



Bloodborne viral and sexually
transmitted infections in Aboriginal
and Torres Strait Islander people:
Surveillance and Evaluation Report

2011

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Aboriginal and Torres Strait Islander Health Program
The Kirby Institute for infection and immunity in society.
University of New South Wales, Sydney NSW 2052

Telephone: **02 9385 0900** Facsimile: **02 9385 0920** International prefix: 61 2 Email: recept@kirby.unsw.edu.au

Edited by The Kirby Institute (formerly the National Centre in HIV Epidemiology and Clinical Research)

Prepared by Andrew Nakhla, Melanie Middleton Ann McDonald and James Ward

Edited by James Ward

Kirby Institute for infection and immunity in society Sydney, Australia

in collaboration with Australian networks in surveillance for HIV, viral hepatitis and sexually transmissible infections

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Preface

This surveillance report provides information on the occurrence of bloodborne viral and sexually transmitted infections (STIs) among Aboriginal and Torres Strait Islander people in Australia. The report is published by the Kirby Institute for the purposes of stimulating and supporting discussion on ways forward in minimising the transmission risk of bloodborne viruses and STIs as well as the personal and social consequences of these infections within Aboriginal and Torres Strait Islander communities.

This Report is published annually as an accompanying document to the report *HIV, viral hepatitis and sexually transmissible infections in Australia Annual Surveillance Report* and is overseen by the National Aboriginal Community Controlled Health Organisation (NACCHO) Sexual Health and Blood Borne Virus Advisory Committee and the Annual Surveillance Report 2011 Advisory Committee.

The report is produced in a format that is recognised as appropriate for Aboriginal and Torres Strait Islander health services and communities and is available in hard copy and at the internet address <http://www.kirby.unsw.edu.au>

Unless specifically stated otherwise, all data provided in this report are to the end of 2010, as reported by 31 March 2011. Data in the *Surveillance and Evaluation Report 2011* are provisional and subject to future revision.

The *Report* could not have been prepared without the collaboration of a large number of organisations involved in health services throughout Australia. The ongoing contribution of these organisations, listed in the following section, is gratefully acknowledged.

Acknowledgments

National Organisations

- Australasian Society for HIV Medicine, Sydney, NSW
- Australian Federation of AIDS Organisations, Sydney, NSW
- Australian Government Department of Health and Ageing, Canberra, ACT
- Australian Institute of Health and Welfare, Canberra, ACT
- Communicable Diseases Network Australia, Canberra, ACT
- Hepatitis Australia, Canberra, ACT
- National Aboriginal Community Controlled Health Organisation, Canberra, ACT
- National Association of People Living with HIV/AIDS, Sydney, NSW

State/Territory Health Departments

- Communicable Disease Control Program, ACT Department of Health and Community Care, Canberra, ACT
- Area Health Services, NSW Health Department, North Sydney, NSW
- Sexual Health and BBV Program, Centre for Disease Control, Department of Health, Darwin, NT
- Queensland Health, Brisbane, QLD
- Sexually Transmitted Diseases (STD) Services, Internal Medicine Service, Royal Adelaide Hospital, SA
- Department of Community and Health Services, Hobart, TAS
- STD/Bloodborne Virus Program, Infectious Diseases Unit, Department of Human Services, Melbourne, VIC;
The Macfarlane Burnet Institute for Medical Research and Public Health Limited, Prahran, VIC
- Communicable Diseases Control Branch, Department of Health, Perth, WA

Collaboration of Australian Needle and Syringe Programs

- Directions ACT, ACT
- AIDS Council of NSW (Sydney and Hunter); Albury Community Health Centre, Albury; First Step Program, Port Kembla and Nowra; Health ConneXions, Harm Reduction Program, Liverpool; Hunter Harm Reduction Services, Newcastle; Indo-Chinese Outreach Network (ICON) Bankstown, Cabramatta and Liverpool; Kirketon Road Centre and K2, Kings Cross; NSW Users and AIDS Association (NUAA), Surry Hills; Northern Rivers Area Health Service, Ballina, Byron Bay, Lismore, Murwillumbah, Nimbin, and Tweed Heads; Resource and Education Program for IDUs, Redfern and Canterbury; Responsive User Services in Health (RUSH), Manly, Ryde and St Leonards; St George NSP, Kogarah; South Court Primary Care NSP, Nepean; Sydney West Area Health Service HIV/Hepatitis C Prevention Service, Auburn, Blacktown, Merrylands, Mt Druitt and Parramatta, NSW
- Northern Territory AIDS and Hepatitis C Council, Alice Springs, Darwin and Palmerston, NT
- Biala Community Alcohol and Drug Services, Brisbane; Cairns Base Hospital NSP, Cairns; Cairns Youthlink, Cairns; Queensland Injectors Health Network (QuIHN), Brisbane, Gold Coast and Sunshine Coast; Kobi House, Toowoomba; West Moreton Sexual Health Service, Ipswich, QLD
- Drug and Alcohol Services South Australia, Adelaide; Hindmarsh Centre, Hindmarsh; Nunkuwarrin Yunti Community Health Centre, Adelaide; South Australia Voice for Intravenous Education (SAVIVE): AIDS Council South Australia, Norwood; Parks Community Health Service, Adelaide; Port Adelaide Community Health Service, Port Adelaide; Noarlunga Community Health Service, Adelaide; Northern Metropolitan Community Health Service NSP and Shopfront, Salisbury, SA
- Clarence Community Health Centre, Clarence; Devonport Community Health Centre, Devonport; Salvation Army Launceston, Launceston; Tasmanian Council on AIDS, Hepatitis & Related Diseases (TasCAHRD), Hobart and Glenorchy; The Link Youth Health Service, Hobart, TAS

- Barwon Health Drug and Alcohol Services, Geelong; Bendigo NSP Services, Bendigo; Darebin Community Health Centre, Northcote; Health Information Exchange, St Kilda; Health Works, Footscray; Melbourne Inner Needle Exchange, Collingwood; North Richmond NSP, North Richmond; South East Alcohol and Drug Service, Dandenong; Southern Hepatitis/HIV/AIDS Resource and Prevention Service (SHARPS), Melbourne, VIC
- WA AIDS Council Mobile Exchange, Perth; Western Australia Substance Users Association (WASUA), Perth and Bunbury, WA

Surveillance and Evaluation Report 2011 Advisory Committee

- Dr Russell Waddell, Australasian Chapter of Sexual Health Medicine
- Dr Anne Mijch, Australasian Society of HIV Medicine
- Phillip Keen, Australian Federation of AIDS Organisations, Sydney, NSW
- Kate Robinson, Australian Government Department of Health and Ageing, Canberra, ACT
- Helen Tyrrell, Hepatitis Australia, Canberra, ACT
- Dr Cindy Shannon, Committee Member, Ministerial Advisory Committee on Blood Borne Viruses and Sexually Transmissible Infections
- Tadgh McMahon, Multicultural HIV/AIDS and Hepatitis C Service, Sydney, NSW
- John Daye, National Association of People Living with HIV/AIDS, Sydney, NSW
- Dr Iryna Zablotska, National Centre in HIV Social Research, The University of New South Wales, Sydney, NSW
- Professor John Kaldor, Associate Professor David Wilson, Professor Basil Donovan, Professor Andrew Grulich, Professor Lisa Maher, Ann McDonald, Melanie Middleton, Dr Libby Topp, Dr Handan Wand, James Ward, Kirby Institute, University of New South Wales, Sydney, NSW

National Aboriginal Community Controlled Health Organisation Sexual Health and Blood Borne Virus Advisory Committee 2011

- Ms Kathy Malera Bandjalar, Chair NACCHO Sexual Health and Blood Borne Virus Advisory Committee; Mr Mark Saunders, National Aboriginal Community Controlled Health Organisation (NACCHO); Mr Peter Waples Crowe, Victorian Aboriginal Community Controlled Health Organisation; Mr Sidney Williams, Queensland Aboriginal and Islander Health Council; Dr David Scrimgeour and Mr John Solar, Aboriginal Health Council of South Australia; Dr Liz Moore, Aboriginal Medical Services Alliance Northern Territory; Ms Katherine Dann, Aboriginal Health Council of Western Australia, Ms Sofia Lema, Aboriginal Health and Medical Research Council of NSW.

Guide to technical terms

AIDS (Acquired Immune Deficiency Syndrome): The late stage of infection with Human Immunodeficiency Virus (HIV). Without treatment, AIDS will develop in about 50% of people with HIV infection within the first ten years. The time to AIDS can range widely between people, being as short as one year in some people and longer than 15 years in others. The wide availability of effective antiretroviral therapy has dramatically reduced the number of AIDS cases in many countries.

Chlamydia: A sexually transmitted infection caused by a type of bacterium. The most common symptom in males is an inflammation of the urethra, causing some pain and penile discharge, and in females the main symptom is a vaginal discharge. Complications of long-term infection are particularly serious for women and can include pelvic inflammatory disease and infertility. Chlamydia is fully curable by a single dose of antibiotics.

Donovanosis: A sexually transmitted infection caused by a type of bacterium. The most common symptom is a large, painless ulcer of the genitals, the groin or the anal region, that can progress and become complicated by other bacterial infection if untreated, ultimately leading to serious damage to the affected part of the body, and even become life-threatening. Donovanosis is fully curable by 3 to 4 doses of antibiotics over a month. Donovanosis occurs in central and northern Australia.

Gonorrhoea: A sexually transmitted infection caused by a type of bacterium. Symptoms are similar to those of chlamydia, as are the complications. Most men with urethral gonorrhoea have symptoms. Gonorrhoea is fully curable by a single antibiotic injection.

HBV (hepatitis B virus) infection: An infection that is transmitted by sexual and blood contact, as well as from mother to child, and is caused by a virus known as HBV. Newly diagnosed hepatitis B virus infection means that a person previously not known to have the infection has been tested and now found to have the infection. Newly acquired infection means the person has become infected within the past two years.

HCV (hepatitis C virus) infection: An infection that is transmitted by blood contact as well as from mother to child. Newly diagnosed hepatitis C virus infection means that a person previously not known to have the infection has been tested and now found to have the infection.

HIV (Human Immunodeficiency Virus) infection: An infection that is transmitted by sexual and blood contact, as well as from mother to child. HIV infection is the cause of AIDS. Newly diagnosed HIV infection means that a person previously not known to have the infection has been tested and now found to have the infection. Newly acquired HIV infection means the person has become infected within the past year.

Infectious syphilis: A sexually transmitted infection caused by a type of bacterium. The main symptoms in the early stage are a small painless sore at the site of infection within the first few weeks, followed by a rash in the next few months. In the absence of treatment, there will then be a period of several years without any symptoms, followed by a range of complications over decades that can involve the skin, bone, intestinal tract, the central nervous system and cardiovascular system. Infectious syphilis is fully curable with a single injection of long acting penicillin.

For more information on these infections, see Chin J (2000). *Control of Communicable Diseases Manual*.

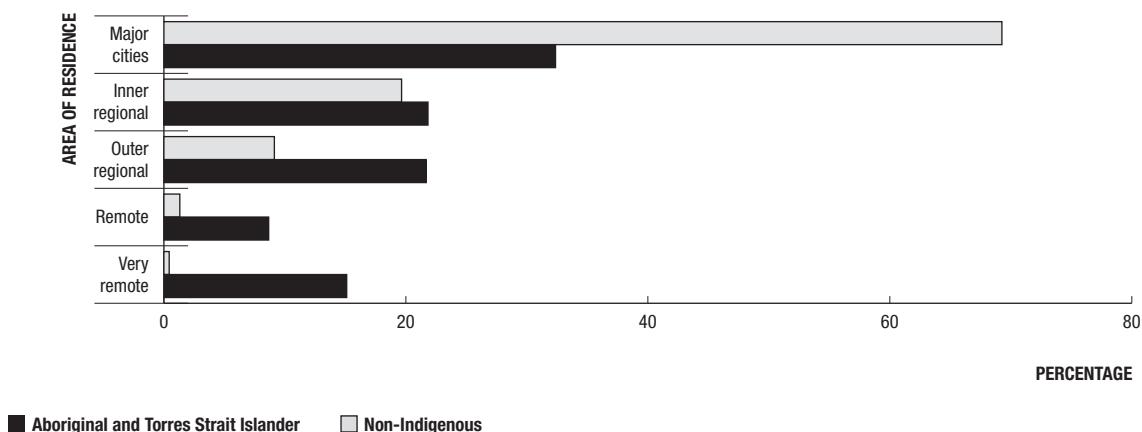
Age specific rate: The proportion of people in a particular age group who have the infection, usually expressed per 100 000 people in the specified age group.

Example: Age-specific rate of diagnosis of gonorrhoea among men aged 20 – 29 years
=
$$\frac{\text{Number of diagnoses of gonorrhoea among men aged 20 – 29 years}}{\text{Number of men aged 20 – 29 years}} \times 100\,000$$

Age standardised rate of infection: The proportion of people in a particular population who have the infection, adjusted by a mathematical technique to account for differences in age structure across populations when comparing rates.

Area of residence: Australia's population lives in many different geographic locations. Area of residence, indicated by postcode of residence at diagnosis of the specific blood borne viruses and sexually transmitted infections included in this report, has been classified into 5 remoteness areas: major cities of Australia, inner regional, outer regional, remote and very remote areas. A relatively high proportion of the Aboriginal and Torres Strait Islander population lives in regional and remote areas of Australia. In 2006, the highest proportion of the Aboriginal and Torres Strait Islander population (32.4%) lived in major cities. Almost half (45.5%) lived in outer regional, remote and very remote areas combined, compared with 10.8% in the non-Indigenous population (See *Methodological Notes* for further information).

