

Surveillance summaries

NATIONAL NOTIFIABLE DISEASES SURVEILLANCE SYSTEM SURVEILLANCE REPORT: SEXUALLY TRANSMISSIBLE INFECTIONS IN ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE

Amy Bright

Introduction

Aboriginal and Torres Strait Islander people represent 3% of the Australian population, of which more than two-thirds are less than 34 years of age.¹ The Indigenous population is considerably diverse, socially, culturally and geographically, providing a challenging environment to deliver culturally appropriate and accessible healthcare services.²

Despite improvements in health outcomes, disparities between the Indigenous and non-Indigenous populations are evident and occur for a range of health issues, including sexual health.³ Indigenous people continue to be disproportionately represented in the sexually transmissible infections (STI) notification data, particularly in younger age groups residing in remote locations.

Methods

Notification data, for selected STIs, extracted from the Nationally Notifiable Diseases Surveillance System (NNDSS) as at 17 September 2015 were used for the analyses. HIV notification data, collected through the National HIV Registry, were sourced from the 2015 annual surveillance reports from the Kirby Institute.⁴

Case identification

For the purposes of this report, notifications with an Indigenous status field reported as not Indigenous or blank/unknown were considered to be non-Indigenous. In interpreting these data it is important to note that changes in notifications over time may not solely reflect changes in disease prevalence. Changes in screening programs,^{5,6} the use of less invasive and more sensitive diagnostic tests⁷ and periodic public awareness campaigns⁸ may influence the number of notifications that occur over time. Rates for STIs are particularly susceptible to overall rates of testing.⁹ As a priority and 'at risk' population, Indigenous people are commonly targeted for STI screening often resulting in a higher number of reported cases.

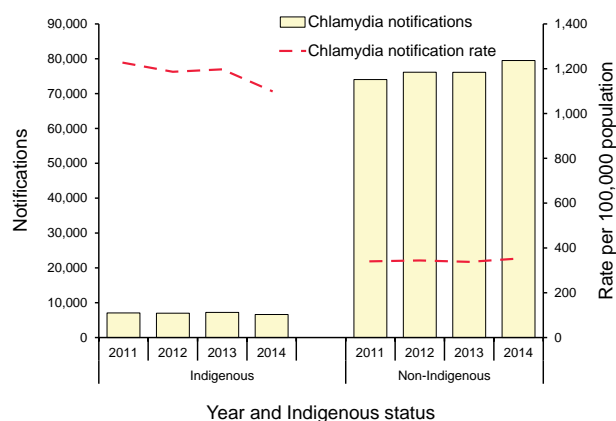
Results

In 2014, the notification rates for chlamydia, infectious syphilis and gonococcal infections in the Indigenous population were 3, 4 and 18 times higher respectively than the non-Indigenous population (Table, Figures 1–3).

Table: Notification rates per 100,000 for sexually transmissible infections and HIV and 5 year trend, Australia, 2014, by Indigenous status

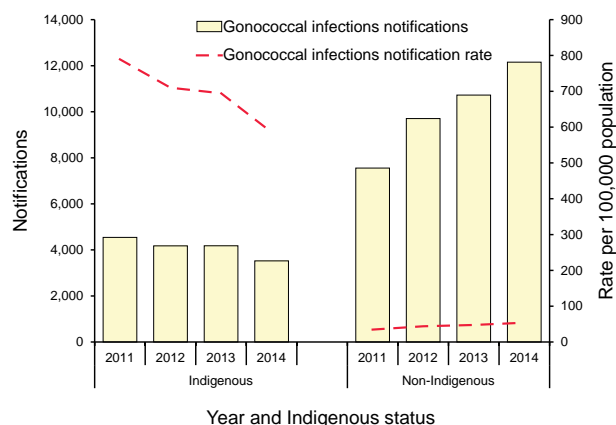
Disease	Non-Indigenous		Indigenous	
	2014	5-year trend	2014	5-year trend
HIV (newly diagnosed)	3.7	Stable from 2012 (men who have sex with men; urban areas)	5.9	Fluctuating (heterosexual contact and injecting drug use)
Chlamydia	389.0	Stable from 2011	1,341.0	Stable from 2011
Gonorrhoea	49.0	81% increase (men who have sex with men; urban areas)	859.0	Fluctuating – declines in younger age groups (heterosexual contact; remote areas)
Infectious syphilis	8.0	73% increase (men who have sex with men; urban areas)	32.0	46% increase (heterosexual contact; remote areas)
Donovanosis	–	1 case in 2012	–	1 case in 2014

Figure 1: Notifications and notification rate (unadjusted) for chlamydia, 2011 to 2014, by year and Indigenous status



* Data as at 17 September 2015.

