

Chlamydia and young people

Toby Lea

National Centre in HIV Social Research,
The University of New South Wales



The number of chlamydia notifications in Australia continues to rise with the bulk of infections occurring in young people under 25 years of age. New strategies are required to reduce barriers to testing among young people and GPs can play a pivotal role in improving access to testing.

Chlamydia is the most commonly diagnosed sexually transmissible infection (STI) in Australia. There were 58,456 notifications recorded in 2008, almost double the number of notifications in 2003 (30,193) [1-2]. There is evidence to suggest that increases in chlamydia notifications could be due to increased testing [3].

Chlamydia can be treated effectively with a single oral dose of azithromycin. Left untreated, it can cause serious complications for women, including pelvic inflammatory disease, ectopic pregnancy, and tubal infertility. In men it can lead to inflammation of the epididymis and testes. Approximately 80% of infections are asymptomatic, although men are more likely to show symptoms than women [4]. In most cases, testing is noninvasive. It is typically a simple urine test.

In 2008, people aged 15–29 years accounted for almost 80% of chlamydia notifications. Among 15–19 year olds, women had more than three times as many notifications as men, while among 20–29 year olds, women had 1.4 times the number of notifications of men [1]. Young people are more likely to have shorter, serial monogamous relationships, a greater number of sexual partners, and be inconsistent in their use of condoms,

which puts them at greater risk of chlamydia infection [3]. The age at first vaginal intercourse in Australia has also gradually fallen over time, from 18–19 years among 50–59 year olds to 16 years among 16–19 year olds. Earlier sexual debut has been associated with a higher number of lifetime sexual partners [5].

Improving rates of chlamydia testing

Recent research using mathematical modelling predicted that if 40% of people under 25 years of age were screened annually for chlamydia in Australia, prevalence would drop dramatically over a 10 year period among all age groups, with 50% of the decline occurring within four years [6]. However, in the 12 months to September 2008, only 6.9% of women and 3.7% of men aged 16–24 years seen at general practices were screened for chlamydia [1]. While the 40% screening target may seem ambitious, the vast majority of young people see a GP at least annually, so it is not unachievable. GPs are in a unique position to facilitate the improvement of chlamydia testing rates, which will be crucial in reducing the population prevalence.

Recent research demonstrates knowledge deficits about key risk factors for

chlamydia among GPs act as a barrier to offering testing to at-risk groups. Only a small proportion of GPs opportunistically offer chlamydia testing to young people, in many cases because GPs believed the patient would be embarrassed [7]. This presents an opportunity to provide further education to GPs.

The Australian Chlamydia Control Effectiveness Pilot (ACCEPt) has recently been implemented, and aims to “assess the feasibility, acceptability, efficacy and cost-effectiveness of annual chlamydia testing among 16–29 year olds in the general practice setting” [8]. It will assess whether chlamydia screening can reduce the incidence of chlamydia in Australia and will guide government policy on whether to implement a national screening program.

Testing among young people: barriers and incentives

A recent national survey of Australian high school students demonstrated poor knowledge about chlamydia, despite significant improvements since 2002. Less than half of students were aware that chlamydia affects both men and women (18.5% in 2002), while just over half knew that chlamydia can lead to sterility in women (36% in 2002) [9].

The lack of awareness about chlamydia among young people is a barrier to testing. Research suggests that most young people believe they are at low risk of infection, do not know that the majority of infections are asymptomatic,

continued next page

Funded by NSW Health

NCHSR is partially funded by the Australian Department of Health and Ageing.
© 2010 National Centre in HIV Social Research, The University of New South Wales
Photograph on page 1 copyright Bigstockphoto

and are ignorant of what testing involves and how to access it. Low risk perception leads to a low likelihood of proactively seeking testing, particularly in the context of asymptomatic infection. Additionally, embarrassment and stigma associated with testing and infection are commonly reported. The perception that chlamydia is a problem only for women is a barrier to testing for young men.

Interviews and focus groups conducted with young people in Australia and New Zealand reveal high levels of support for routine testing by GPs specifically targeting young people. It was commonly suggested that if all young people attending general practices were offered chlamydia testing and informed that sexually active young people were a high-risk group, testing would become normalised and stigma and embarrassment would diminish. Young women suggested that in such circumstances, it would be unnecessary for GPs to take a sexual history in order to determine whether to offer testing. This was attractive to young women who often did not feel comfortable disclosing their sexual history to their GP.

Indigenous young people

Young Indigenous Australians experience far higher rates of chlamydia infection than non-Indigenous young people [1]. Very little research has been conducted into the sexual health of Indigenous people beyond the collection of surveillance data.