Figure 1 Area of residence, 2006, by Aboriginal and Torres Strait Islander status



Source: Australian Bureau of Statistics

Reporting new diagnoses of specific bloodborne viruses and sexually transmitted infections by Aboriginal and Torres Strait Islander status: Trends in diagnoses of specific bloodborne viruses and sexually transmitted infections were included in the *Surveillance and Evaluation Report 2011* if information on Aboriginal and Torres Strait Islander status was available in a State/Territory health jurisdiction for at least 50% of diagnoses in each year over the past five years. Trends were not included in this *Surveillance and Evaluation Report* if information on Aboriginal and Torres Strait Islander status was available for less than 50% of diagnoses in a State/Territory health jurisdiction for less than five of the past five years.

Figure 2 Reporting of Aboriginal and Torres Strait Islander status at diagnosis of selected sexually transmitted infections, by State/Territory, 2010

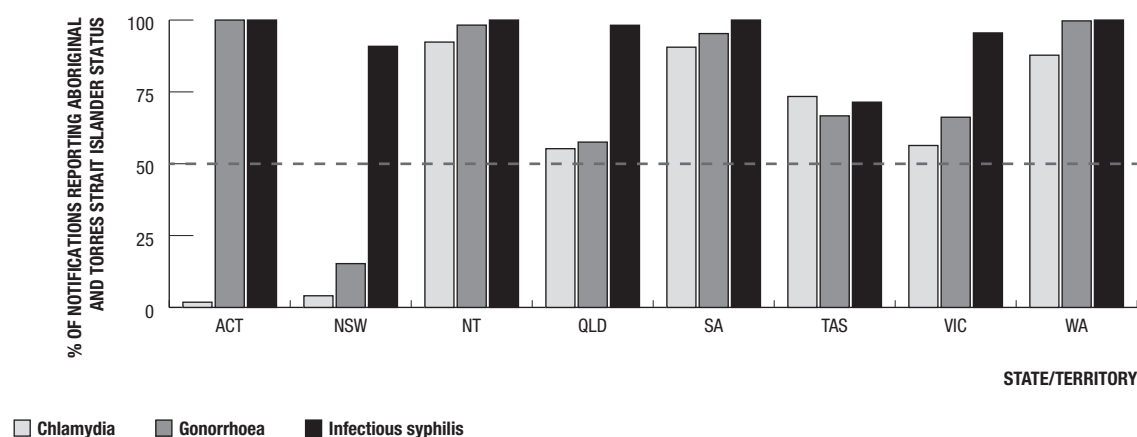
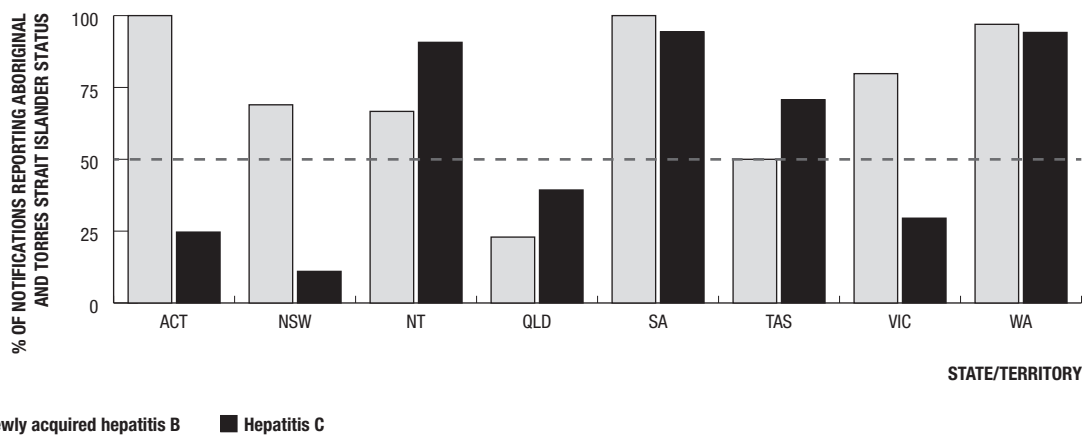


Figure 3 Reporting of Aboriginal and Torres Strait Islander status at diagnosis of viral hepatitis, by State/Territory, 2010



Data quality

- Information on the occurrence of blood borne viruses and sexually transmitted infections is included in this *Surveillance and Evaluation Report 2011* if Aboriginal and Torres Strait Islander status was reported for at least 50% of diagnoses in a State or Territory health jurisdiction in each of the past five years.
- There remain considerable gaps in the reporting of Aboriginal and Torres Strait Islander status at diagnosis of blood borne viruses and sexually transmitted infections in Australia. Aboriginal and Torres Strait Islander status was not reported in 50% (36 858) diagnoses of chlamydia, 35% (3506) of cases of gonorrhoea and 51% (3853) of cases of hepatitis C diagnosed in 2010. Incomplete information on Aboriginal and Torres Strait Islander identification has the potential to underestimate the true prevalence and morbidity associated with these infections in the Aboriginal and Torres Strait Islander population.

Summary

- Aboriginal and/or Torres Strait Islander people continue to be overrepresented in STIs and BBV notification data despite limitations related to data quality.
- Chlamydia and gonorrhoea continue to be reported at disproportionately high rates among Aboriginal and Torres Strait Islander people.
- The elimination of donovanosis from Australia continues with just one notification in Australia during 2010.
- Diagnoses of infectious syphilis remained stable in Aboriginal and Torres Strait Islander communities in 2010.
- Remote and very remote Aboriginal and Torres Strait Islander communities continue to experience significantly higher rates of chlamydia, gonorrhoea and infectious syphilis compared with regional and urban centres in Australia.
- HIV infection continues to be diagnosed at a similar rate to that in the non-Indigenous non-high HIV prevalence country of birth population although there are substantial differences in the distributions of exposure to HIV.
- Hepatitis C and B are reported at disproportionately high rates among Aboriginal and Torres Strait Islander communities.

Sexually transmitted infections

- Chlamydia continued to be the most frequently reported condition in Australia with 74 305 diagnoses in 2010. Of these, 6 681 (9%) were among Aboriginal and Torres Strait Islander people, 30 766 cases (41%) were diagnosed among non-Indigenous people and Indigenous status was not reported for 36 858 (51%) cases.
- The chlamydia diagnosis rate in the Aboriginal and Torres Strait Islander population in 2010 of 1 257 per 100 000 was more than three times the rate in the non-Indigenous population of 340 per 100 000.
- 80% of chlamydia diagnoses in 2010 in both populations occurred in the 15–19 and 20–29 year age groups.
- Female to male ratios of chlamydia notifications for Aboriginal and Torres Strait Islander people and non-Indigenous people were 1.6:1 and 1.4:1, respectively.
- Chlamydia reported from remote and very remote areas accounted for 68% of all notifications in the Aboriginal and Torres Strait Islander population.
- Of 10 015 diagnoses of gonorrhoea in 2010, 3 604 (36%) were among Aboriginal and Torres Strait Islander people, 2 905 (29%) were among non-Indigenous people and Indigenous status was not reported for 3 506 (35%).
- The rate of diagnosis of gonorrhoea in the Aboriginal and Torres Strait Islander population in 2010 was 804 per 100 000 compared to 30 in the non-Indigenous population.
- Male to female ratios of gonorrhoea notifications for Aboriginal and Torres Strait Islander and non-Indigenous people were 0.9:1 and 3.7:1, respectively.
- Only one case of donovanosis was diagnosed in Australia in 2010 demonstrating success in the efforts to eliminate this from Australian populations.
- Nationally, 1 098 cases of infectious syphilis were diagnosed in 2010. Of these, 130 (11.8%) cases were among Aboriginal and Torres Strait Islander people, 911 (83%) were among non-Indigenous people and Indigenous status was not reported for 57 (5.2%) cases.
- The rate of diagnosis of infectious syphilis in the Aboriginal and Torres Strait Islander population in 2010, was 25 per 100 000 compared to 5 per 100 000 in the non-Indigenous population.

HIV infection

- A total of 1 043 cases of HIV infection were newly diagnosed in 2010, giving a population rate of 4.6 per 100 000 population. Of the 1 043 diagnoses, 22 were among Aboriginal and Torres Strait Islander people.
- In the ten years from 2001 to 2010, 207 cases of HIV infection were newly diagnosed in Aboriginal and Torres Strait Islander people.
- In 2010, the rate of HIV diagnosis in the Aboriginal and Torres Strait Islander population (4.6 per 100 000) was similar to that in the non-Indigenous non-high HIV prevalence country of birth Australian population (4 per 100 000).
- Among cases of HIV infection newly diagnosed in 2006 – 2010, the most frequently reported route of HIV transmission was sexual contact between men in both the Aboriginal and Torres Strait Islander cases (48.5%) and in the non-Indigenous cases (70.8%).*
- In the period 2006 – 2010, Aboriginal and Torres Strait Islander cases differed from non-Indigenous non-high HIV prevalence country of exposure cases, in that a higher proportion of diagnoses were attributed to injecting drug use (19.4% vs 2.5%), and a higher proportion of cases were diagnosed among women (21.4% vs 8.0% for non-Indigenous cases).*
- Heterosexual contact was also reported as the source of exposure to HIV more frequently in Aboriginal and Torres Strait Islander cases (18.5%) than in non-Indigenous non-high HIV prevalence country of exposure cases (16.0%) (Figure 26).*

Viral hepatitis

- A total of 229 cases of newly acquired hepatitis B infection (HBV) were newly diagnosed in Australia in 2010; of these 19 (8%) were among Aboriginal and Torres Strait Islander people, 174 (72%) were among non-Indigenous people and Aboriginal and Torres Strait Islander status was not reported for 46 (20%) cases.
- In 2010, the rate of diagnosis of newly acquired hepatitis B infection in the Aboriginal and Torres Strait Islander population was 4 per 100 000 compared to 1 per 100 000 in the non-Indigenous population.
- A total of 7 608 cases of hepatitis C were diagnosed in Australia in 2010. Of these 458 (6%) occurred among Aboriginal and Torres Strait Islander people, 3 297 (43%) were among non-Indigenous people and Aboriginal Torres Strait Islander status was not reported for 3853 (51%) cases.
- The rate of newly diagnosed hepatitis C in the Aboriginal and Torres Strait Islander population was 141 per 100 000 compared to 43 per 100 000 in the non-Indigenous population.

* **Correction of material errors.**

An error in the proportion of non-Indigenous cases by exposure category was detected after publication of the Bloodborne viral and sexually transmitted infections in Aboriginal and Torres Strait Islander people: Surveillance and Evaluation Report 2011. The error has been corrected in this online version of the report.

Table 1 Aboriginal and Torres Strait Islander population in Australia, 2006, by State/Territory

State/Territory	Census 2006 Number ¹	Estimated resident population Number ²
ACT	3 873	4 282
NSW	138 504	152 685
NT	53 663	64 005
QLD	127 581	144 885
SA	25 556	28 055
TAS	16 770	18 415
VIC	30 140	33 517
WA	58 709	70 966
Total	455 016	517 043

1 Australian Bureau of Statistics. 2006 Census of population and housing. Indigenous status by age by sex. Canberra: Australian Bureau of Statistics, 2007.

2 Australian Bureau of Statistics 2008. *Experimental estimates of Aboriginal and Torres Strait Islander Australians*, 2006. Canberra: Australian Bureau of Statistics, 2008.

Source: Australian Bureau of Statistics 2007, 2008

Table 2 Number and rate¹ of diagnosis of bloodborne viruses and specific sexually transmitted infections in Australia², 2010, by Aboriginal and Torres Strait Islander status

Bloodborne virus/ sexually transmitted infection	Aboriginal and Torres Strait Islander		Non-Indigenous		Jurisdictions (number of cases) in which Aboriginal and Torres Strait Islander status was reported for less than 50% of diagnoses
	Number ¹	Rate ²	Number ³	Rate ²	
Chlamydia	3475	1257	32 179	340	ACT, NSW (18 673)
Gonorrhoea	3573	804	4064	30	NSW (1 968)
Infectious syphilis	130	25	911	5	
HIV infection	22	5	1 021	4	
Newly acquired hepatitis B	19	4	207	1	
Hepatitis C infection	242	141	1 798	43	ACT, QLD, TAS, VIC (3722) NSW*,

1 State/Territory health jurisdictions in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses in each of the past five years.

2 Age standardised rate per 100 000 population. Population estimates by State/Territory and year from *Experimental estimates of Aboriginal and Torres Strait Islander Australians* (ABS 2008).

3 Includes diagnoses in people whose Aboriginal and Torres Strait Islander status was not reported.

* Data for HCV was not available for NSW in 2010.