Figure 2: Notifications and notification rate (unadjusted) gonococcal infection, 2011 to 2014, by year and Indigenous status

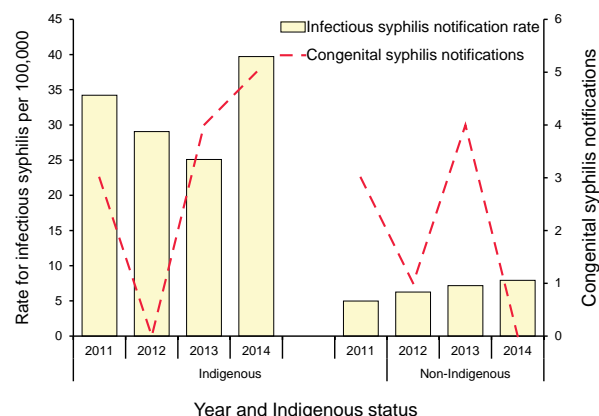


* Data as at 17 September 2015.

In 2014, in the Indigenous population:

- chlamydia notifications were predominately reported in females, representing 66% of notifications (non-Indigenous 56% of notifications were female) and 80% of all chlamydia notifications for Indigenous persons were in the 15–29 years age range (78% in non-Indigenous);
- gonococcal notifications were reported relatively evenly across the sexes indicating transmission was predominately heterosexual, with females representing 55% and males 45% of notifications (non-Indigenous 81% of notifications were male), and 71% of all gonorrhoea notifications for Indigenous persons were in the 15–29 years age range (56% in non-Indigenous);

Figure 3: Notification rate (unadjusted) for infectious syphilis and number of congenital syphilis cases, by year and Indigenous status, 2011 to 2014



* Data as at 17 September 2015.

- infectious syphilis notifications were reported evenly across the sexes indicating transmission was predominately heterosexual, with males representing 52% and females 48% of notifications (non-Indigenous 97% of notifications were male), and 67% of all infectious syphilis notifications for Indigenous persons were in the 15–29 years age range (44% in non-Indigenous);
- 1 case of donovanosis was reported in a 38-year-old male (no cases in the non-Indigenous population).
- An on-going outbreak of infectious syphilis affecting young Indigenous people in remote areas of northern Australia (Western Australia, the Northern Territory and Queensland) has resulted in a marked increase in the notification rate in Indigenous children aged 15–19 years between 2010 and 2014 (34 to 99 per 100,000).

The notification rate for infectious syphilis in the Indigenous population between 2013 and 2015 (17 September) almost doubled (25–49 per 100,000). Increases in infectious syphilis may coincide with increased cases of congenital syphilis (Figure 3).

Notification rates of HIV diagnosis in 2014 among the Indigenous population were higher than in the non-Indigenous population (5.9 and 3.7 per 100,000 respectively).

A summary of STI transmission, treatment, trends and risk groups in Australia is shown in the Appendix.

Data presented in this report may differ to those presented in the 2015 Annual Kirby surveillance

reports and the NNDSS annual report (pending publishing); however the overall trends are comparable.

Discussion

In Australia, notifications of non-congenital syphilis and gonorrhoea have continued to rise, with the majority of notifications occurring in non-Indigenous males residing in urban settings and young Indigenous people residing remote areas. In the last few years notifications of chlamydial infection have stabilised; however chlamydia continues to be the most commonly reported infection across all nationally notifiable diseases, largely affecting young Indigenous and non-Indigenous women.

