

# Chlamydia at an inner metropolitan sexual health service in Sydney, NSW: Australian Collaboration for Chlamydia Enhanced Sentinel Surveillance (ACCESS) Project

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**Abstract.** **Background:** Australia has a widely dispersed network of public sexual health services that test large numbers of people from high prevalence populations for genital *Chlamydia trachomatis* infection. These populations include young sexually active heterosexuals, men who have sex with men, sex workers and Aboriginal and Torres Strait Islander people. The Australian Collaboration for Chlamydia Enhanced Sentinel Surveillance (ACCESS) Project was established to monitor chlamydia testing rates and positivity rates at a national level, which in turn will help interpret trends in chlamydia diagnoses reported through passive surveillance. The ACCESS Project is the first time that chlamydia-related data including priority population and testing denominators has been collated at a national level. The present paper reports on chlamydia testing and positivity rates in a sexual health service in the inner west of Sydney between 2004 and 2008 and compares these to published national data from the ACCESS Project in sexual health services. **Methods:** Chlamydia positivity and testing rates at an inner western Sydney sexual health service were compared with aggregate data from the ACCESS Project obtained from 14 sexual health services across Australia. Using a standardised extraction program, retrospective de-identified line-listed demographic and chlamydia testing data on all patients were extracted from patient management systems. **Results:** Over the 5-year period, 5145 new patients attended the inner-west sexual health service. Almost 66% had a chlamydia test at first visit and there was no significant difference in this testing rate when compared with the ACCESS Project national rate for sexual health services (67.0%; odds ratio [OR] 0.94, 95% confidence intervals 0.88–1.00). The testing rate increased over time from 61% in 2004 to 70% in 2008. There were 281 chlamydia diagnoses at this service, giving an overall chlamydia positivity rate of 9.3%, significantly higher than the ACCESS Project national rate of 8.2% (OR 1.16, 95% confidence intervals 1.02–1.32). **Discussion:** Testing rates were similar and positivity rates for *Chlamydia trachomatis* were higher in this sexual health service in Sydney than national trends.

**Additional keywords:** STI testing.

## Introduction

Genital *Chlamydia trachomatis* is the most common notifiable infection in Australia. In 2008 there were 58 456 new notifications. In males the age standardised rate was 124.8 per 100 000 population in 2003 increasing to 221.9 in

2008 and among females, 179.7 in 2003, increasing to 323.5 in 2008.<sup>1</sup> Age standardised rates are highest in 15–19 years at 867 and 20–29 years at 1199 in 2008.<sup>2</sup> As with other developed countries<sup>3–7</sup> genital chlamydia is highest in young heterosexual<sup>8–17</sup> and homosexual men.<sup>18,19</sup> In Australia, rates

are also high in remote Aboriginal communities.<sup>1,20</sup> Australia has a widely dispersed network of public sexual health services that test large numbers of people from selected high risk populations for genital *Chlamydia trachomatis* infection. These populations include young sexually active heterosexuals, men who have sex with men, sex workers and Aboriginal and Torres Strait Islander people. The Australian Collaboration for Chlamydia Enhanced Sentinel Surveillance (ACCESS) Project was established to monitor chlamydia testing rates and positivity at a national level; which in turn will help interpret trends in chlamydia diagnoses reported through passive surveillance. It is the first time chlamydia-related data that includes risk population and testing denominators has been collated at a national level.<sup>1</sup>

The Royal Prince Alfred Hospital (RPA) Sexual Health Clinic (from April 2007) and its forerunner, Livingstone Rd Sexual Health Clinic at Marrickville, provide sexual health services for the inner west of Sydney. The inner-west of Sydney has the second highest prevalence rate of HIV in Australia and among the highest rates of chlamydia in metropolitan Australia.<sup>21</sup> The area also has a significant population of homosexual men and young people.<sup>22</sup> The RPA Sexual Health Clinic provides screening and clinical care for high risk populations and clinical support for general practitioners (GPs) who provide sexual health care to the general community.<sup>23–26</sup> All aspects of care at sexual health services are free of charge, whereas GP care usually involves a co-payment for clinical care and pharmaceuticals.

The present paper reports on chlamydia testing and positivity rates, 2004 to 2008 in sexual health clinics in the inner-west of Sydney and compares these rates to published national data from the ACCESS Project in sexual health services<sup>1</sup> in order to determine if the site could be seen as a sentinel site for national trends.