Source: State/Territory health authorities; National Notifiable Diseases Surveillance System

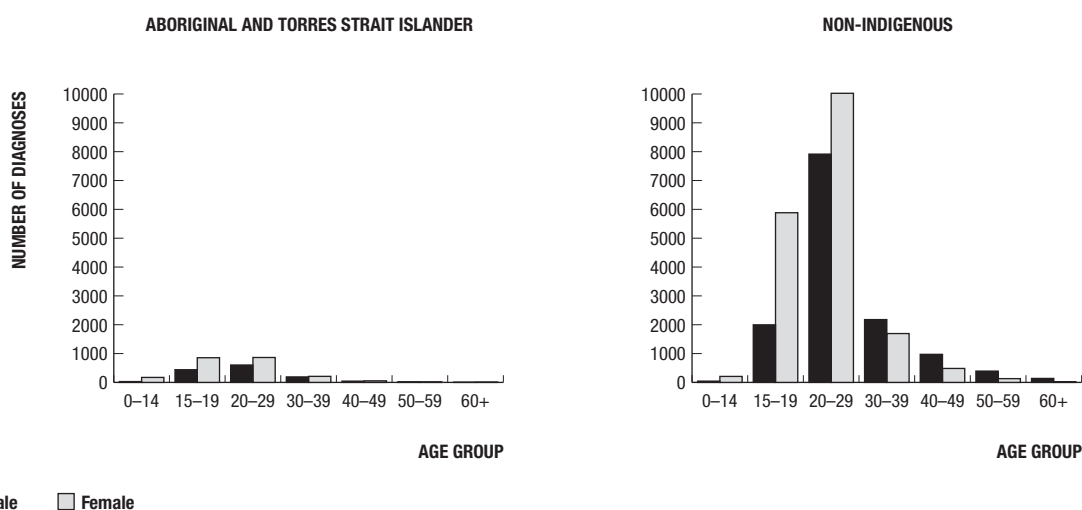
Main Findings

Chlamydia

- Chlamydia continued to be the most frequently reported notifiable condition in Australia in 2010. A total of 74 305 diagnoses were notified in 2010, 6 681 (9%) were among Aboriginal and Torres Strait Islander people, 30 766 (41%) were among non-Indigenous people and Indigenous status was not reported for 36 858 (50%) cases.
- The rate of diagnosis of chlamydia for the Aboriginal and Torres Strait Islander population was 3.7 times that of the non-Indigenous notification rate at 1257 and 340 per 100 000 population respectively.
- The rate of diagnosis of chlamydia in Australia continues to increase in both the Aboriginal and Torres Strait Islander population and in the non-Indigenous population. The rate of diagnosis of chlamydia in the Aboriginal and Torres Strait Islander population increased from 1039 in 2006 to 1 257 in 2010 (21% increase). In the non-Indigenous population, the rate increased by 65%, from 206 in 2006 to 340 per 100 000 population in 2010.
- Chlamydia is diagnosed predominantly among young people. In 2009, 80% of diagnoses were made among people aged 15 to 29 years among Aboriginal and Torres Strait Islander people and non-Indigenous people respectively.
- The rate of diagnosis of chlamydia in the Aboriginal and Torres Strait Islander population resident in major cities in South Australia, Victoria and Western Australia in 2009 was 3.4 times that among non-Indigenous people. Similarly residents in outer regional areas had a rate of diagnosis 3.3 times of non-Indigenous residents. Among Aboriginal and Torres Strait Islander people resident in remote and very remote areas in the Northern Territory, South Australia, Tasmania, Victoria and Western Australia, the rate of diagnosis of chlamydia was at least 7 times that among non-Indigenous people.

Chlamydia continues to be the most frequently reported notifiable condition in Australia in 2010. A total of 74 305 diagnoses were notified in 2010, of these 6 681 (9%) were among Aboriginal and Torres Strait Islander people, 30 766 (41%) were among non-Indigenous people and Indigenous status was not reported for 36 858 (50%) cases.

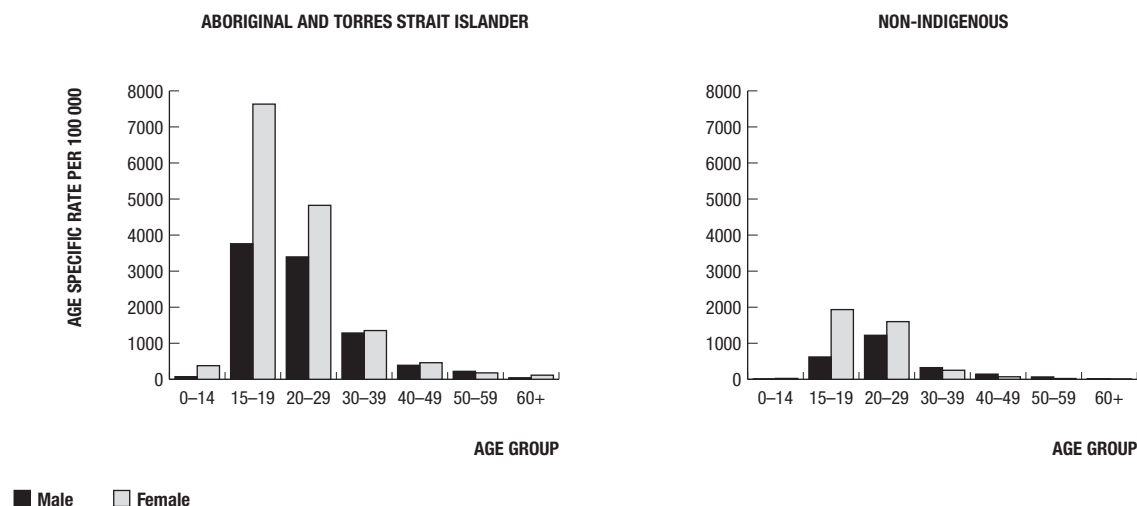
Figure 4 Chlamydia diagnoses by Aboriginal and Torres Strait Islander status¹, sex and age group, 2010



¹ Jurisdictions (NT, SA, TAS, VIC and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

In the period 2006 – 2010, Aboriginal and Torres Strait Islander status was not reported for more than 50% of diagnoses in New South Wales, Queensland and the Australian Capital Territory and as such notification data for chlamydia excludes these jurisdictions. Hereinafter notification data for the period 2006 – 2010 refers to data notified from the Northern Territory, South Australia, Tasmania, Victoria and Western Australia.

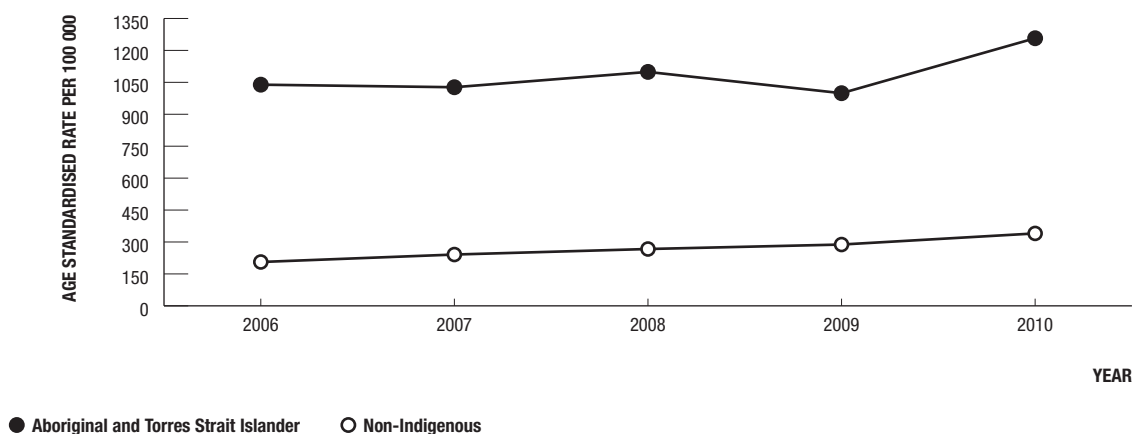
Figure 5 Rate of diagnosis of chlamydia in 2010 by Aboriginal and Torres Strait Islander status¹, sex and age group



¹ Jurisdictions (NT, SA, TAS, VIC and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

The rate of diagnosis of chlamydia for the Aboriginal and Torres Strait Islander population was 3.7 times that of the non-Indigenous notification rate at 1257 and 340 per 100 000 population respectively. The rate of diagnosis of chlamydia in the Aboriginal and Torres Strait Islander population increased from 1 039 in 2006 to 1 257 in 2010 (21% increase). In the non-Indigenous population, the rate increased by 65%, from 206 in 2006 to 340 per 100 000 population in 2010.

Figure 6 Age standardised rate of chlamydia by Aboriginal and Torres Strait Islander status¹ and year

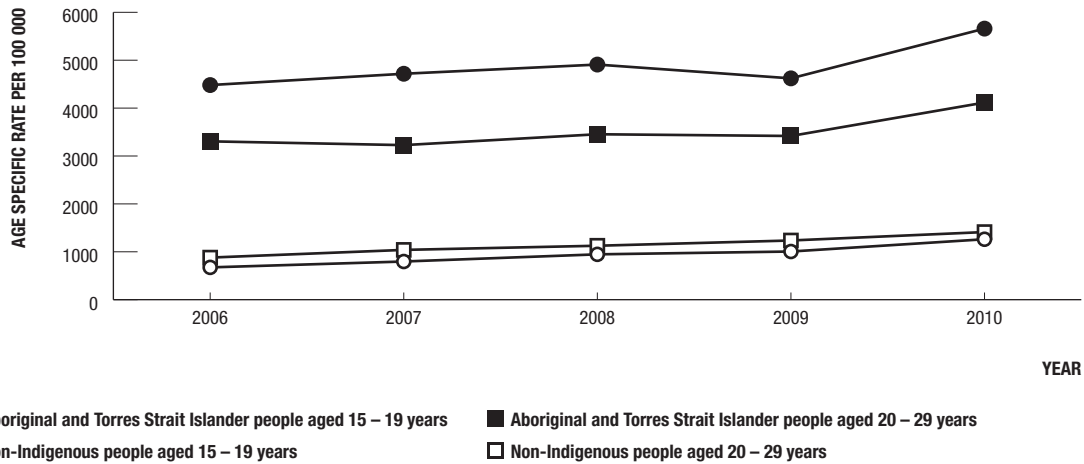


¹ Jurisdictions (NT, SA, TAS, VIC and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

Chlamydia is diagnosed predominantly among young people. In 2010, 80% of diagnoses were made among people aged 15 to 29 years in both Aboriginal and Torres Strait Islander and non-Indigenous populations. The highest rates of diagnoses occurred among women in the 15–19 and 20–29 year age groups, and may partly reflect higher rates of access to health services and subsequent testing in these populations. However the diagnosis rate of 7 632 per 100 000 population in 2010 among Aboriginal and Torres Strait Islander women aged 15–19 years, was 3.95 times the rate among non-Indigenous women in the same age group.

From 2006 to 2010, the rate of chlamydia diagnosis in the Aboriginal and Torres Strait Islander population in the 15–19 and 20–29 year age groups increased by 26% and 87%, respectively, whereas in the non-Indigenous population the rate increased by 85% and 60% in respective age groups (Figure 7). However, the rate of diagnosis of chlamydia in the Aboriginal and Torres Strait Islander population in the 15–19 and the 20–29 year age groups in 2009 was more than 4.5 times and 2.9 times higher, respectively, than that in the non-Indigenous population.

Figure 7 Chlamydia by selected age groups Aboriginal and Torres Strait Islander status¹, year and specific age groups

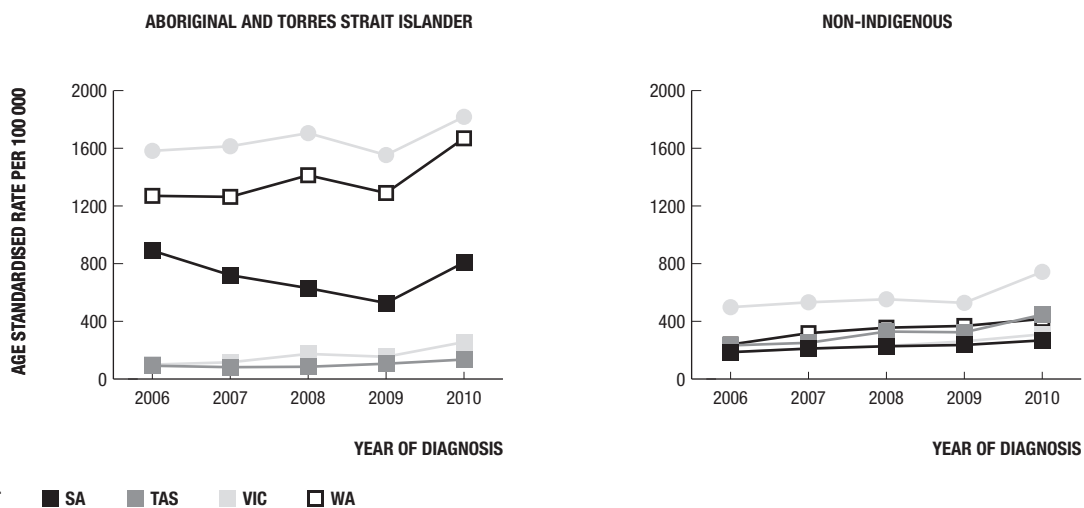


¹ Jurisdictions (NT, SA, TAS, VIC and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

The number of diagnoses of chlamydia in 2010 peaked in the 20–29 year age group in both the Aboriginal and Torres Strait Islander and non-Indigenous populations (Figure 7). In the Aboriginal and Torres Strait Islander population, the female to male ratio of chlamydia diagnoses in the age groups 15–19 years, and 20–29 years was 1.9 and 1.4, respectively. In the non-Indigenous population the ratio was 2.9 and 1.3 in the age groups 15–19 and 20–29 years, respectively.

In 2010, 2 149 and 1 324 diagnoses of chlamydia were made among Aboriginal and Torres Strait Islander females and males respectively, providing a female to male ratio of 1.6:1. The female to male ratio of chlamydia diagnoses in 2010 for non-Indigenous people was 1.4:1.

Figure 8 Chlamydia by Aboriginal and Torres Strait Islander status, State/Territory¹ and year

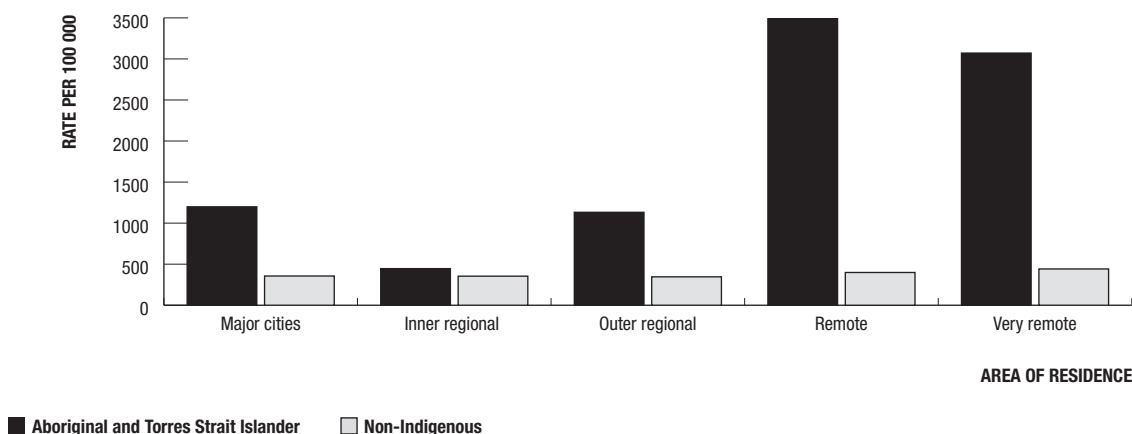


¹ Jurisdictions (NT, SA, TAS, VIC and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

In the five years from 2006 to 2010, the rate of diagnosis of chlamydia increased by 21% in the Aboriginal and Torres Strait Islander population and by 65% in the non-Indigenous population resident in the Northern Territory, South Australia, Tasmania, Victoria and Western Australia. It is not clear whether this discrepancy is an artefact of increased testing in the non-Indigenous population combined with maintenance of already high testing rates in these jurisdictions in Aboriginal and Torres Strait Islander communities, or result of decreased chlamydia testing in these jurisdictions (Figure 6).