Greater representation of women in STI notifications is linked to health seeking behaviour; in general women are more likely to access health-care services as compared to men who often have biological, sociological and psychological factors determining their 'help-seeking' practices.¹⁰ This is particularly apparent in Indigenous men, who face not only gender related issues but cultural and in some instances geographical barriers when accessing care.¹⁰ Men who remain undiagnosed and therefore untreated have the potential to perpetuate transmission within communities. Repeat and persistent STI infection in Indigenous communities is common, and can have considerable impact on rates of notifications and the prevalence of serious complications of infection, including pelvic inflammatory disease.^{11,12} Physical access to condoms, due to geographical location, and inconsistent condom use, are also contributing factors to high rates of STI infection in the Indigenous population.^{13,14}

The Australian Government, in collaboration with states, territories and the community, continues to work towards effective public health interventions to prevent STI within the population, particularly among young people and other 'at risk' populations. The fourth *National Aboriginal and Torres Strait Islander BBV and STI Strategy 2014–2017*, part of a suite of National Strategies for BBV and STI, includes specific targets for the elimination of congenital syphilis, reducing the incidence of chlamydia, gonorrhoea and infectious syphilis in people under 30 years of age, and increasing the number of people with HIV receiving treatment.

The Strategy supports the goals of *National Aboriginal and Torres Strait Islander Health Plan 2013–2023*, a long-term, evidence-based policy framework as part of the overarching Council of Australian Governments' approach to Closing the Gap in Indigenous disadvantage.

To achieve the targets of the Strategy and address the disproportionate representation of Indigenous people with STI, the Australian Government continues to support innovative approaches, including Point-of-Care Testing to achieve same day STI testing and treatment for Indigenous people residing in remote communities; engagement of organisations to provide healthcare services specifically to Indigenous people, including routine screening for STI; and comprehensive community education and health promotion.

Acknowledgements

Ms Sarah Norris; Ms Leonor Nacua; Ms Kavita Verma; Ms Michaela Coleborne; Ms Lindsey Bailie

Author details

Ms Amy Bright, Office of Health Protection, Australian Government Department of Health, MDP 14, GPO Box 9848, CANBERRA ACT 2601. Telephone: +61 2 6289 5844. Email: Amy.Bright@health.gov.au

Appendix: Sexually transmissible infections transmission, treatment, trends and risk groups, Australia

Disease	Transmission ¹⁵ (causative agent)	Recommended treatment ¹⁶	Trends	Risk groups
Gonorrhoea	Sexual exposure – contact with exudate from mucus membranes of infected people. Sites of infection include – urogenital, rectum and pharynx/throat. Can be transmitted perinatally (during childbirth). (<i>Neisseria gonorrhoeae</i>)	Ceftriaxone 500 mg single dose intramuscularly (decreased susceptibility reported)	Highest number of reported notifications in 2014 (more than 15,000). Notifications have increased substantially over the previous 7 years – with the highest increase between 2009 and 2010 (23%).	Men who have sex with men (MSM) Heterosexual contact within Indigenous populations
Chlamydia	Sexual exposure – genital contact and/or intercourse with an infected person (cases largely asymptomatic) Perinatal transmission occurs through exposure to mother's infected cervix during childbirth. (<i>Chlamydia trachomatis</i> [immunotypes D – K])	Azithromycin 1 g single oral dose	Most frequently reported infection in Australia. Notifications stabilised from 2011 after steady increase from 1999 to 2010.	Females 15–24 years Indigenous people (men and women)
Syphilis*	Sexual exposure – direct contact with infectious exudates from moist early lesions of skin and mucous membranes. Transplacental infection of the fetus occurs during pregnancy in an infected woman. (<i>Treponema pallidum</i>)	Penicillin 1.8 g single dose intramuscularly	Rates increasing for non-congenital cases – with the majority of cases reported in MSM. Congenital syphilis rare disease – with approximately 5 cases reported each year.	Men who have sex with men (MSM) Heterosexual contact within Indigenous populations
Donovanosis	Sexual exposure – contact with ulcers. (<i>Klebsiella granulomatis</i>)	Azithromycin 1 g oral dose weekly for 4–6 weeks	Targeted for elimination. Predominantly in Indigenous females in rural/remotely communities in central/northern Australia – relatively uncommon. Fewer than 6 cases notified each year since 2006.	
HIV (notified to the Kirby Institute)	Sexual exposure – exchange of bodily fluids during sex. Can be transmitted perinatally and parenterally (including intravenous injection).	Antiretroviral therapy – to suppress HIV replication (no cure)	Newly diagnosed infection has stabilised over the last 3 years (2012–14). Estimated 27,150 people living with HIV – 12% unaware of their HIV positive status.	MSM Heterosexual contact within Indigenous populations.