## Methods

Using a standardised extraction program, retrospective de-identified line-listed demographic and chlamydia testing data on all patients were extracted from patient management systems. This paper estimates annual testing and positivity rates among new patients (first visit to the service) attending an inner-metropolitan sexual health service in Sydney, New South Wales using retrospective data for 5 years, 2004 to 2008. Breakdowns according to priority population, geographical residence and other demographic factors are presented and compared with published national ACCESS Project data. The methodology of the ACCESS Project is published elsewhere.<sup>1</sup> Odds ratios (OR) comparing inner-west service data with published national data were calculated with 95% confidence intervals (CI).

All chlamydia testing in Australian sexual health clinics involves nucleic acid amplification tests. Specimens that are tested include first-void urine (men and women), self-collected vaginal swabs, clinician-collected vaginal or cervical swabs, or patient/clinician-collected anal swabs. This is standard practice throughout sexual health services in Australia.

## Results

### Overall

Over the 5-year period, 5145 new patients attended the inner-west sexual health service. For a period of 6 months in 2006

(6 February 2006 to 6 July 2006) data were not available on chlamydia testing due to data loss. This period was not exceptional in any other way. The baseline population will therefore exclude any new patients during this time and estimates of testing rates and chlamydia positivity rates for 2006 will be based on the remaining 6 months of that year. Excluding these patients, the total number of new patients is 4564. Of the 4564; 2999 (65.7%) had a chlamydia test at first visit. There is no significant difference in this testing rate when compared with the published ACCESS national rate of 67.0%, OR 0.94 (95% CI 0.882–1.001). The testing rate increased over time from 61% in 2004 to 70% in 2008. The testing rate for males was higher at 70.7% than females at 58.3%. There were 281 chlamydia diagnoses recorded, giving an overall chlamydia positivity rate of 9.4%. There was a significantly higher positivity rate when compared with the published ACCESS Project national rate of 8.2%, OR 1.16 (95% CI 1.02–1.32). The median age of chlamydia infected patients was 29 years ranging from 15 to 63 years: the median age for men was 31 years but for women it was younger at 25 years. The chlamydia positivity rate was highest in the 20–24 year age group (10.6%) and lowest in patients aged 45–49 years (1.7%).

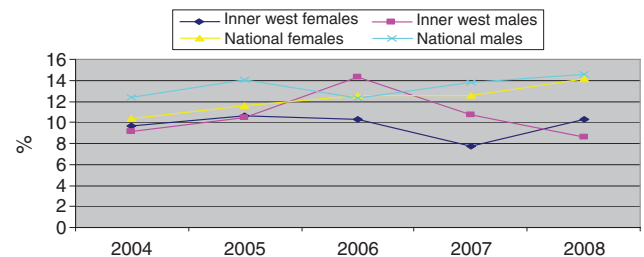


Fig. 1. Comparison of chlamydia prevalence in young heterosexuals 2004–08.

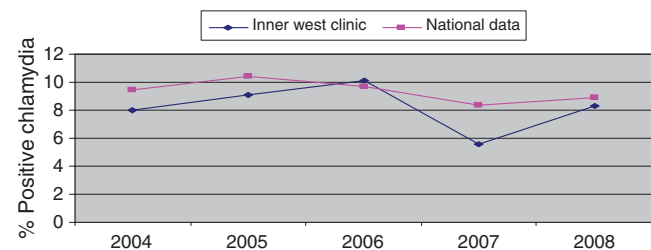


Fig. 2. Comparison of chlamydia prevalence in men who have sex with men inner west to Australian sexual health clinics.

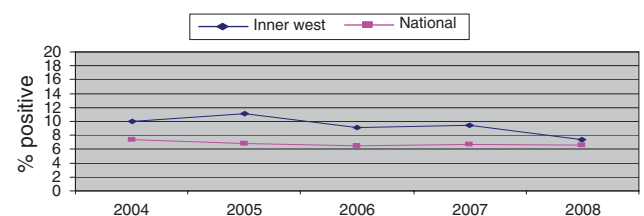


Fig. 3. Comparison of chlamydia prevalence in female sex workers 2004–08.

# Chlamydia

## Testing Practice Tips

General practice is the most common setting for testing for sexually transmissible infections (STIs). Chlamydia is the most common notifiable bacterial infection in Australia.<sup>1</sup> We suggest you offer all patients under 30 years a urine test for chlamydia.

