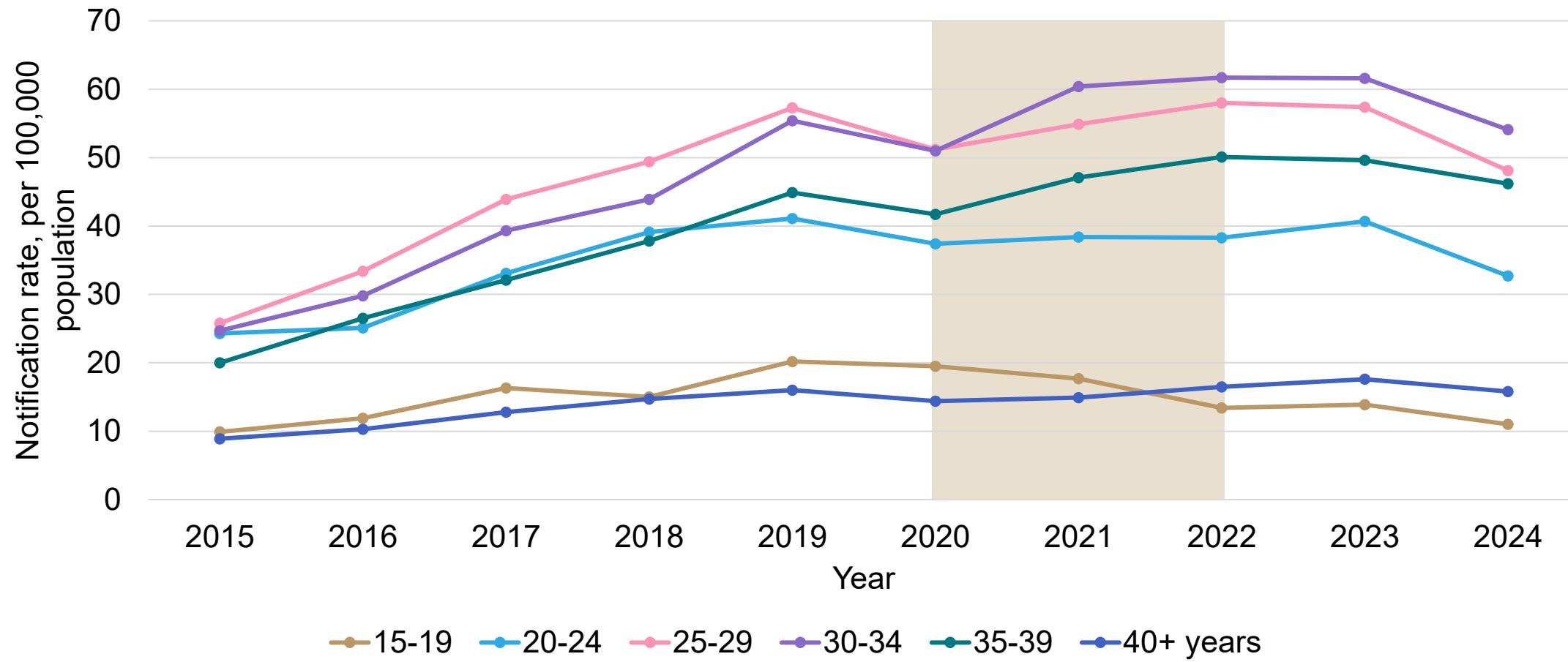
2015–2024 change:

- National: +111%
- Male: +87%
- Female: +319%

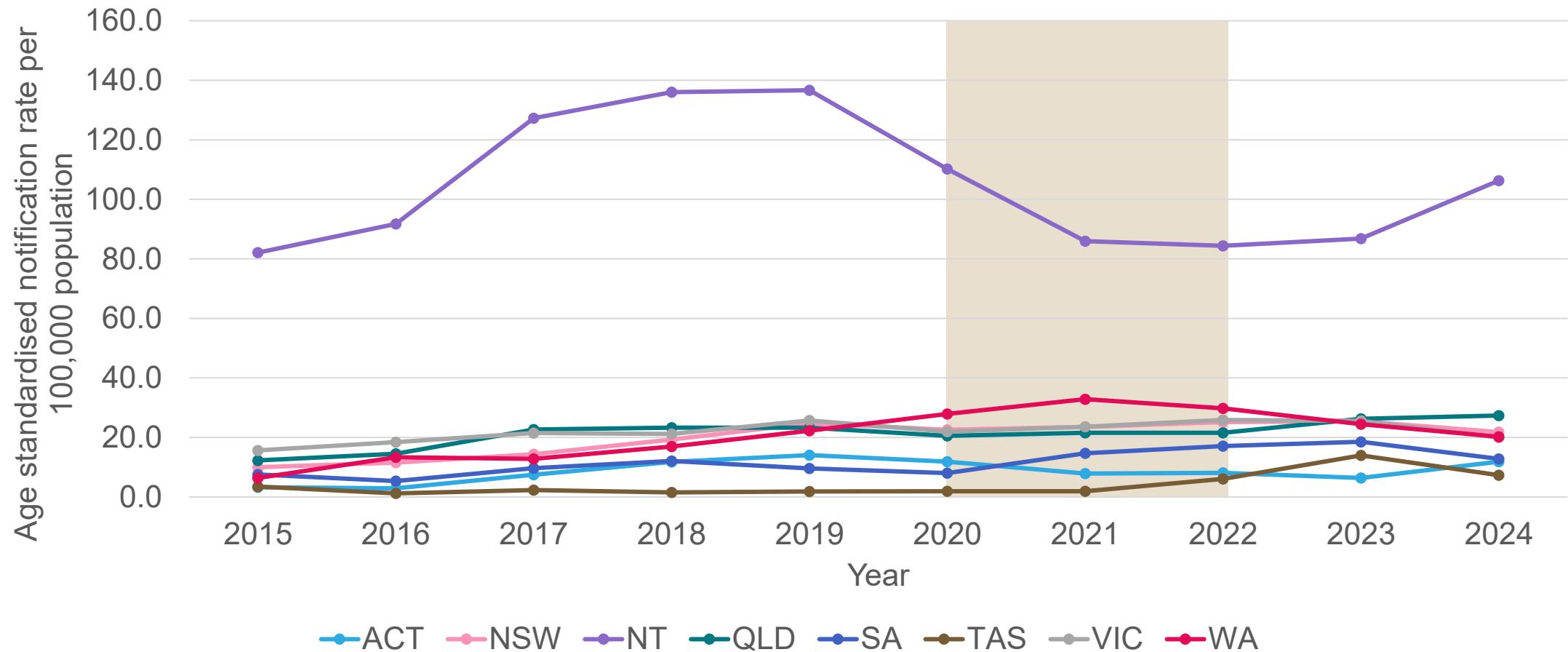
Infectious syphilis notification rate, by SA3