Key barriers that Indigenous young people face when accessing sexual health services include concerns around privacy and confidentiality, feelings of shame associated with STI diagnosis, and a lack of understanding of Indigenous culture among many health care providers. Separation of women's and men's business is particularly salient in the context of sexual health. Some of this can be resolved by providing access to Indigenous health workers who are same-gendered [10]. An additional barrier is the lack of services or distance to services for Indigenous people located in rural and remote areas.

Men who have sex with men

Men who have sex with men (MSM) are at a greater risk of infection with chlamydia and other STIs than the general population [1]. Chlamydia infection in MSM has been associated with younger age, unprotected anal intercourse, having a greater number of sex partners, co-infection with other STIs, and being HIV-positive. Infection with STIs (including genital chlamydia)

has been associated with a higher risk of HIV transmission [11]. In recent years there have been improvements in STI screening among gay men [12]. The majority of MSM are accepting of anal STI screening, a common site for chlamydia infection in this group [13].

References

1. National Centre in HIV Epidemiology and Clinical Research. (2009). *HIV/AIDS, viral hepatitis and sexually transmissible infections in Australia: Annual Surveillance Report 2009*. Sydney: National Centre in HIV Epidemiology and Clinical Research, The University of New South Wales.
2. National Centre in HIV Epidemiology and Clinical Research. (2004). *HIV/AIDS, viral hepatitis and sexually transmissible infections in Australia: Annual Surveillance Report 2004*. Sydney; Australian Institute of Health and Welfare: Canberra.
3. Lim, M. S. C., Hellard, M. E., Aitken, C. K., & Hocking, J. S. (2009). Surveillance of STI risk behaviour among young people attending a music festival in Australia, 2005-08. *Australian and New Zealand Journal of Public Health*, 33, 482-484.
4. Peipert, J. F. (2003). Genital chlamydial infections. *New England Journal of Medicine*, 349, 2424-2430.
5. Rissel, C. E., Richters, J., Grulich, A. E., Visser, R. O., & Smith, A. M. A. (2003). Sex in Australia: First experiences of vaginal intercourse and oral sex among a representative sample of adults. *Australian and New Zealand Journal of Public Health*, 27, 131-137.
6. Regan, D. G., Wilson, D. P., & Hocking, J. S. (2008). Coverage is the key for effective screening of chlamydia trachomatis in Australia. *Journal of Infectious Diseases*, 198, 349-358.
7. Hocking, J. S., Lim, M. S. C., Vidanapathirana, J., Read, T. R. H., & Hellard, M. (2006). Chlamydia testing in general practice: a survey of Victorian general practitioners. *Sexual Health*, 3, 241-244.
8. ACCEPt Research Team. (2009). ACCEPt: *Australian Chlamydia Control Effectiveness Pilot*. Retrieved July 6, 2010, from <http://accept.org.au/>
9. Smith, A., Agius, P., Mitchell, A., Barrett, C., & Pitts, M. (2009). *Secondary Students and Sexual Health 2008*. Monograph Series No. 70. Melbourne: Australian Research Centre in Sex, Health & Society, La Trobe University.
10. Forrest, B., & Plummer, D. (1999). Factors affecting indigenous Australians' access to sexual health clinical services. *Venereology*, 12, 47-52.
11. Fleming, D. T., & Wasserheit, J. N. (1999). From epidemiological synergy to public

health policy and practice: the contribution of other sexually transmitted diseases to sexual transmission of HIV infection. *Sexually Transmitted Infections*, 75, 3-17.

12. Zablotska, I. B., Imrie, J., Bourne, C., Grulich, A. E., Frankland, A., & Prestage, G. (2008). Improvements in sexual health testing among gay men in Sydney, Australia, 2003-2007. *International Journal of STD & AIDS*, 19, 758-760.

13. Currie, M. J., Martin, S. J., Soo, T. M., & Bowden, F. J. (2006). Screening for chlamydia and gonorrhoea in men who have sex with men in clinical and non-clinical settings. *Sexual Health*, 3, 123-126.

Information and resources

NSW Sexual Health Infoline 1800 451 624

Provides sexual health information and referral to community members, and provides specialist clinical support and information to health professionals treating clients with sexual health issues

Get Clued Up

All you need to know about chlamydia
<http://www.getcluedup.com.au/>

Get Tested

NSW Health STI and HIV Education Campaign website providing information on STIs, testing, treatment and prevention
<http://www.gettested.com.au>

NSW Health Chlamydia factsheet

<http://www.health.nsw.gov.au/factsheets/infectious/chlamydia.html>

National STI Prevention Program: Sexual Health Campaign

An Australian Department of Health and Ageing website about STI prevention, testing and treatment
<http://www.health.gov.au/internet/sti/publishing.nsf/Content/home-1>

Australian Indigenous HealthInfoNet

Information and resources about sexual health among Indigenous peoples
<http://www.healthinonet.ecu.edu.au/other-health-conditions/sexual>

Drama Downunder

Website about the most common STIs experienced by gay men, STI testing, and partner notification.
www.thedramadownunder.info/

Young people in New Zealand discuss barriers to accessing chlamydia testing and ways to improve rates of testing.