- ▶ Screen for asymptomatic genital chlamydia annually in sexually active patients < 30 years old; especially:
  - If any unprotected sex
  - After recent partner change
  - As part of antenatal screening
- ▶ Screen both male and female patients
- ▶ Request Chlamydia PCR on first void urine (after not passing urine for one hour - no need for examination unless symptoms)
- ▶ Chlamydia serology not appropriate
- ▶ Treat with 1g Azithromycin Stat as a single oral dose
- ▶ Treat all current sexual partners
- ▶ For PID or complicated infections, contact your local Sexual Health Service
- ▶ Following treatment, advise no unprotected sex for 7 days
- ▶ Provide contact tracing for all sexual partners within the last 6 months<sup>2</sup>
- ▶ Retest in 3 months<sup>1</sup>
- ▶ Discuss prevention of chlamydia and other STIs by reinforcing condom use and regular testing

**CONSIDER BULK-BILLING (Iabs & consult)**

### Why is it important to test for Chlamydia?

- Chlamydia is the most common notifiable bacterial infection in Australia.
- There are consistently higher rates of notifications of chlamydia in inner-western Sydney than in NSW overall.<sup>iii</sup>
- Studies have shown a higher rate of chlamydia in pregnant young women.<sup>iv</sup>
- Chlamydia is mostly asymptomatic in both men and women.
- If chlamydia is left untreated, women can experience serious consequences such as: pelvic inflammatory disease, ectopic pregnancy, chronic pelvic pain and both men and women may be at risk of infertility.

Developed by the HIV & Related Programs Health Promotion Team, SSWAHS (Inner West), March 2008.

SYDNEY SOUTH WEST  
NSW HEALTH

**CSGPN**  
Community Sexual Health Program

### Support for GPs

For information and advice about STI testing and treatment and contact tracing, contact your local Sexual Health Service to speak to a sexual health specialist:  
Inner West: RPA Sexual Health Clinic on 9515 3131  
South West: Liverpool Sexual Health Clinic on 9827 8022

### Contact Tracing

*Australian Contact Tracing Manual Edition 3, 2006* available for download from:  
[www.asthm.org.au/contact-tracing/](http://www.asthm.org.au/contact-tracing/)

### Patient Information

Patient factsheets on chlamydia and other STIs can be downloaded:  
[www.health.nsw.gov.au/sexualhealth](http://www.health.nsw.gov.au/sexualhealth)

### NSW Sexual Health Infoline 1800 451 624 (toll free)

A telephone support service for patients, nurses, doctors and other health professionals. Provides on the spot technical support for clinicians during consultations; a statewide referral and triage service for patients; an information service for community members.

i. Clinical Guidelines for the Management of STIs Among Priority Populations, Royal Australian College of Physicians: Australasian Chapter of Sexual Health Medicine, 2004.

ii. Australian Bureau of Statistics, *Marriage, Divorce, Remarriage, Separation and Reconciliation in Australia*, Canberra, 2006.

iii. Chlamydia Notifications in Australia, South West, 2006, NSW Health, Sydney.

iv. Cheney K, Wray L. Chlamydia and associated factors in an inner 20s antenatal population, Aust NZ J Obstetrics & Gynaecology, 2008;48(1):40-3

NSW Health, Sydney

Fig. 4. Chlamydia testing practice tips resource.



Most patients were Australian born (59.6%) followed by the UK (5.6%), China (5.1%), Vietnam (3.9%) and New Zealand (3.5%). Thirty-one patients identified as transgendered, five of these received a chlamydia test, of which none were positive. These individuals have been excluded from further comment in this report.

#### *Young heterosexuals (<25 years)*

Of the new heterosexual patients attending the service, 21.7% ( $n = 574$ ) were aged less than 25 years. Seventy-nine percent of the group were aged 20–24 years with a median age of 22 years. Females made up 61.3% of the group. A total of 394 (68.6%) young heterosexual patients had a chlamydia test: females made up 59.6% of patients tested. There were 39 cases of chlamydia in young heterosexuals, giving an overall chlamydia positivity rate of 9.9%. It was slightly higher in young men (10.1%) than in women (9.8%) and was highest in males in 2006 and females in 2005 (Fig. 1). These chlamydia positivity rates were significantly lower than comparable published rates for Australian sexual health services of 12.8%, OR 2.01 (95% CI 1.5–2.8).<sup>1</sup>