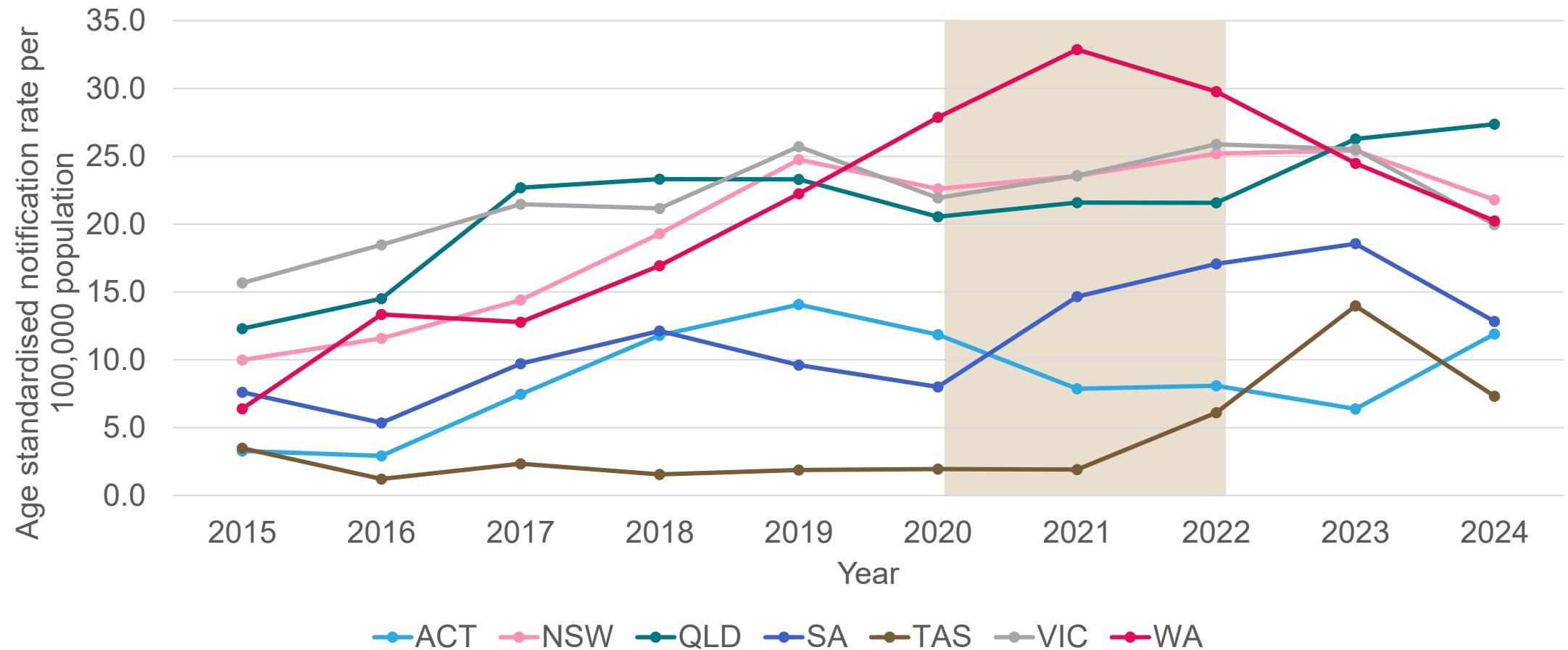
Infectious syphilis notification rate, by age group



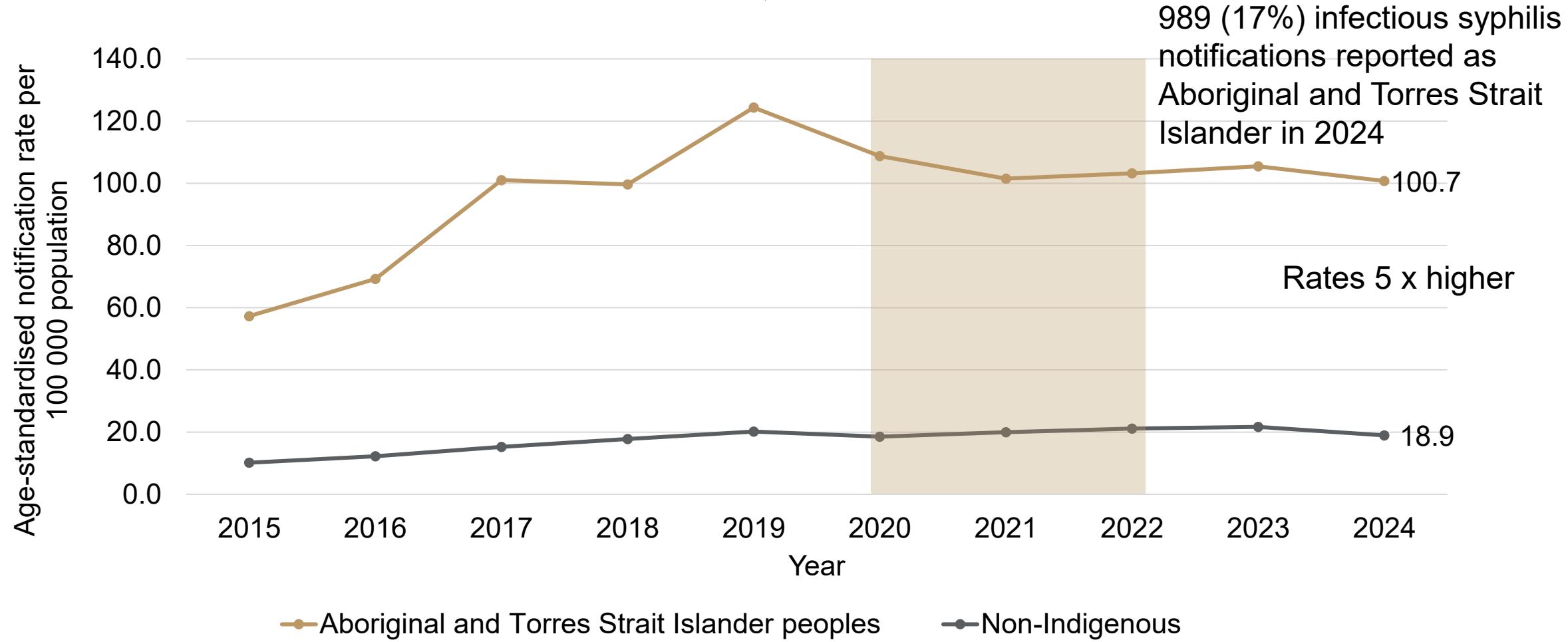
Infectious syphilis notification rate by state/territory, 2015-2024