This paper aimed to explore attitudes towards chlamydia testing among young people in New Zealand. Focus groups were conducted with 28 people aged 16–24 years and participants identified a number of barriers to testing including a lack of awareness and knowledge about chlamydia, especially how to access testing, what testing involved, and the asymptomatic nature of infection in most cases. Other barriers included fear of being tested and perceived stigma associated with infection. Discussing sexual matters was considered a source of discomfort for both patients and providers (particularly GPs).

To improve testing rates, most participants suggested the introduction of routine testing in general practice, for example during a general check-up or pap smear test. Participants felt that stigma would be reduced if the GP suggested testing, rather than having to request it. It was argued that this would normalise testing among young people. Some participants suggested mandatory testing.

A common concern raised about accessing testing was the perception of others regarding your reason for attending a

health service. For this reason, accessing a GP for chlamydia testing was favoured because the array of different services offered by GPs maintained privacy. Attending a sexual health service made the reason for the visit more transparent which could result in perceived stigma. However, some participants valued accessing a dedicated service because 'they see people with this stuff all the time', thereby reducing embarrassment associated with attendance.

Home-testing kits were considered a good idea by many because of the anonymity and autonomy provided by this method and there was a preference for accessing these via the internet or a telephone hotline rather than a pharmacy. Some thought that the cost of home-kits could be prohibitive.

In order to improve awareness and knowledge of chlamydia among young people, participants suggested 'straightforward' public education providing essential information about STIs, their consequences and how to access testing. Television, radio, pamphlets, and the internet were considered good mediums for these campaigns. Sex education at schools was considered inadequate by most participants.

 Rose, S. B., Smith, M. C., & Lawton, B. A. (2008). "If everyone does it, it's not a big deal." Young people talk about chlamydia testing. *New Zealand Medical Journal*, 121, 33-42.

2 Young women want testing based on age rather than sexual risk

In-depth interviews were conducted with 24 young Australian women to determine their attitudes to chlamydia screening by GPs. Interviewees were most interested in age-based screening of all young women that was independent of sexual history. Some women said they may not be truthful about their sexual activity for fear of being judged by their GP, and cited this as a barrier to testing. In combination with community education campaigns, interviewees believed routine screening would normalise testing and reduce stigma associated with infection. Regarding how test results were received, the preferred method was face-to-face with their GP. Other acceptable methods were a phone call or a letter in an unmarked envelope. Technologies such as email and SMS were less favoured due to concerns about privacy.

Pavlin, N. L., Parker, R., Fairley, C. K., Gunn, J. M., & Hocking, J. (2008). Take the sex out of STI screening! Views of young women on implementing chlamydia screening in General Practice. *BMC Infectious Diseases*, 8, doi:10.1186/1471-2334-1188-1162.

3 GPs are missing opportunities for testing

This paper reports on a survey of 576 general practitioners in Western Australia about their chlamydia-related knowledge and practices with young people. While 76% of GPs were aware that 20–24 year olds are an at-risk group, less than half were aware that chlamydia is common in 15–19 year olds.

Results showed that a large proportion of GPs are missing opportunities to screen for chlamydia in at-risk groups, often because they believed the patient would be embarrassed. In the context of a pap smear test or offering contraceptive or safe sex advice, the authors suggested that GPs could easily incorporate testing for chlamydia. Finally, 15% of GPs did not routinely notify the Department of Health of chlamydia infections.

Temple-Smith, M. J., Mak, D., Watson, J., Bastian, L., Smith, A., & Pitts, M. (2008). Conversant or clueless? Chlamydia-related knowledge and practice of general practitioners in Western Australia. *BMC Family Practice*, 9, doi:10.1186/1471-2296-1189-1117. *Hepatitis Australia*.

4 Sexual health screening among young Indigenous people

This paper explored the experiences of accessing sexual health services by young Aboriginal and Torres Strait Islander people in Queensland. Interviews were conducted with 45 young people, most of whom lacked stable accommodation. Most participants had accessed sexual health services for testing, treatment, prevention advice, and/or free condoms. This was most commonly an Indigenous health service but sexual health centres were also used. The majority rated their experiences positively. Seeing an Indigenous health worker was important as participants felt understood and comforted due to shared cultural identity. Seeing a same-gendered health worker was imperative.