The rate of diagnosis of chlamydia in 2006 – 2010 in the Aboriginal and Torres Strait Islander and non-Indigenous populations increased by 31% and 74 % in Western Australia, 15% and 49% in the Northern Territory, 25% and 66% in Victoria respectively. In South Australia the rate decreased by 10% among the Aboriginal and Torres Strait population while at the same time increased by 44% among non-Indigenous people.

Figure 9 Chlamydia by Aboriginal and Torres Strait Islander status¹ and area of residence, 2010



¹ Jurisdictions (NT, SA, TAS, VIC and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

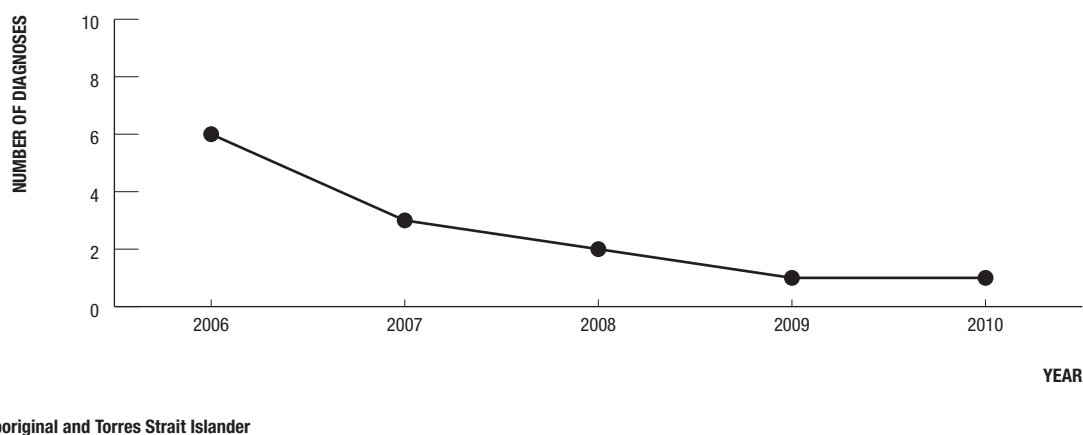
In 2010, the rate of diagnosis of chlamydia in the Aboriginal and Torres Strait Islander population resident in major cities (1 199 per 100 000) was 3.4 times the rate (346 per 100 000) in the non-Indigenous population. The rate of chlamydia diagnosis was similar between the two populations in inner regional centres but 3.3 times the rate in outer regional areas than for non-Indigenous people. In remote and very remote areas of the Northern Territory, South Australia, Tasmania, Victoria and Western Australia the rate of diagnosis was 7.8 times higher than the rate in non-Indigenous population (Figure 9).

Donovanosis

- Donovanosis notifications in Australia remain very low but continue to occur. Since 2005 there have been fewer than 15 cases per year. In 2010, only one case was diagnosed nationally. The National Donovanosis Eradication (Elimination) Project was implemented in 2001 – 2004, following the introduction of improved methods of diagnosis and treatment of Donovanosis. The project was carried out employing strategies such as targeted surveillance, high quality education and support of primary health care workers in their management of genital ulcerative disease, intermittent or short course oral medication and new laboratory techniques, for the elimination of Donovanosis.

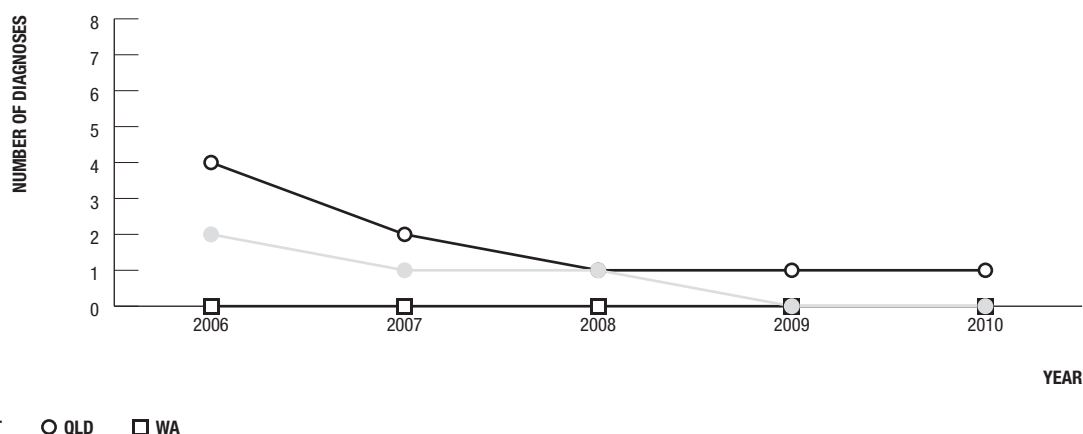
The decline in annual number of diagnoses of Donovanosis, from 14 in 2005 to one in 2010 may be attributed to improved case ascertainment and treatment (Figures 10). There were no diagnoses of Donovanosis in New South Wales, South Australia, Tasmania and Victoria in the past five years and no diagnoses in Western Australia in the past three years.

Figure 10 Donovanosis¹ diagnoses by Aboriginal and Torres Strait Islander Status and year



¹ Jurisdictions (NT, QLD and WA) reporting diagnoses of donovanosis in 2006 – 2010

Figure 11 Donovanosis diagnoses by State/Territory¹ and year



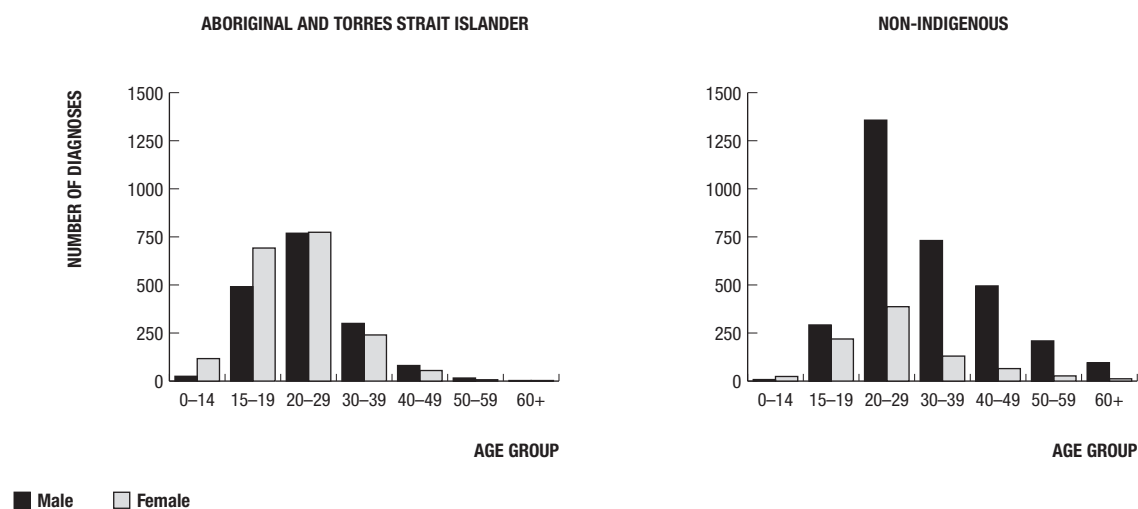
¹ Jurisdictions (NT, QLD and WA) reporting diagnoses of donovanosis in 2006 – 2010

Gonorrhoea

- A total of 10 015 cases of gonorrhoea were diagnosed in Australia in 2010. Of these 3 604 (36%) were among Aboriginal and Torres Strait Islander people, 2 905 (29%) were among non-Indigenous people and Indigenous status was not reported for 3 506 (35%) diagnoses.
- In 2010, the rate of gonorrhoea diagnosis in the Aboriginal and Torres Strait Islander population was more than 26 times that for the non-Indigenous population (804 vs. 30 per 100 000 populations).
- In 2010, 76% of cases among Aboriginal and Torres Strait Islander cases were diagnosed among people in the age group 15 to 29 years compared with 56% in the non-Indigenous population.
- The female to male ratio of (1.1:1) of cases of gonorrhoea diagnosed in 2010 in the Aboriginal and Torres Strait Islander population suggests transmission predominantly through heterosexual contact. In contrast the male to female ratio of 3.7:1 in the non-Indigenous population suggests transmission occurring predominantly by sex between men.
- In 2010, gonorrhoea was diagnosed in the Aboriginal and Torres Strait Islander population at substantially higher rates than in the non-Indigenous population in all areas of residence, especially in remote and very remote areas of Australia.

Of 10 015 diagnoses of gonorrhoea in 2010 more notifications were made among Aboriginal and Torres Strait Islander people (3 604) than for non-Indigenous people (2 905). Aboriginal and Torres Strait Islander status was not reported for 3 506 cases or 35% of total diagnoses made nationally.

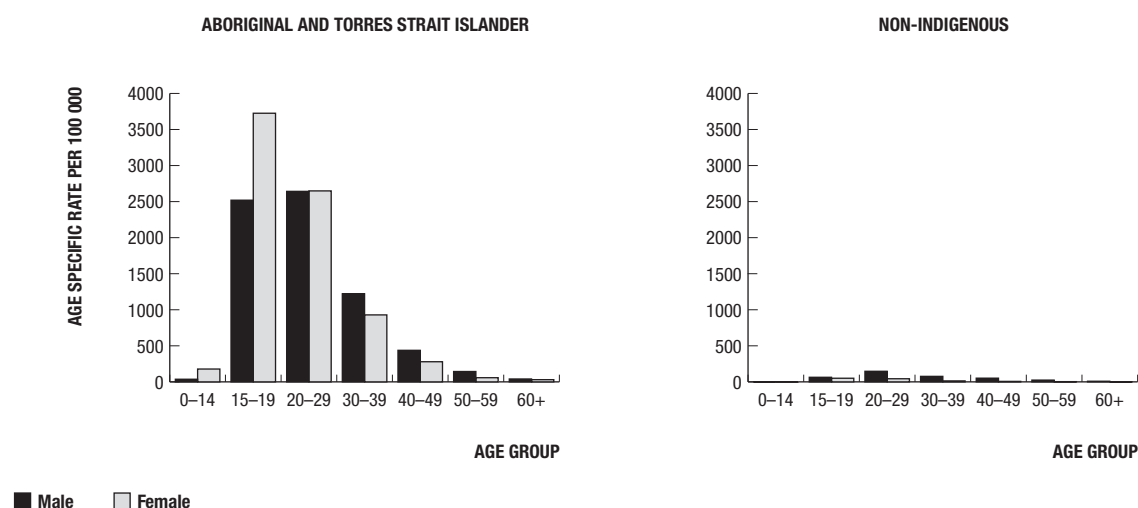
Figure 12 Number of diagnoses of gonorrhoea by Aboriginal and Torres Strait Islander status¹, sex and age group, 2010



¹ Jurisdictions (NT, QLD, SA, TAS, VIC, ACT and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

In the period 2006 – 2010, Aboriginal and Torres Strait Islander status was not reported for more than 50% of diagnoses in New South Wales notifications. No notifications were reported among Aboriginal and Torres Strait Islander people nor not identified as either Indigenous or non-Indigenous in the Australian Capital Territory during 2010. Hereinafter notification data for the period 2006 – 2010 refers to data notified from the Northern Territory, Queensland, South Australia, Tasmania, Victoria, Australian Capital Territory and Western Australia.

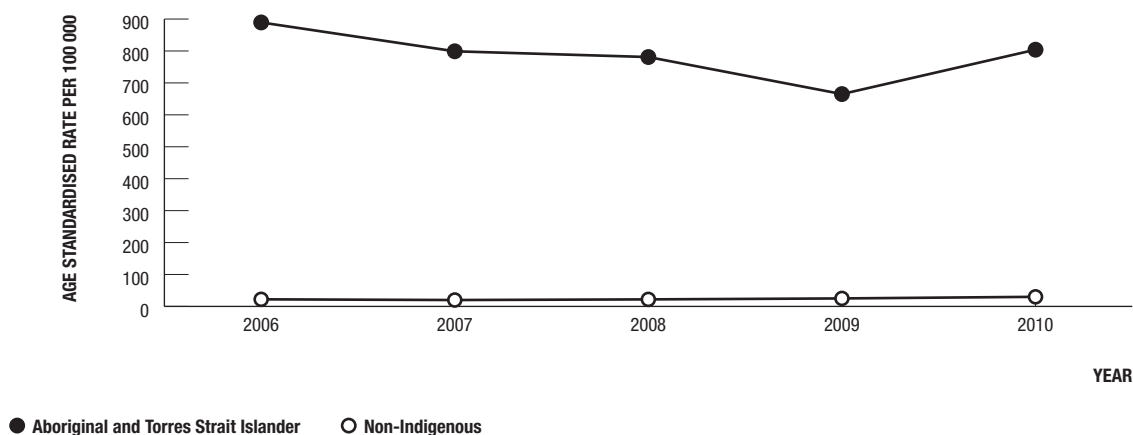
Figure 13 Rate of diagnosis of gonorrhoea by Aboriginal and Torres Strait Islander status¹, sex and age group, 2010



¹ Jurisdictions (NT, QLD, SA, TAS, VIC, ACT and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

In 2010, the rate of diagnosis of gonorrhoea for the Aboriginal and Torres Strait Islander population was 26 times that of the non-Indigenous notification rate at 804 and 30 per 100 000 population respectively. During the period, 2006 – 2010, the rate of diagnosis of gonorrhoea decreased by 9.6% in the Aboriginal and Torres Strait Islander population, from 889 to 804 per 100 000 population while an increase of 27% was observed in non-Indigenous cases over the same period from 22 in to 30 per 100 000.