Appendix (cont'd): Sexually transmissible infections transmission, treatment, trends and risk groups, Australia

Disease	Transmission ¹⁵ (causative agent)	Recommended treatment ¹⁶	Trends	Risk groups
HPV (not nationally notifiable)	Sexual exposure – genital, rectal, mouth and oropharyngeal, skin to skin and mucosal to mucosal membrane contact and oral faecal contamination during sex. (Human papillomavirus – largely non-cancerous genotypes 6 and 11 (causing genital warts) and cancerous genotypes 16 and 18.	No treatment for virus but vaccine preventable – cancerous outcomes managed	Early markers of HPV infection (genital warts) have decreased substantially in young females post vaccination program (2007) – with marked decreases in largely heterosexual males (2013). Low and high grade cervical lesions (pre-cancer) have also declined in females.	All sexually active people.

* Includes unspecified syphilis (more than 2 years or unspecified duration), infectious syphilis (less than 2 years duration) and congenital syphilis.

References

1. Australian Bureau of Statistics. *Estimates and Projections, Aboriginal and Torres Strait Islander Australians, 2001 to 2026*. Canberra: Australian Bureau of Statistics; cat. no. 3238.0; 2014.
2. Australian Institute of Health and Welfare. *The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples*. Canberra: Australian Institute of Health and Welfare; cat. no. IHW 147; 2015.
3. Australian Institute of Health and Welfare. *Australia's Health 2014*. Australia's health series no. 14. Canberra: Australian Institute of Health and Welfare; cat. no. AUS 178; 2014.
4. The Kirby Institute. *HIV, Viral Hepatitis and Sexually Transmissible Infections in Australia Annual Surveillance Report*. Sydney NSW: The University of New South Wales; 2015.
5. Chen MY, Fairley CK, Donovan B. Nowhere near the point of diminishing returns: correlations between chlamydia testing and notification rates in New South Wales. *Aust N Z J Public Health* 2005;29(3):249–253.
6. Hocking J, Fairley C, Counahan M, Crofts N. The pattern of notification and testing for genital *Chlamydia trachomatis* infection in Victoria, 1998–2000: an ecological analysis. *Aust N Z J Public Health* 2003;27(4):405–408.
7. Burckhardt F, Warner P, Young H. What is the impact of change in diagnostic test method on surveillance data trends in *Chlamydia trachomatis* infection? *Sex Transm Infect* 2006;82(1):24–30.
8. Chen MY, Karvelas M, Sundararajan V, Hocking JS, Fairley CK. Evidence for the effectiveness of a chlamydia awareness campaign: increased population rates of chlamydia testing and detection. *Int J STD AIDS* 2007;18(4):239–243.
9. Hammad A, Guy RJ, Fairley C, Wand H, Chen MY, Dickson B, et al. Understanding trends in genital *Chlamydia trachomatis* can benefit from enhanced surveillance: findings from Australia. *Sex Trans Infect* 2012;88(7):552–557.
10. Smith J, Braunack-Mayer A, Wittert G. What do we know about men's help-seeking and health service use? *Med J Aust* 2006;184(2):81–83.
11. Guy R, Natoli L, Ward J, Causer L, Hengel B, Whiley D, et al. A randomised trial of point-of-care tests for chlamydia and gonorrhoea infections in remote Aboriginal communities: Test, Treat AND GO- the "TTANGO" trial protocol. *BMC Infect Dis* 2013;13(485).
12. Strobel N, Ward J. *Education programs for Indigenous Australians about sexually transmitted infections and bloodborne viruses*. Resource sheet no. 14 for the Closing the Gap Clearinghouse. Canberra, ACT: Australian Institute of Health and Welfare; 2012.
13. Stark A, Hope A. Aboriginal women's stories of sexually transmissible infection transmission and condom use in remote central Australia. *Sex Health* 2007;4(4):2237–2242.
14. Larkins S, Page R, Panaretto K, Scott R, Mitchell M, Alberts V, et al. Attitudes and behaviours of young Indigenous people in Townsville concerning relationships, sex and contraception: the "U Mob Yarn Up" project. *Med J Aust* 2007;186(10):513–518.
15. Heymann D. *Control of Communicable Diseases Manual*. American Public Health Association; 2008.
16. Australasian Society for HIV Medicine. *HIV, Viral Hepatitis and STIs: A Guide for Primary Care*. Sydney: 2014. Available from: <http://www.ashm.org.au/resources/Pages/1976963411.aspx>