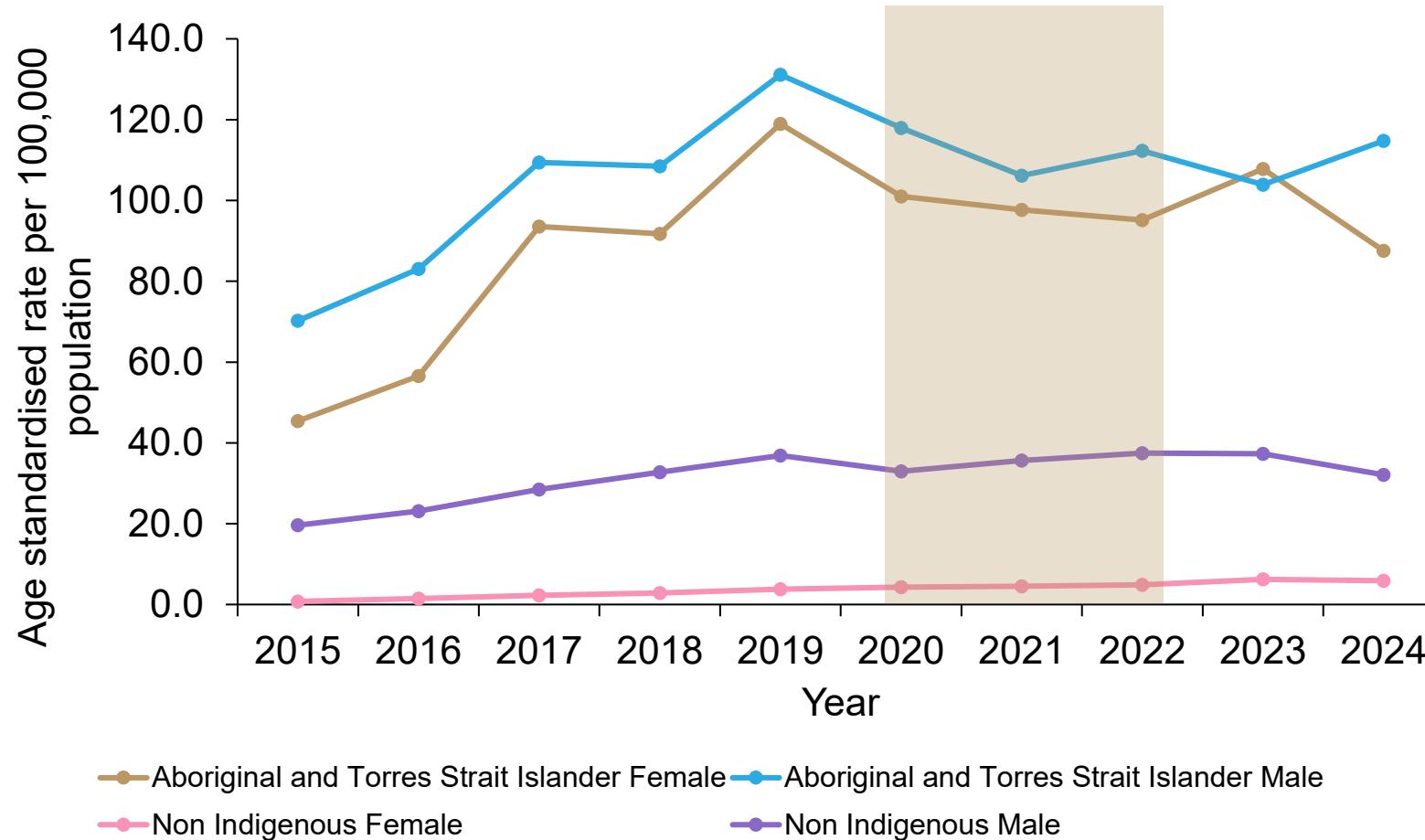
Infectious syphilis notification rate by state/territory, 2015-2024