#### *Men who have sex with men*

Between 2004 and 2008, a total of 1302 new men who have sex with men (MSM) attended the inner-west sexual health service (28.5% of total new patients) of whom 1015 (78.0%) had a chlamydia test (Fig. 2). Testing rates changed over the 5-year time period and were highest in 2008 at 80.9%. Testing rates were similar to published national rates for sexual health services of 80.0% OR 0.9 (95% CI 0.78–1.03).<sup>1</sup> Over the study period, 83 MSM patients were positive for chlamydia, giving a chlamydia positivity rate of 8.2%. There is no significant difference between this chlamydia positivity rate in MSM with published national positivity rate for sexual health services of 9.4% OR 0.86 (95% CI 0.68–1.09).<sup>1</sup> The median age of positive MSM was 33 years, ranging from 20 to 53 years. The highest positivity rate was in the 20–24 year age group at 12.4%.

#### *Aboriginal and Torres Strait Islander people*

Between 2004 and 2008, a total of 118 new Aboriginal and Torres Strait Islander patients attended the service (2.6% of total patients). Sixty (50.8%) were tested and the chlamydia positivity rate was 6.7%. There is no significant difference between the chlamydia testing rate of 58%, OR 0.74 (95% CI 0.51–1.1),<sup>1</sup> or the chlamydia positivity rate in Aboriginal and Torres Strait Islander people when compared with the published national positivity rate for sexual health services of 14.3%, OR 0.61 (95% CI 0.22–1.7).<sup>1</sup>

#### *Sex workers*

Between 2004 and 2008, 234 new patients were recorded as currently engaged in sex work. Two hundred (85.5%) were female and 34 (14.5%) were male. Australian born sex workers represented 53.4% of the group, followed by China (16.7%), New Zealand (3.8%), Vietnam (3.0%) and the UK (3.0%). The overall testing rate for sex workers was 82.5%. Testing rates in female sex workers were similar overall to published national

rates of 87%, OR 0.71 (95% CI 0.50–1.0).<sup>1</sup> The chlamydia positivity rate for sex workers was 8.3%. Male sex workers had a higher positivity rate of 11.1% compared with female sex workers at 7.8%. In female sex workers, positivity rates were higher than the national rates in 2004 to 2007, but approached the national level in 2008 (Fig. 3).<sup>1</sup>

## **Discussion**

This is the first time combined nationwide *Chlamydia trachomatis* data from sexual health services has been able to be compared with data from local services – in this case the sexual health service in the inner-west of Sydney. The data suggest that clients accessing this service have similar testing rates and higher chlamydia positivity rates when compared with the national rates. Chlamydia in both MSM and young women decreased in 2007. From April 2007 to January 2008, the base clinic for the sexual health service at Marrickville was closed and the service worked from outreach services only. Consequently clinical services may have been less available to high risk clients who often attend opportunistically. Chlamydia rates in young heterosexuals remain high.<sup>9,10</sup> The census data for 2006 suggested there were 64 658 people 15–25 years in the inner-west of Sydney.<sup>27</sup> Comparatively few attend sexual health services (nor does the sexual health service have the capacity to provide clinical care) and general practitioners (GPs) provide the majority of sexual health care.<sup>15,28</sup> It is consequently important that sexual health services provide support and assistance to GPs regarding screening and clinical care for chlamydia.<sup>23–26</sup> In 2008, a ‘Chlamydia Practice Tips’ resource was developed at this service to assist GPs working with young people to improve chlamydia screening uptake (Fig. 4).

Aboriginal and Torres Strait Islander patient numbers were not high enough to examine the data in detail. Chlamydia testing rates and positivity rate in Aboriginal people were similar to those for other sexual health service testing sites. Low attendance rates and low testing rates in Aboriginal clients is problematic but consistent with national data. Outreach screening at youth services and sexual health education for general practitioners working at local Aboriginal Community Controlled Health services have begun to address these issues.

Improving chlamydia surveillance by including active surveillance at strategically important sites such as sexual health clinics, Aboriginal Community Controlled Health services and general practice throughout Australia is an important step to augment existing passive chlamydia surveillance mechanisms. The ACCESS Project will allow improved capacity to closely monitor the ongoing Australian chlamydia epidemic and to assist in evaluation of national and regional chlamydia control strategies.

## **Conflicts of interest**

None declared.

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