Barriers to treatment centred largely around shame associated with STIs and having to seek treatment. Making and keeping appointments was another barrier cited by participants. This study highlights the importance of culturally appropriate sexual health services for Indigenous young people.

Mooney-Somers, J., Erick, W., Scott, R., Akee, A., Kaldor, J., & Maher, L. (2009). Enhancing Aboriginal and Torres Strait Islander young people's resilience to blood-borne and sexually transmitted infections: findings from a community-based participatory research project. *Health Promotion Journal of Australia*, 20, 195-201.

5 Chlamydia risk in MSM

This paper reports on the incidence and risk factors for urethral and anal chlamydia among 1427 HIV-negative MSM in Sydney. For men under 25 years, results from the Health in Men Study reported an incidence of 10.03 and 6.97 per 100 person-years for urethral and anal chlamydia, respectively.

Urethral chlamydia was associated with younger age (≤ 34 years), insertive oral sex, and having a greater number of casual sex partners. Anal chlamydia was associated with receptive unprotected anal intercourse (UAI), receptive rimming, and having a greater number of casual sex partners. Anal chlamydia was not associated with younger age. The authors recommended that screening for urethral and anal chlamydia should be conducted with all sexually active MSM, and not just among men reporting UAI.

Jin, F., Prestage, G. P., Mao, L., Kippax, S. C., Pell, C. M., Donovan, B., et al. (2007). Incidence and risk factors for urethral and anal gonorrhoea and chlamydia in a cohort of HIV-negative homosexual men: the Health in Men Study. *Sexually Transmitted Infections*, 83, 113-119.

6 Notifying partners about chlamydia infection

Forty Australian adults were interviewed about the psychosocial effects of chlamydia infection and partner notification. Interviews were conducted post-diagnosis and most participants were under 25 years.

The most common reaction to diagnosis among women was shock, while men more often expressed surprise or indignity. Shame and disappointment were experienced by both men and women. A small number of participants expressed relief in identifying the cause of their symptoms, while some were more neutral in their response to diagnosis.

Most participants felt a sense of obligation to inform sex partners about their infection. Many cited concerns about the risk to partners' health. Reluctance to contact partners often stemmed from fears about their reaction. Other reasons included not having their contact details. Some experienced hostility after notifying partners. However, more commonly expressed was that notification proceeded better than expected.

Temple-Smith, M., Hopkins, C., Fairley, C., Tomnay, J., Pavlin, N., Parker, R., et al. (2010). The right thing to do: patients' views and experiences of telling partners about chlamydia. *Family Practice*, doi:10.1093/fampra/cm1028.

7 Australian students and chlamydia testing

In this survey of the attitudes of 185 university students in Sydney towards chlamydia testing by GPs, only 27% of sexually active participants had ever been tested for chlamydia, the majority of whom had been tested by their GP. Over 80% reported a low likelihood of being tested in the following year, typically because of a low perception of risk. Other reasons included ignorance of what a test involved or where to get tested, fear of what others may think, cost of testing, and not wanting to know.

Three-quarters reported being comfortable with chlamydia testing by their GP regardless of the reason for their consultation. Those who were not comfortable most commonly reported that they were not at risk of infection or were not comfortable discussing sexual matters with their GP. The results highlight the important role GPs can play in opportunistic chlamydia testing.

Zakher, B., & Kang, M. (2008). Attitudes to chlamydia screening in general practice among Australian university students: a pilot study. *Sexual Health*, 5, 359-363.

Action Points

- Young people aged 25 years and under bear the largest burden of chlamydia infection in Australia. Efforts must be focused on increasing the proportion of young people who are tested and treated for chlamydia in order to reduce the number of annual notifications. The Federal Government are currently addressing this with ACCEPt, a chlamydia testing pilot providing routine testing of young people attending general practice.
- GPs may require further education and support to improve their capacity to respond to increasing rates of infection by opportunistically offering chlamydia testing to asymptomatic young people.
- Young people have clear knowledge deficits in relation to chlamydia. Efforts should be made to improve awareness and knowledge about chlamydia. For example, that it affects both men and women, the asymptomatic nature of most infections, and the risks associated with untreated infection.
- Increasing the perception of personal relevance of chlamydia testing is also important, as young people will not proactively access testing if they do not believe they are at risk.
- The provision of culturally appropriate and targeted sexual health services for Indigenous young people is imperative, as they experience far higher rates of chlamydia than their non-Indigenous counterparts.