Figure 14 Rate of diagnosis of chlamydia by Aboriginal and Torres Strait Islander status¹, sex and age group, 2010

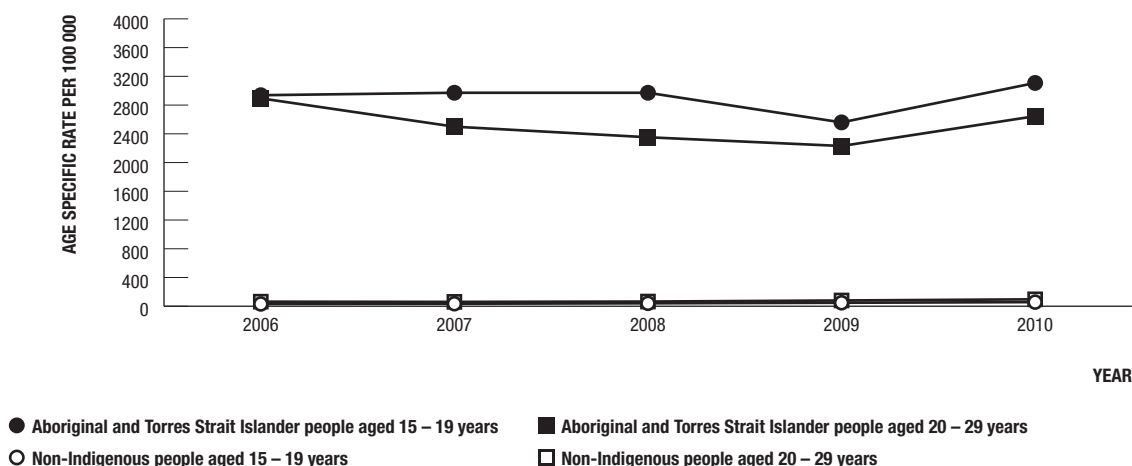


¹ Jurisdictions (NT, QLD, SA, TAS, VIC, ACT and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

Differences in age at diagnoses exist between Aboriginal and Torres Strait Islander people and non-Indigenous people. In 2010, the rate of diagnoses of gonorrhoea was highest in the 20–29 year age group for both the Aboriginal and Torres Strait Islander and non-Indigenous populations with 43% cases diagnosed in this age group for both populations (Figure 13). Furthermore in 2010, 33% and 13% of gonorrhoea cases diagnosed were among 15-19 year olds in the Aboriginal and Torres Strait Islander and non-Indigenous populations respectively. In the age groups 15–19 and 20–29 years, the rate of diagnosis was 55 and 28 times greater respectively than diagnosis rates among non-Indigenous cases in 2010 (Figure 15).

From 2006 to 2010, the rate of gonorrhoea diagnosis in the Aboriginal and Torres Strait Islander population in the 15–19 year age group increased 8% and decreased 10% in the 20–29 year age group, where as in the non-Indigenous population the rate increased by 80% and 34% in respective age groups. (Figure 15).

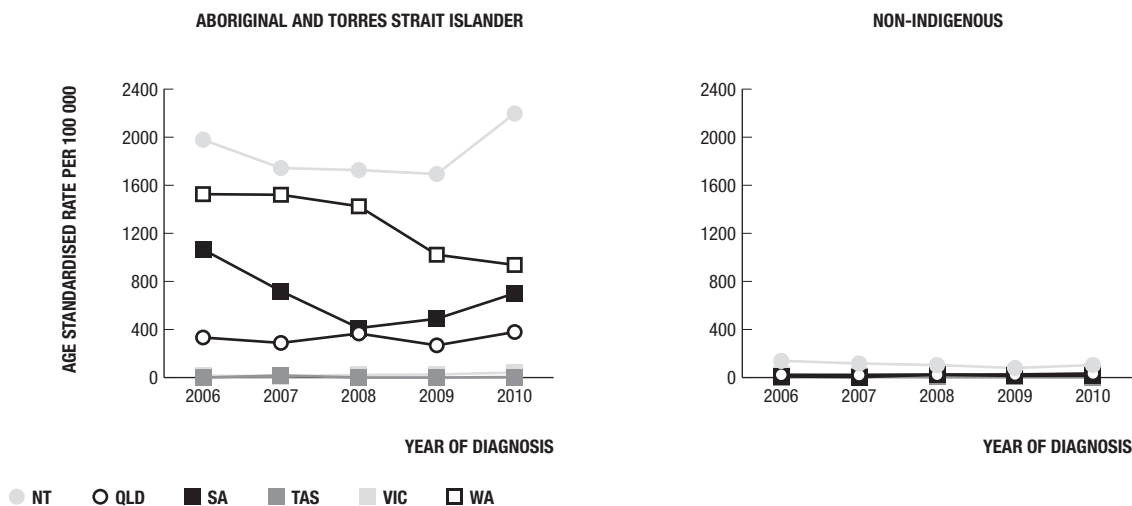
Figure 15 Gonorrhoea by Aboriginal and Torres Strait Islander status¹, year and specific age groups



¹ Jurisdictions (NT, QLD, SA, TAS, VIC, ACT and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

In all jurisdictions except New South Wales in 2010, 1 685 and 1 888 diagnoses of gonorrhoea were made among Aboriginal and Torres Strait Islander males and females, providing a male to female ratio of 0.9:1. In comparison, 3 188 males and 864 females from the non-Indigenous population were diagnosed with gonorrhoea in 2010; providing a male to female ratio of gonorrhoea diagnoses of 3.7:1. In the Aboriginal and Torres Strait Islander population, the male to female ratio of gonorrhoea diagnoses in the age groups 15–19 years, 20–29 years, 30–39 years and 40–49 years was 0.7, 1.0, 1.2 and 1.5, respectively. In the non-Indigenous population the male to female ratio was 1.3, 3.5, 5.6 and 7.6 in the corresponding age groups respectively, suggesting increasing transmission of gonorrhoea through male homosexual contact with increasing age.

Figure 16 Gonorrhoea by Aboriginal and Torres Strait Islander status, State/Territory¹ and year

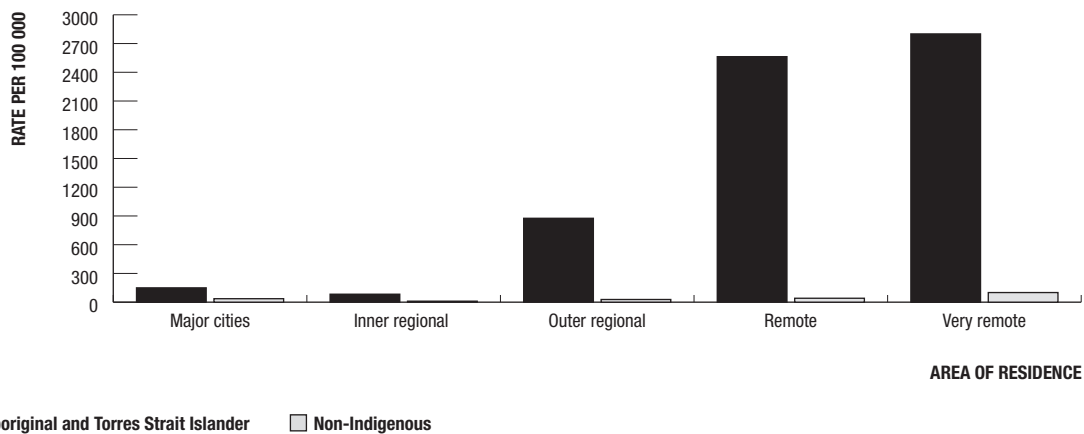


¹ Jurisdictions (NT, QLD, SA, TAS, VIC, ACT and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

The rate of diagnosis of gonorrhoea in the Aboriginal and Torres Strait Islander population resident in the Northern Territory, Queensland, South Australia, Tasmania, Victoria, ACT and Western Australia decreased by 9% from 889 in 2006 to 804 in 2010. In the non-Indigenous population, the rate of diagnosis of gonorrhoea increased from 22 per 100 000 to 30 over the past five years (Figure 12). The overall rate of gonorrhoea diagnosis in the Aboriginal and Torres Strait Islander population in 2010 was 27 times that in the non-Indigenous population.

The rate of diagnosis of gonorrhoea during the period 2006 – 2010 in the Aboriginal and Torres Strait Islander population decreased by 35% and 38% in South Australia, and Western Australia respectively and increased by 10%, 12% and 64% in the Northern Territory, Queensland and Victoria, respectively (Figure 16). Among the non-Indigenous population the rate increased by 32%, 40%, 24% and 30% in Queensland, South Australia, Victoria and Western Australian respectively. The rate decreased by 33% the Northern Territory during the same period.

Figure 17 Gonorrhoea by Aboriginal and Torres Strait Islander status¹ and area of residence, 2010



¹ Jurisdictions (NT, QLD, SA, TAS, VIC, ACT and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

In the Aboriginal and Torres Strait Islander population resident in major cities, inner regional, outer regional, remote and very remote areas of the Northern Territory, Queensland, South Australia, Victoria and Western Australia, the population rate of gonorrhoea was 4 times, 8 times, 31 times, 62 times, and 36 times that of the non-Indigenous population, respectively, in 2010 (Figure 17).

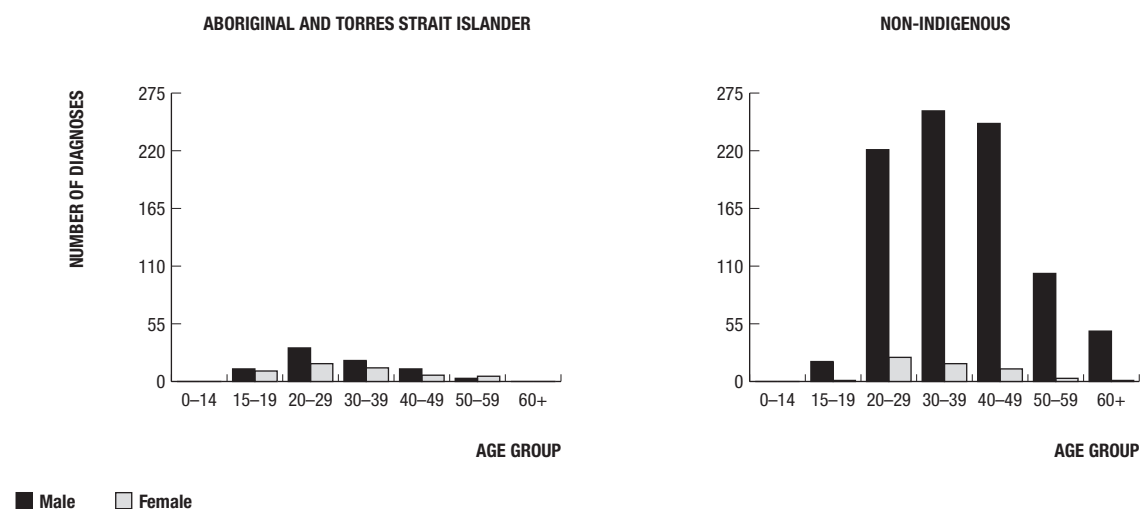
Infectious syphilis

- Diagnoses of infectious syphilis have been reported nationally since 2004.
- A total of 1 098 cases of infectious syphilis were notified in 2010, with 130 (12%) cases nationally notified among Aboriginal and Torres Strait Islander people, 911 (83%) cases among non-Indigenous people and a further 52 (5%) cases for which Indigenous status was not reported. Information on Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses of infectious syphilis in each of the past five years through all State and Territory health jurisdictions in Australia.
- In the period 2006 to 2010, the rate of diagnosis of infectious syphilis decreased from 40 to 25 per 100 000 Aboriginal and Torres Strait Islander population. In the same period the rate of diagnosis in the non-Indigenous population increased from 3 to 5 per 100 000.
- The number of diagnoses of infectious syphilis among Aboriginal and Torres Strait Islander women and men in 2010 was 51 and 79, respectively whereas in the non-Indigenous population 57 women and 895 men were diagnosed in 2010.
- In 2010, 80% and 54% of diagnoses of infectious syphilis in the Aboriginal and Torres Strait Islander and non-Indigenous populations respectively occurred among people aged less than 40 years of age.
- The male to female ratio of 1.5:1 whereas in the non-Indigenous population the same ratio is 16:1, indicating that infectious syphilis is transmitted predominantly through male homosexual contact in the non-Indigenous population.
- In the Aboriginal and Torres Strait Islander population the rate of diagnosis increased exponentially as remoteness of residence increased. In 2010, the rate of diagnosis of infectious syphilis was similar between the two populations resident in major cities and inner regional areas. However rates increased significantly in outer regional, remote and very remote areas with an overall rate differential of around 20 times that of non-Indigenous Australians resident in the same areas. A different trend occurred in the non-Indigenous population where the majority of notifications occurred in urban and regional areas.

Accurate and complete systems for the notification of infectious syphilis exist nationally, enabling greater than 95% of all infectious syphilis diagnoses to be notified by Aboriginal and Torres Strait Islander status.

In 2010 there were 1 098 cases of infectious syphilis notified, with 130 (12%) cases nationally notified among Aboriginal and Torres Strait Islander people, 911 cases among non-Indigenous people and a further 52 cases for which Indigenous status was not reported.

