

# Trends in neurosyphilis hospitalisation in Australia, 2007-2020

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## Introduction

- Untreated syphilis can lead to neurosyphilis with high mortality and morbidity.
- The epidemiology of neurosyphilis is relative unknown.

## Objective

- To determine the trends of neurosyphilis admission in Australia, and
- To estimate the duration of hospital admission and associated costs.

## Method

- Retrospective analysis of admission data for patients with neurosyphilis as the principal diagnosis.
- Data extracted from International Classification of Diseases, Tenth Revision, Australian Modification (ICD-10 AM) from the National Hospital Morbidity database from the Australian Institute of Health and Welfare (AIHW).
- Study period was from 1 July 2007 to 20 June 2020 and data limited to age between 15 to 50 years.

Figure 2: Neurosyphilis admission by age group and sex between 2007 & 2020

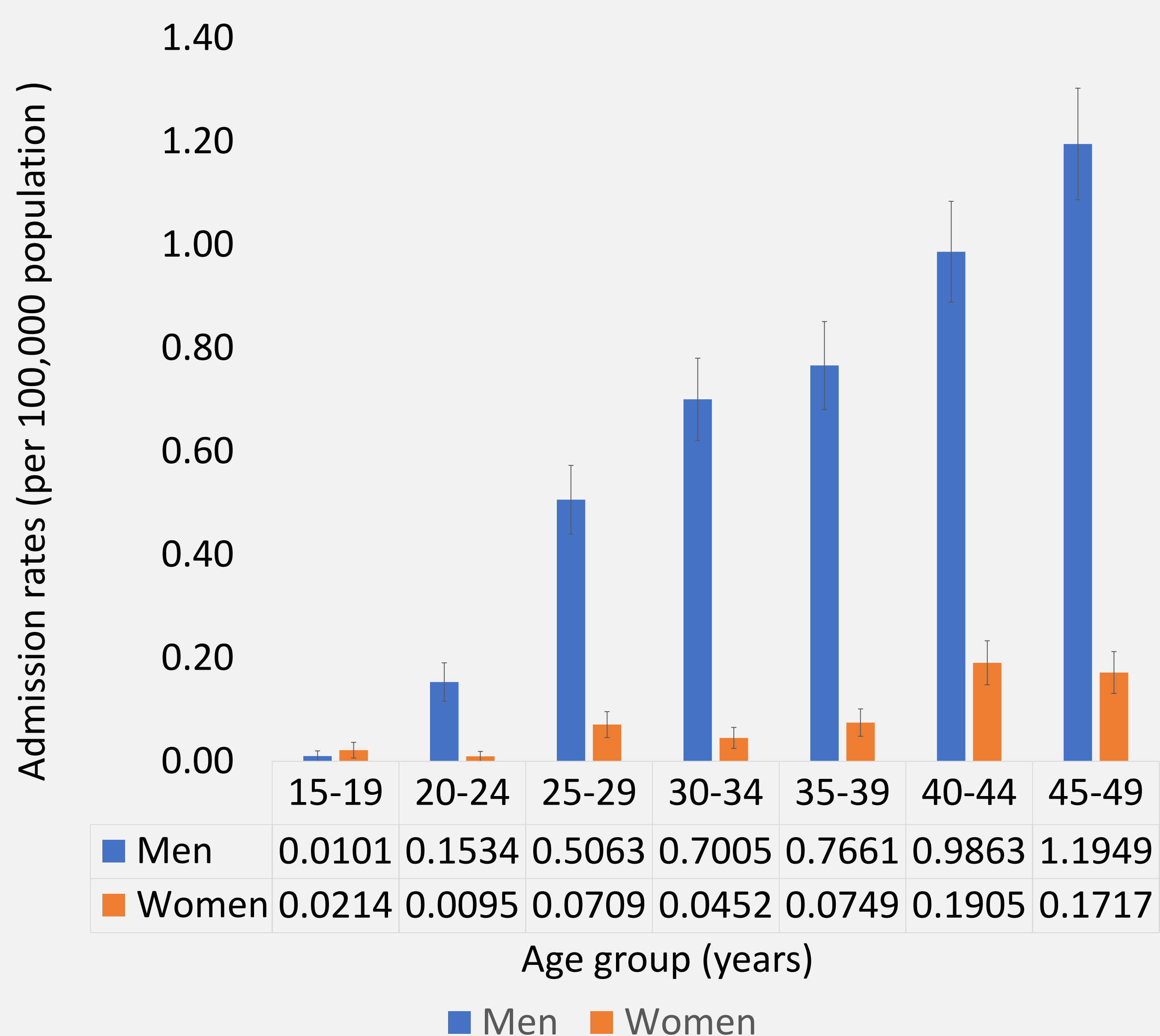
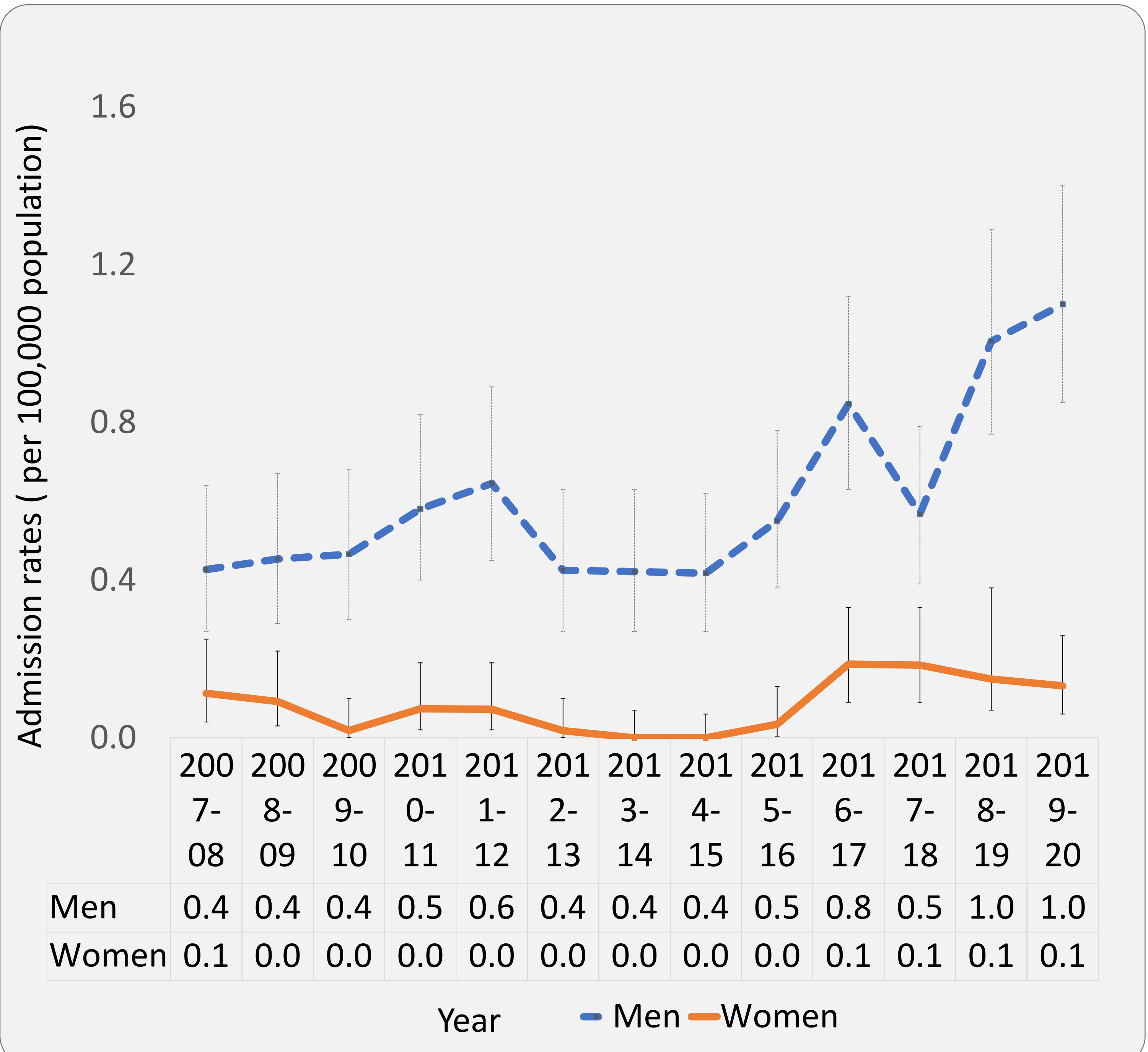


Figure 1: Neurosyphilis admission by sex and year between 2007 and 2020



## Results

- In 2007-2020, 458 men and 62 women aged 15-50 years were admitted to hospitals with neurosyphilis.
- The annual admission rate for neurosyphilis among men increased 2.5-fold from 0.427/100,000 population in 2007-2008 to 1.099/100,000 population in 2019-2020 ( $P_{trend}=0.005$ ) (Figure 1).
- The annual admission rate among women remained stable with the mean admission rate at 0.084/100,000 population in 2007-2020 ( $P_{trend}=0.154$ ) (Figure 1).
- The admission rate for neurosyphilis increased with increasing age for both men ( $P_{trend}<0.001$ ) and women ( $P_{trend}=0.008$ ) (Figure 2).
- Overall, the mean length of hospital stay was 8.7 days (SD: 2.4 days) and the average admission cost for neurosyphilis was estimated to be AUD 18,223 (AUD 2,094.6 per day x 8.7days) per person (4).

## Conclusion

- If syphilis infections continue to increase, our data suggest rates of neurosyphilis may increase further, and with this, the cost to hospitals.

## Contact

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