Infectious syphilis notification rate, by Aboriginal and Torres Strait Islander status, 2015–2024

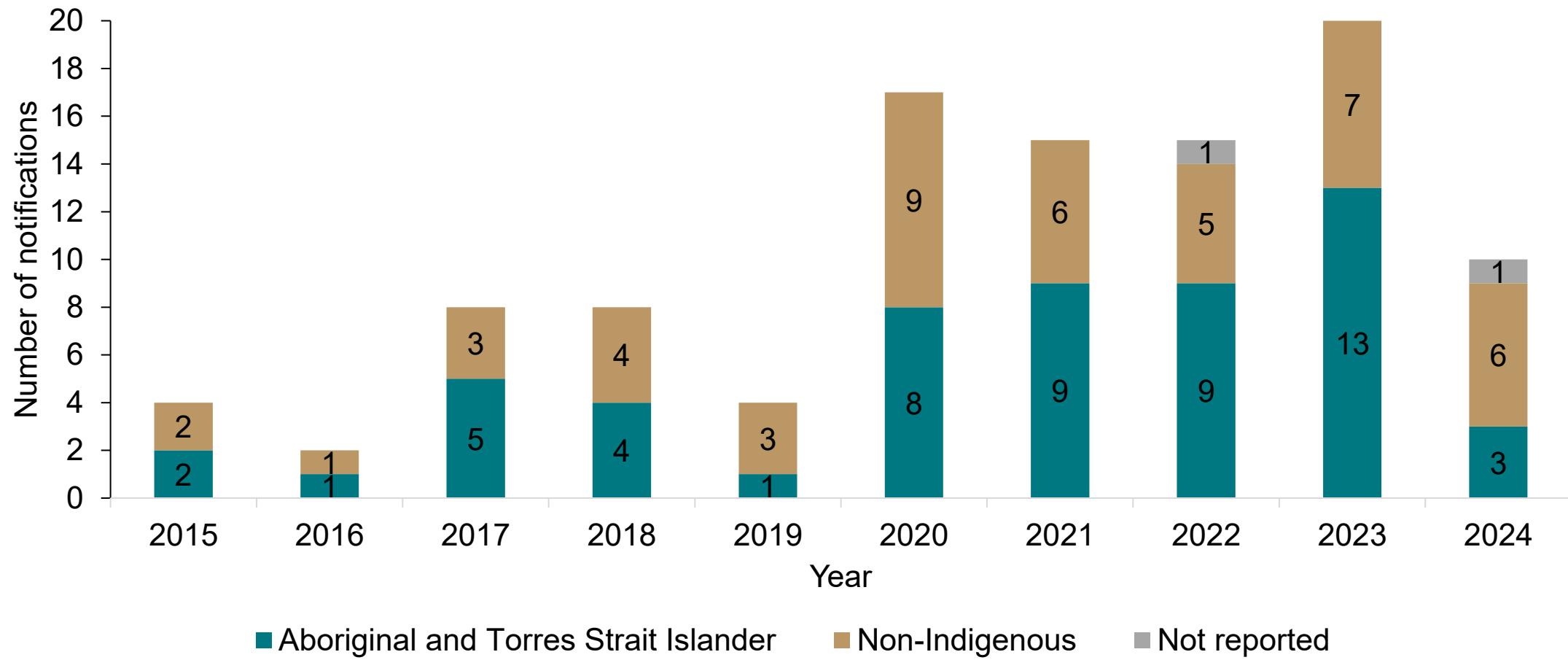


Infectious syphilis notification rate, by gender and Aboriginal and Torres Strait Islander status, 2015-2024