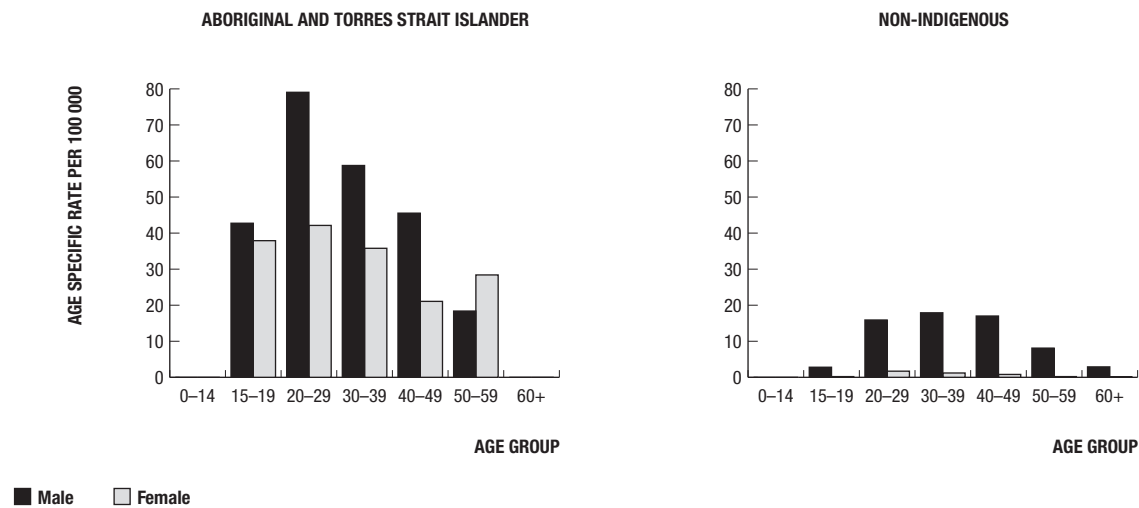
Figure 18 Number of diagnoses of infectious syphilis by Aboriginal and Torres Strait Islander status¹, sex and age group, 2010



¹ Jurisdictions (NSW, NT, QLD, SA, TAS, VIC, ACT and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

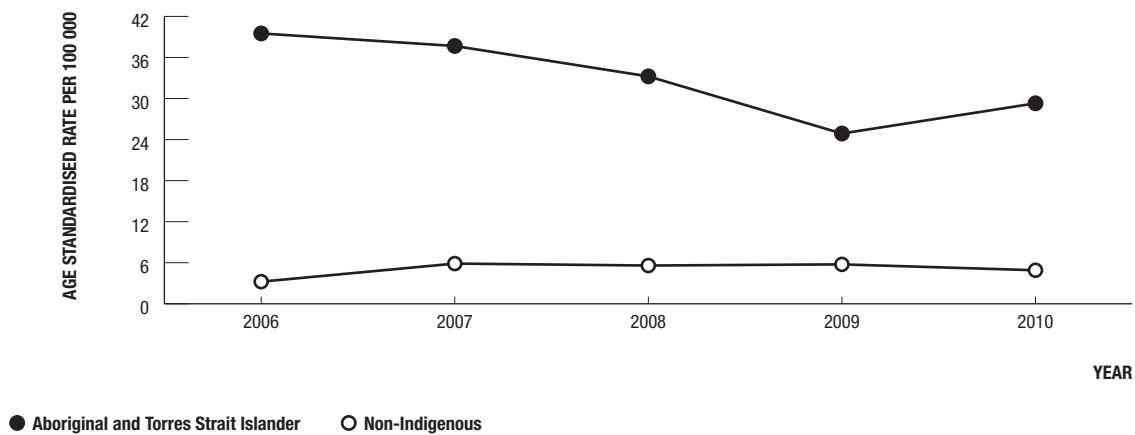
Since 2006 infectious syphilis diagnosis among Aboriginal and Torres Strait Islander people have declined from 234 cases to 130 in 2010. The population rate of diagnosis of infectious syphilis in the Aboriginal and Torres Strait Islander population decreased from 30 in 2006 to 25 per 100 000 in 2010, however this rate is 5 times that reported in the non-Indigenous population. In the non-Indigenous population the rate increased from 3 in 2006 to 5 in 2010 (Figure 20).

Figure 19 Rate of diagnosis of infectious syphilis by Aboriginal and Torres Strait Islander status¹, sex and age group, 2010



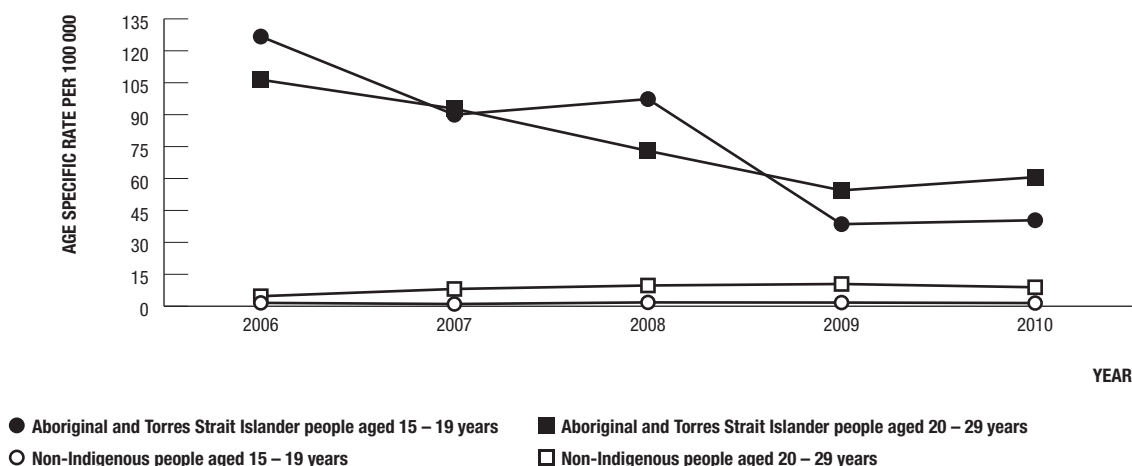
¹ Jurisdictions (NSW, NT, QLD, SA, TAS, VIC, ACT and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

Figure 20 Age standardised rate of diagnosis of infectious syphilis by Aboriginal and Torres Strait Islander status¹ and year



¹ Jurisdictions (NSW, NT, QLD, SA, TAS, VIC, ACT & WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

Figure 21 Infectious syphilis by Aboriginal and Torres Strait Islander status¹, year and specific age groups

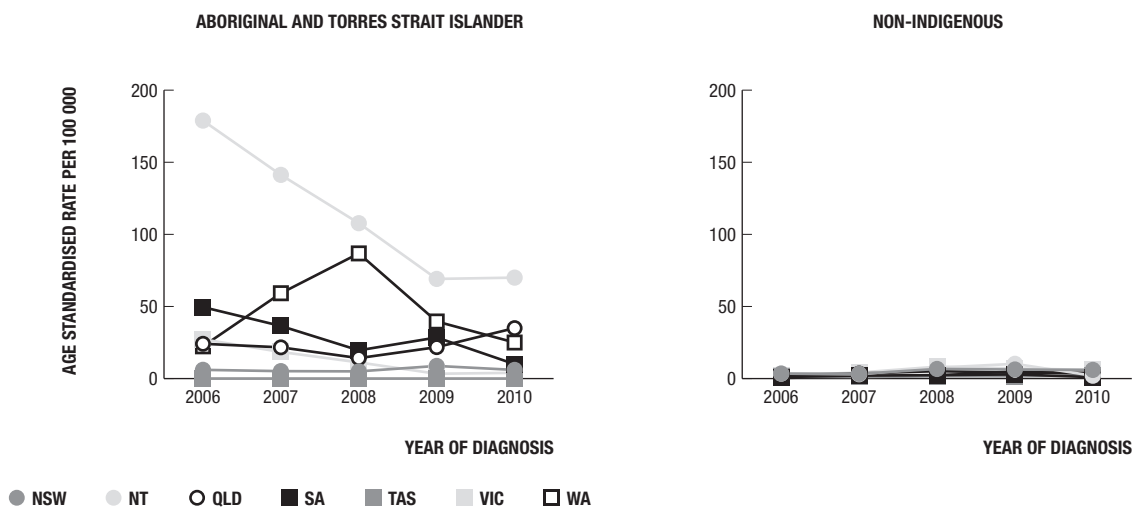


¹ Jurisdictions (NSW, NT, QLD, SA, TAS, VIC, ACT and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

The rate of diagnosis of infectious syphilis in the Aboriginal and Torres Strait Islander population was higher in all age groups. The range varied between 27 and 3 times the rate of non-Indigenous diagnoses. Even with the age group with highest rate of diagnoses 30-39 years the rate difference was 4.9 times that of non-Indigenous people. In 2010, the rate of diagnosis of infectious syphilis was highest in the 20-29 year age groups for Aboriginal and Torres Strait Islander population and 30-39 years for non-Indigenous people. (Figure 20). (Figure 21).

In 2010, 94% of non-Indigenous cases of infectious syphilis were diagnosed in men whereas 61% of cases in the Aboriginal and Torres Strait Islander population were among men. The male to female ratio among the Aboriginal and Torres Strait Islander cases indicates transmission of infectious syphilis predominantly through heterosexual contact and through male homosexual contact in the non-Indigenous population.

Figure 22 Infectious syphilis by Aboriginal and Torres Strait Islander status, State/Territory¹ and year

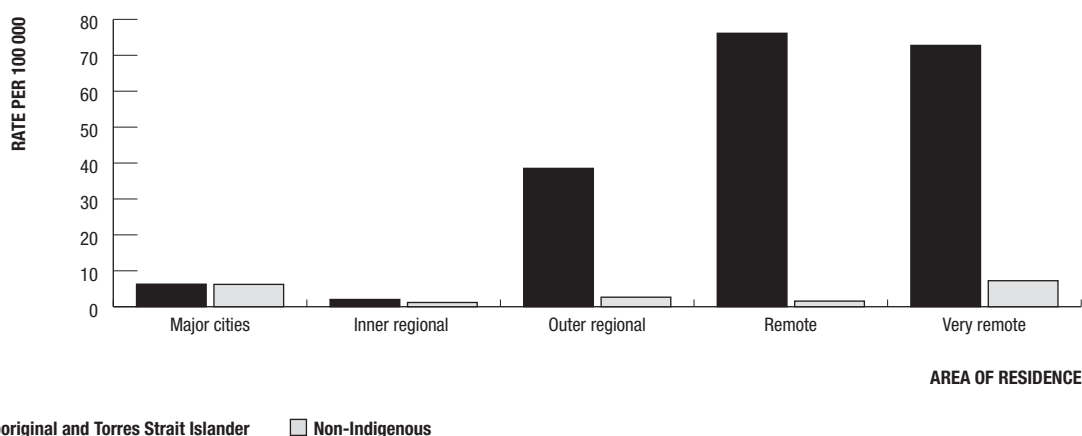


¹ Jurisdictions (NSW, NT, QLD, SA, TAS, VIC, ACT and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

In 2010, the majority (91%) of diagnosis of infectious syphilis in the Aboriginal and Torres Strait Islander population occurred in the, Queensland (45%) Northern Territory (31%) and Western Australia (15%). In contrast the majority (90%) of infectious syphilis diagnosis in the non-Indigenous population occurred in New South Wales (43%), Victoria (30%) and Queensland (17%). (Figure 19).

In 2010, the rate of diagnosis of infectious syphilis in the Aboriginal and Torres Strait Islander population was reported at similar rates in major cities and inner regional areas, however was reported at 13, 38 and 10 times the rate of non-Indigenous people residing in outer regional remote and very remote areas of Australia respectively.

Figure 23 Infectious syphilis by Aboriginal and Torres Strait Islander status¹ and area of residence, 2010



¹ Jurisdictions (NSW, NT, QLD, SA, TAS, VIC, ACT and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

Bacterial sexually transmissible infections reported in persons aged less than 16 years

The occurrence of sexually transmissible infections among young Aboriginal and Torres Strait Islander people aged less than 16 years linked to child sexual assault is a sensitive issue and often unnecessarily linked. The occurrence of chlamydia, gonorrhoea and infectious syphilis among people aged 15 years or younger is described, based on cases notified to the National Notifiable Diseases Surveillance System and is summarized only for those health jurisdictions in which Aboriginal and Torres Strait Islander status was reported for at least 50% of diagnoses in each year over the past five years.

From 2006 to 2010, a total of 2 973 and 5 223 cases of chlamydia were reported among Aboriginal and Torres Strait Islander and non-Indigenous people aged less than 16 years respectively. In the same period 1 570 and 266 cases of gonorrhoea and 68 and 11 cases of infectious syphilis were reported in Aboriginal and Torres Strait Islander and non-Indigenous people aged less than 16 years respectively. The majority (95% for chlamydia, 94% for gonorrhoea and 97% for infectious syphilis) of these diagnoses were among people aged from 13 to 15 years. A similar pattern of diagnosis occurred among non-Indigenous young people where 93% of chlamydia, 84% of gonorrhoea and 64% of infectious syphilis diagnoses were among people aged 13 to 15 years. The majority of diagnoses of sexually transmissible infections in young Aboriginal and Torres Strait Islander people occurred in areas of known high endemicity of STIs and where screening for sexually transmitted infections is routinely carried out. Caution should be taken in describing these data as related to child sexual assault; it is likely that a significant proportion of these notifications are the result of early sexual debut and/or sex with peer-aged partners.

