

# ESTIMATED INCIDENCE OF *CHLAMYDIA TRACHOMATIS* GENITAL INFECTION IN NEW ZEALAND

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## Introduction:

In New Zealand (NZ), 3.4% of 15–29 year-old women were diagnosed with chlamydia in 2014. While annual test coverage is also high (>25%), how the diagnosis rate relates to actual incidence is unknown. Here we estimate through mathematical modelling the national total — and age and ethnic specific — incidence for sexually active 15–29 year-old men and women in 2014.

## Methods:

We based our analyses on a previously developed Bayesian approach. Published evidence and expert opinion were used to estimate the following parameters: proportion of cases symptomatic, proportions of cases tested, and the probabilities of true-positive and false-positive tests. Percentage of incidence cases diagnosed was also calculated.

## Results:

The model provisionally estimates the 2014 incidence as 11.4% (95% Bayesian Credible Interval, 8.0–16.5%) for men and 10.8% (8.7–13.3%) for women aged 15–29 years. The highest rates were seen for 15–19 year-old men (13.9%) and women (19.6%). Estimated incidence rates were 18.8% in Māori men and 20.0% in Māori women; rates were similar in Pacific Islanders, but lower in NZ European/Other ethnicities (8.1% and 6.9%, respectively). The percentage diagnosed for men was 14.9% and women 45.9%, with little variation by age and ethnicity.

## Conclusion:

Total estimated chlamydia incidence in NZ was similar for men and women, and was higher than published estimates in Australia. Māori and Pacific people had disproportionately high estimated incidence. A limitation of the method is that assumptions about some parameters, e.g. the proportion of symptomatic infections, cannot be verified and might lead to systematic errors. The relationships between chlamydia incidence, prevalence and testing continue to raise challenging questions. These analyses will be extended to investigation of trends in annual incidence, testing coverage and percentages diagnosed.

## Disclosure of Interest Statement:

*The authors have no conflicts of interest to declare.*