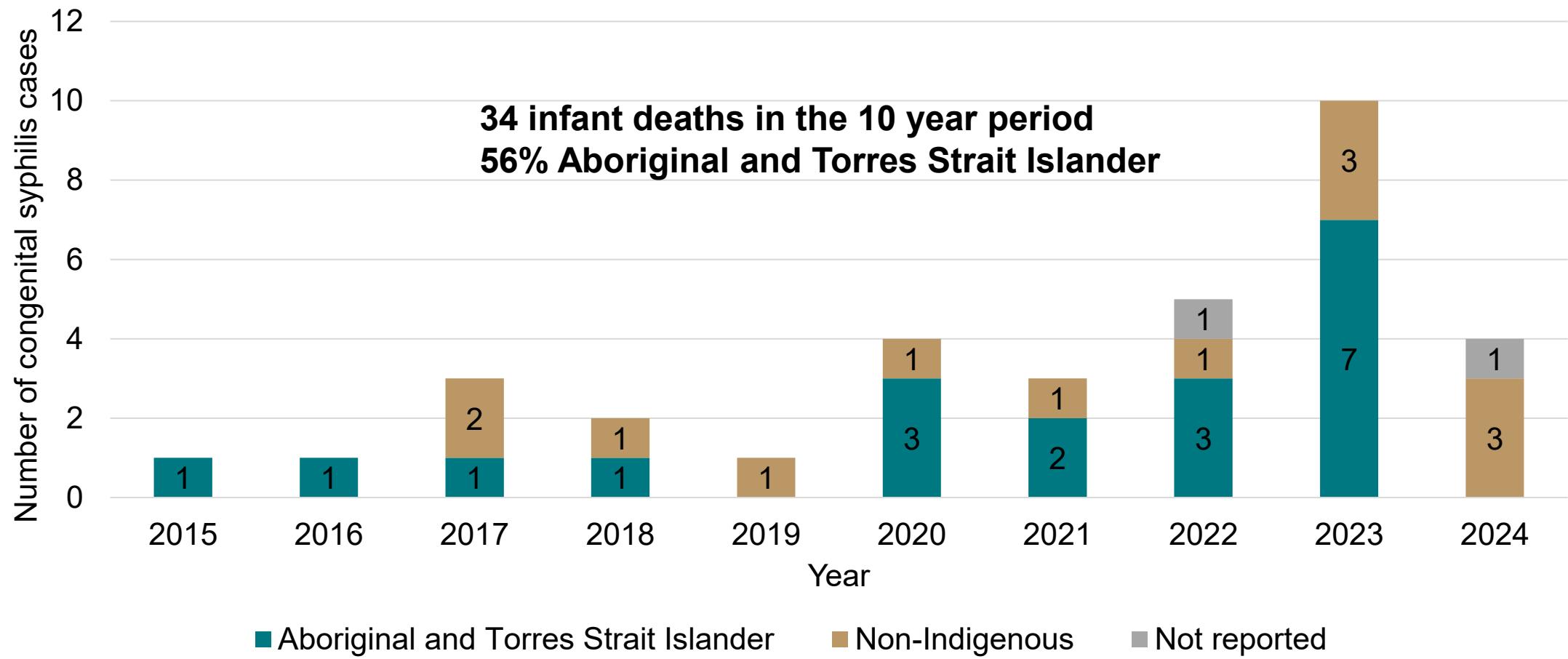


- Different male to female ratio suggest different transmission patterns?
- Drop in rate among women in 2024?