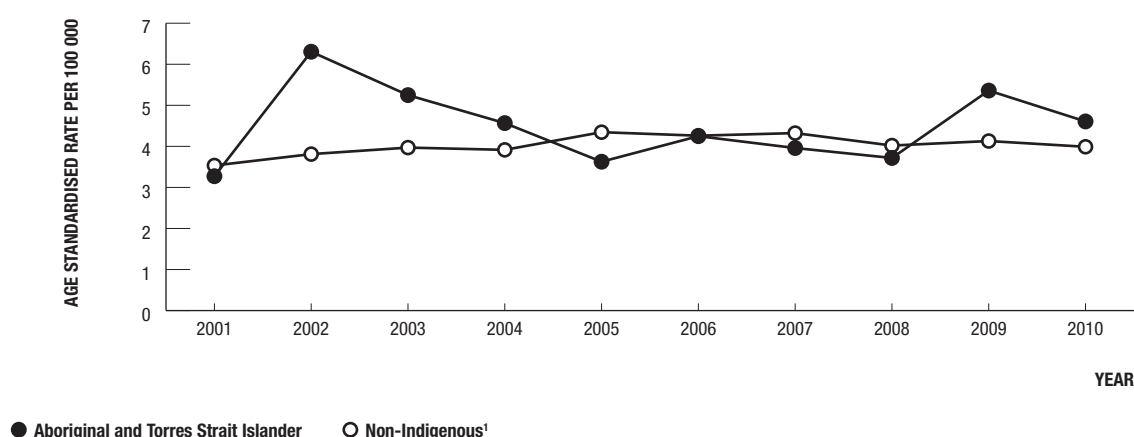
HIV infection

- A total of 1 043 diagnoses of HIV infection were reported in 2010, of these, 22 were identified as Aboriginal and Torres Strait Islander cases. In 2010, the population rate of diagnosis of HIV was similar for both populations. The Aboriginal and Torres Strait Islander population had a rate of 4.6 per 100 000 compared to 4 per 100 000 in the non-Indigenous population.
- In Australia the number of new diagnoses of HIV in Australia increased overall by 3.4% between 2006 and 2010 while the number of diagnoses in the Indigenous population increased by 4.7% over the same period.
- During 2006 – 2010, 103 cases of HIV were diagnosed among Aboriginal and Torres Strait Islander people. Forty eight (48.5%) of these cases were diagnosed among men who have sex with men and 21.4% of cases were diagnosed among women. A median age at diagnosis was 34 years; 29% of cases were classified as newly acquired cases, and conversely 16% of cases were classified as a late HIV diagnosis.*
- After excluding cases whose infection was acquired in a high prevalence country in the period 2006 – 2010, heterosexual contact was the reported source of exposure to HIV in 16.0% of non-Indigenous cases and 18.5% among Aboriginal and Torres Strait Islander cases (Figure 26). Aboriginal and Torres Strait Islander cases differed from non-Indigenous cases in that a higher proportion of infections were attributed to injecting drug use (19.4% among Aboriginal and Torres Strait Islander cases vs. 2.5% for non-Indigenous cases), and a higher proportion of infections were among women (21.4% among Aboriginal and Torres Strait Islander cases vs. 8.0% for non-Indigenous cases).*
- In 2010, the rate of HIV diagnosis was higher among Aboriginal and Torres Strait Islander people resident in urban and regional areas and lower in remote areas compared with non Indigenous residents.

All States and Territories report accurately and complete data sets for HIV diagnosis. Accurate and complete systems for the notification of HIV diagnoses exist nationally that enables greater than 90% of all HIV diagnoses to be notified by Aboriginal and Torres Strait Islander status.

In 2010, of the 1 043 HIV diagnoses, 1 021 identified as non-Indigenous people and 22 were among Aboriginal and Torres Strait Islander people. The population rate of diagnosis of HIV was similar for both populations with a rate of 4.6 and 4 per 100 000 for the Aboriginal and Torres Strait Islander population and non-Indigenous population respectively.

Figure 24 Newly diagnosed HIV infection by Aboriginal and Torres Strait Islander status¹ 2001 – 2010



¹ Cases and populations from high prevalence countries were excluded from the non-Indigenous rate.

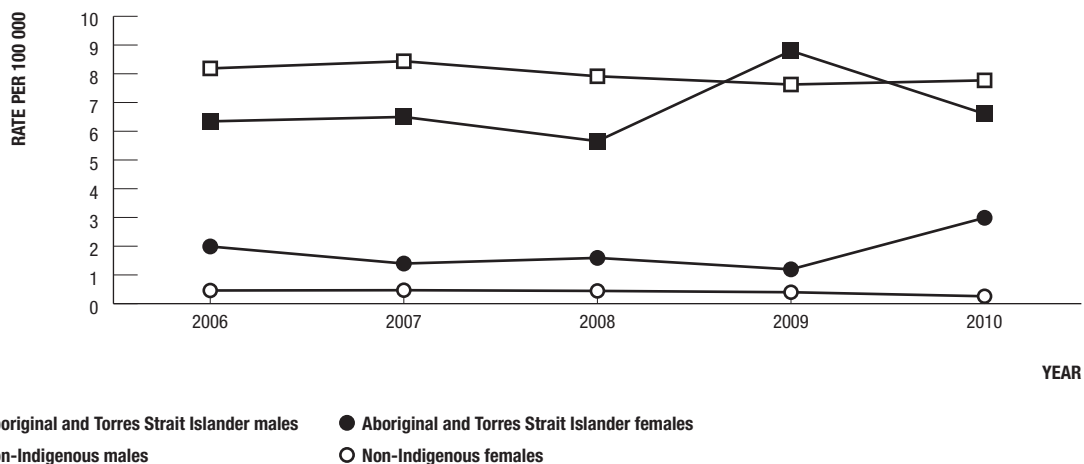
For the purposes of a longer term trend analysis of HIV diagnosis in the Aboriginal and Torres Strait Islander population we have analysed data for the period 2006 – 2010 and excluded non-Indigenous cases whose infection was acquired in a high prevalence country. During this period 103 cases of HIV infection were diagnosed among Aboriginal and Torres Strait Islander people.

* **Correction of material errors.**

An error in the proportion of non-Indigenous cases by exposure category was detected after publication of the Bloodborne viral and sexually transmitted infections in Aboriginal and Torres Strait Islander people: Surveillance and Evaluation Report 2011. The error has been corrected in this online version of the report.

In 2006 – 2010, the rate of HIV diagnosis in the Aboriginal and Torres Strait Islander population increased steadily from 4.3 to 4.6 per 100 000 and in the non-Indigenous population, the rate decreased slightly from 4.3 in 2000 to 4 per 100 000 in 2010. The recent trends in the rates of HIV diagnoses in the Aboriginal and Torres Strait Islander population are based on small numbers and may reflect localised occurrences rather than national patterns.

Figure 25 HIV diagnoses in Australian born people by Aboriginal and Torres Strait Islander status¹, sex and year

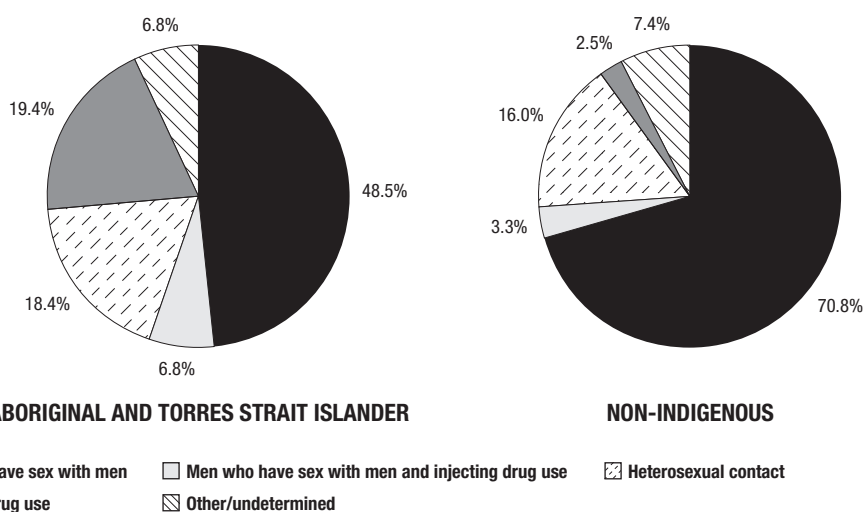


¹ Cases and populations from high prevalence countries were excluded from the non-Indigenous rate.

Of the 103 cases diagnosed among Aboriginal and Torres Strait Islander people during 2006 – 2010, 77.7% of cases were diagnosed among men (48.5% among men who sex with men), the median age at diagnosis was 34 years, 29% of cases were classified as newly acquired cases and 16% of cases were classified as a late diagnosis.*

The rate of HIV diagnosis among Aboriginal and Torres Strait Islander women remained stable during the period 2006 – 2010 at 2 per 100 000 population in 2006 however increased to 3 per 100 000 population in 2010; in non-Indigenous Australian born women the rate remained stable at 0.5 per 100 000 in 2006 and 0.25 in 2010 (Figure 25). For men, the diagnosis rate remained relatively stable in both the Aboriginal and Torres Strait Islander (6.3 in 2006 to 6.9 per 100 000 in 2010) and non-Indigenous, non high prevalence origin population (8 per 100 000). In the period 2006 – 2010, 77.7% of all HIV diagnoses in the Aboriginal and Torres Strait Islander population were among men. (Figure 26).*

Figure 26 HIV diagnoses, 2006 – 2010, by exposure category and Aboriginal and Torres Strait Islander status¹



¹ Cases and populations from high prevalence countries were excluded from the non-Indigenous rate.

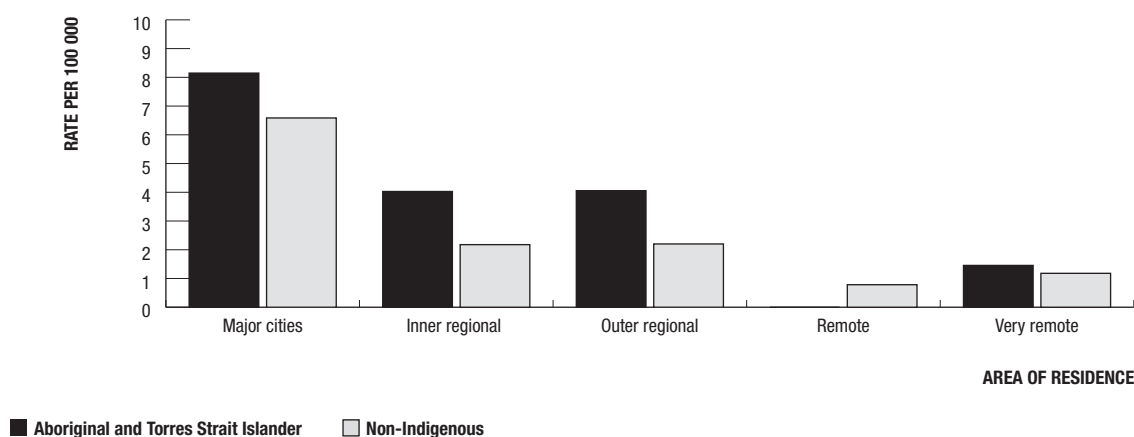
*** Correction of material errors.**

An error in the proportion of non-Indigenous cases by exposure category was detected after publication of the Bloodborne viral and sexually transmitted infections in Aboriginal and Torres Strait Islander people: Surveillance and Evaluation Report 2011. The error has been corrected in this online version of the report.

After excluding cases whose infection was acquired in a high prevalence country, heterosexual contact was the reported source of exposure to HIV in 16.0% of non-Indigenous cases and 18.5% among Aboriginal and Torres Strait Islander cases (Figure 26). Aboriginal and Torres Strait Islander cases differed from non-Indigenous cases in that a higher proportion of infections were attributed to injecting drug use (19.4% among Aboriginal and Torres Strait Islander cases vs. 2.5% for non-Indigenous cases), and a higher proportion of infections were among women (21.4% among Aboriginal and Torres Strait Islander cases vs 8.0% for non-Indigenous cases).*

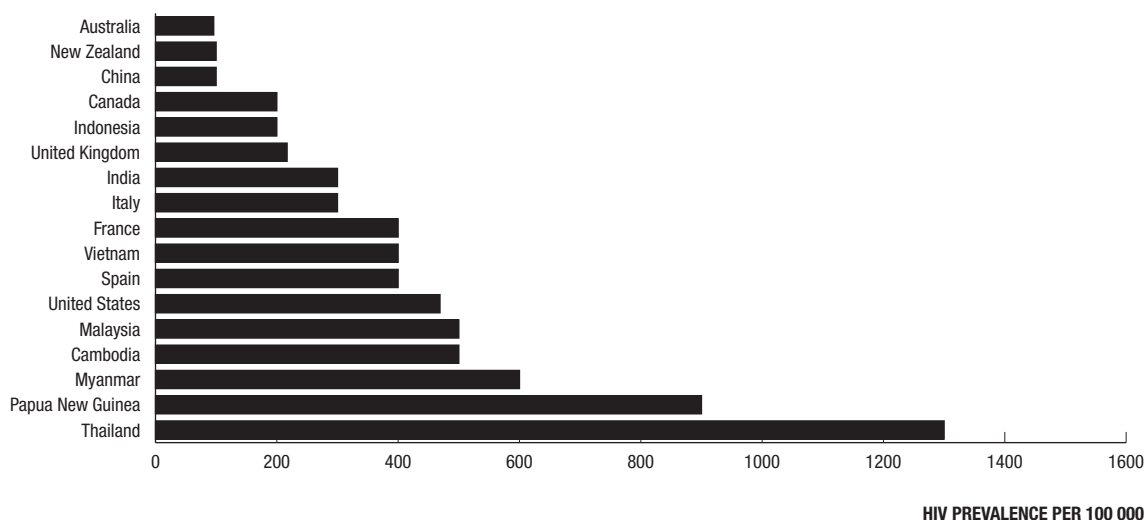
During the period 2006 – 2010, 38%, 26%, 16% and 9% of cases were diagnosed in New South Wales, Queensland, Western Australia and Victoria respectively.