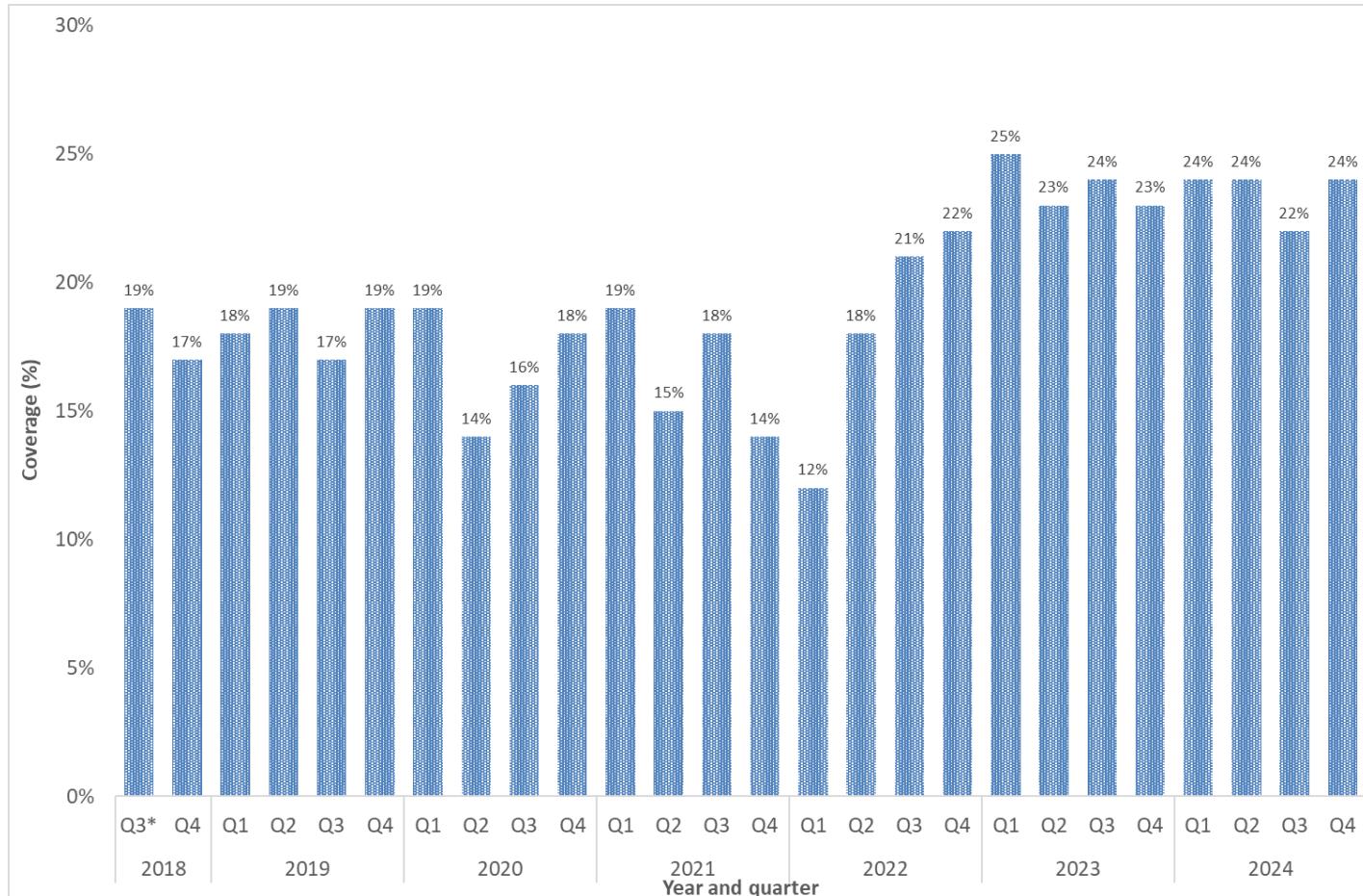
Congenital syphilis notifications, by Aboriginal and Torres Strait Islander status, 2015-2024



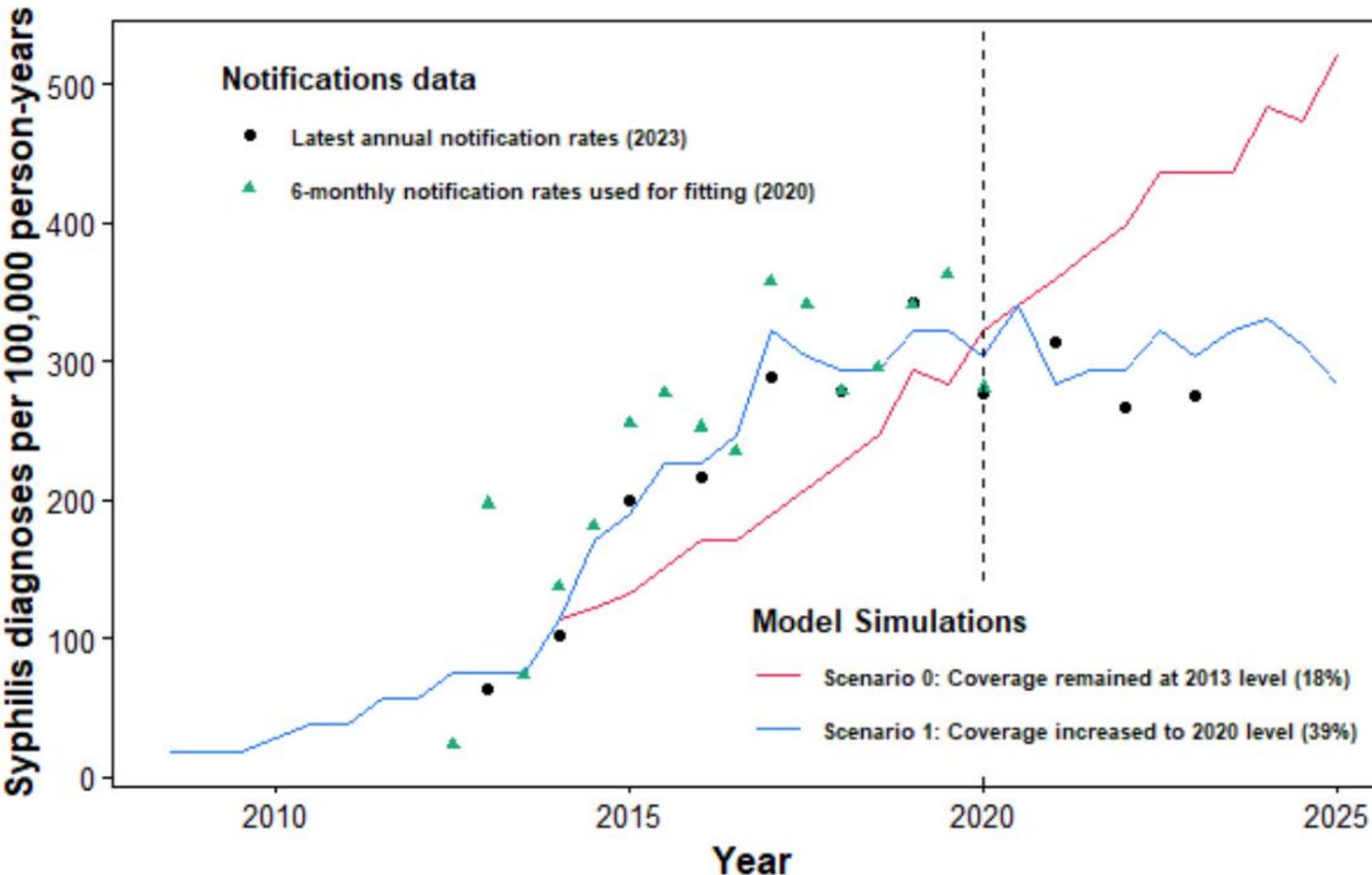
Congenital syphilis deaths, by Aboriginal and Torres Strait Islander status, 2015-2024



Proportion of Aboriginal and Torres Strait Islander clients attending participating ACCHS who received a syphilis test (PoCT and/or serology), 15–34-year-olds



Annual infectious syphilis notification rate among Aboriginal and Torres Strait Islander people aged 15-34 years in regional and remote communities for 2013-2023 versus modelled estimates



- Without high testing rates, syphilis rates would likely have increased much more

Summary

- Infectious syphilis notifications have doubled in the 10 years 2015–2024, quadrupled among women
- Burden of infection in regional and remote, main urban centres
- Understanding epidemiology in Aboriginal and Torres Strait Islander peoples, men in urban areas, women of reproductive age
- Differential patterns in jurisdictions
- Associated increase in congenital syphilis cases, and tragically 34 deaths attributed to congenital syphilis
- Evidence of increased testing in Aboriginal and Torres Strait Islander communities
- Early evidence of doxy-PEP in some jurisdictions? Too early to tell?
- What next?

Acknowledgements

- Community organisations and partners
- **Amy Bright**, Jonathan King, Richard Gray, Rebecca Guy, Ela Naruka, Hamish McManus, Elaine Lee, Lucienne Bamford, Amy Bright
- Department of Health, Disability and Ageing
- State and territory health departments & surveillance officers
- Surveillance Advisory Committee
- National BBV and STI Surveillance Subcommittee