Figure 27 Newly diagnosed HIV infection by Aboriginal and Torres Strait Islander status and area of residence, 2010



In 2010, the rate of HIV diagnosis was highest among those resident in major cities in both the Aboriginal and Torres Strait Islander population and the non-Indigenous population (Figure 27). The mean rate of HIV diagnosis in the Aboriginal and Torres Strait Islander population was 8.1 per 100 000 in major cities compared to 1.4 per 100 000 in remote areas. The rate of HIV diagnosis in the non-Indigenous population was 6.1 per 100 000 in major cities compared to 1.2 per 100 000 in the remote areas.

Figure 28 HIV prevalence in selected countries



In the Oceania region of the world, Australia is among the countries with the lowest prevalence of HIV infection in its population aged 15 – 49 years. Australia’s nearest neighbour, Papua New Guinea, has the highest HIV prevalence in its population aged 15 – 49 years. It is important to view these data in the context of family and cultural connections between some Torres Strait Islander communities and Papua New Guinea peoples (Figure 28).

* **Correction of material errors.**

An error in the proportion of non-Indigenous cases by exposure category was detected after publication of the Bloodborne viral and sexually transmitted infections in Aboriginal and Torres Strait Islander people: Surveillance and Evaluation Report 2011. The error has been corrected in this online version of the report.

Viral hepatitis

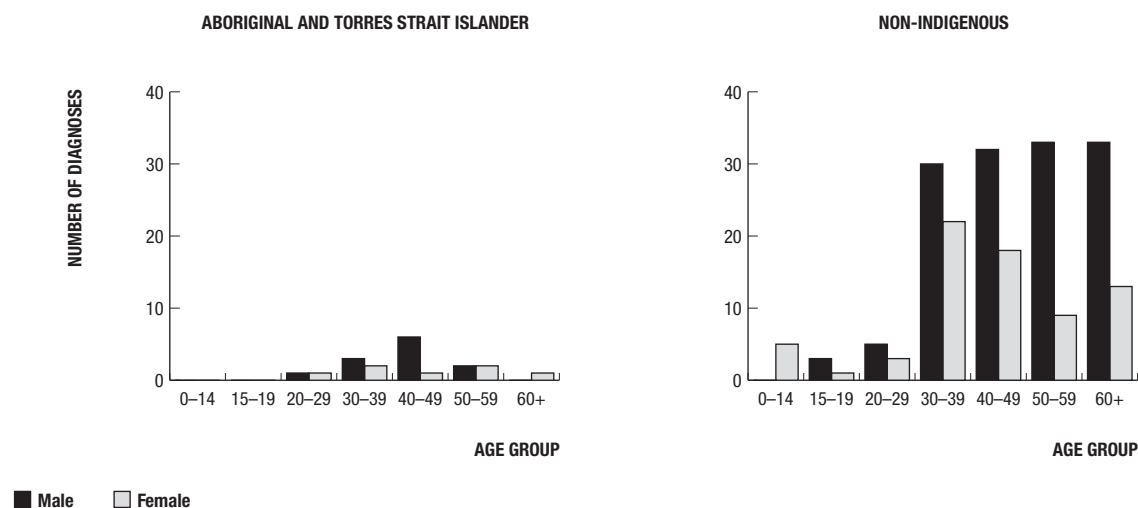
- A total of 229 cases of newly acquired hepatitis B (HBV) were diagnosed in Australia in 2010, 19 (8%) of these were diagnosed among Aboriginal and Torres Strait Islander people, 164 (72%) cases occurred among non-Indigenous people and a further 46 (20%) were not notified of Aboriginal and or Torres Strait Islander status.
- In 2010 the population rate of diagnosis of newly acquired hepatitis B infection for the non-Indigenous and Aboriginal and Torres Strait Islander populations were 1 and 4 per 100 000 respectively.
- In 2010, 89% and 91% of newly acquired HBV in the Aboriginal and Torres Strait Islander and non-Indigenous populations respectively, were diagnosed in those aged 20 years of age and over.
- In 2010, 4 640 cases of chronic HBV were diagnosed in Australia. Of these 217 (5%) were among Aboriginal and Torres Strait Islander people, 2 229 (47%) were among non-Indigenous people and 2 194 (48%) were not reported for Aboriginal and Torres Strait Islander status.
- A total of 7 608 cases of hepatitis C (HCV) were diagnosed in Australia in 2010. Of these 458 (5%) occurred among Aboriginal and Torres Strait Islander people, 3 297 (43%) occurred among non-Indigenous people and a further 3 853 (51%) cases were not notified for Indigenous status.
- At the end of 2009, an estimated 217 000 people were living in Australia with chronic hepatitis C infection including an estimated 74 000 with moderate to severe liver disease.
- Based on reported cases, hepatitis C transmission continued to occur in Australia predominantly among people with a history of injecting drug use.

Newly acquired hepatitis B

In 2010, Information on Aboriginal and Torres Strait Islander status was reported by all jurisdictions for more than 50% of diagnoses for newly acquired HBV.

The rate of diagnosis of newly acquired hepatitis B infection in the Aboriginal and Torres Strait Islander population continues to be higher than for non-Indigenous Australians. In 2010, 19 cases of newly acquired hepatitis B infection were diagnosed in Aboriginal and Torres Strait Islander people and 164 in non-Indigenous people (Figure 29).

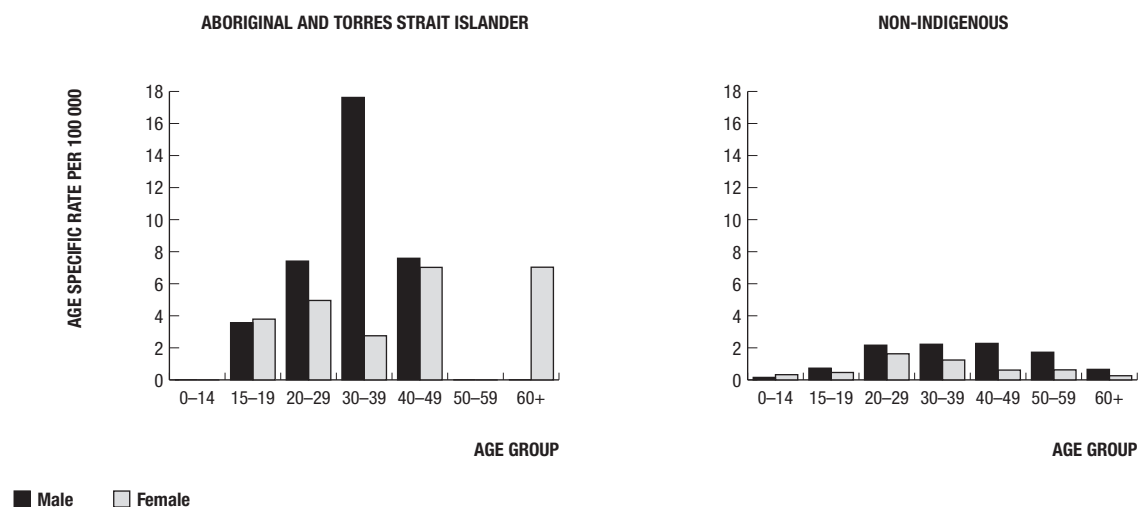
Figure 29 Number of diagnoses of newly acquired hepatitis B by Aboriginal and Torres Strait Islander status¹, sex and age group, 2010



¹ Jurisdictions (NSW, NT, QLD, SA, VIC and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

In 2010, the diagnosis rate for newly acquired hepatitis B infection for the Aboriginal and Torres Strait Islander population was four times the rate than that of the non-Indigenous population. In the non-Indigenous population, the rate of diagnosis of newly acquired hepatitis B infection remained low in all State and Territory health jurisdictions (Figure 30).

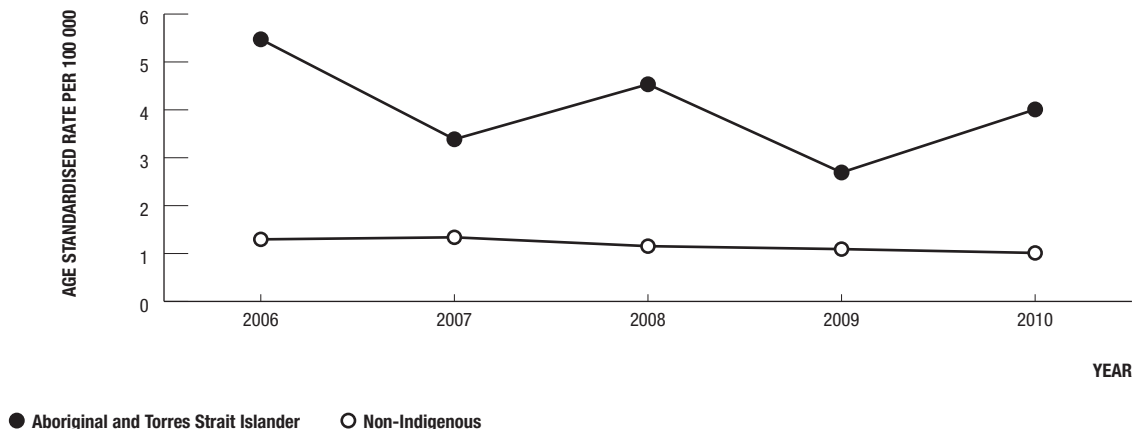
Figure 30 Rate of diagnosis of newly acquired hepatitis B by Aboriginal and Torres Strait Islander status¹, sex and age group, 2010



¹ Jurisdictions in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

In 2010, the majority of diagnosis of newly acquired hepatitis B infection occurred in both Aboriginal and Torres Strait Islander (89%) and non-Indigenous people (92%) occurred in people aged over 20 years of age. In 2010, there were no diagnoses in people aged less than 15 years of age in the Aboriginal and Torres Strait Islander population. In 2010, the male to female ratio of diagnosis in the Aboriginal and Torres Strait Islander population was 1.7:1 and 1.9:1 in the non-Indigenous population.

Figure 31 Age standardised rate of newly acquired hepatitis B by Aboriginal and Torres Strait Islander status¹ and year

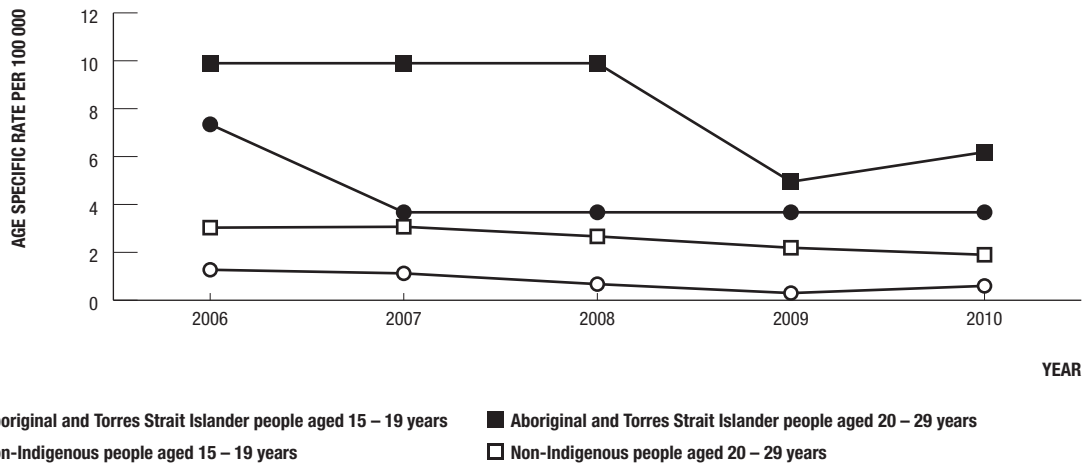


¹ Jurisdictions (NSW, NT, QLD, SA, VIC and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

In the period 2006 to 2010 the population rate of diagnosis for newly acquired hepatitis B infection for the Aboriginal and Torres Strait Islander population decreased slightly from 5 per 100,000 in 2006 to 4 per 100,000 in 2010 and remained stable at 1 per 100,000 in the non-Indigenous over the same time period.

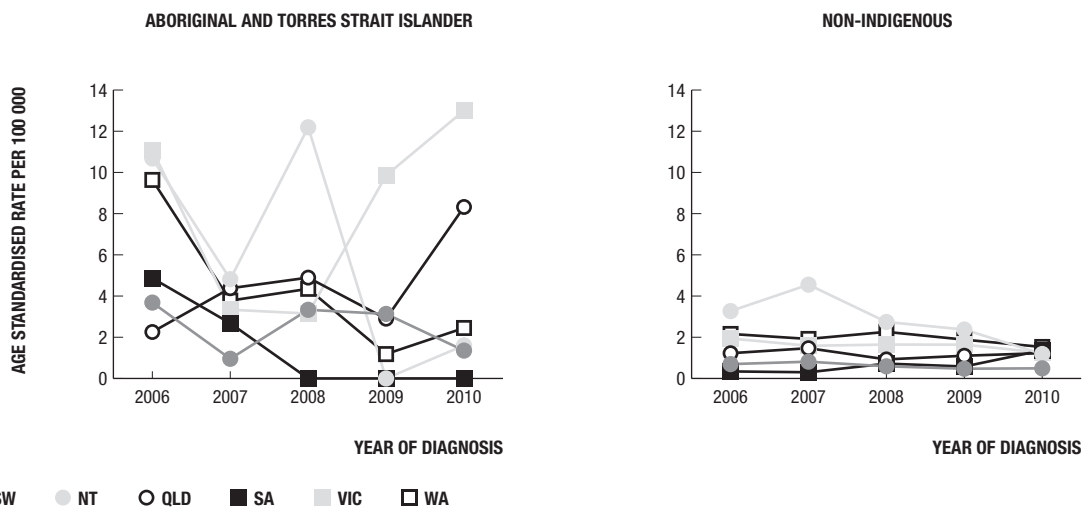
In 2010, the rate of diagnosis of newly acquired hepatitis B infection in the Aboriginal and Torres Strait Islander population in the age groups 20-49 years was at a rate of 2.3 and 3.9 times that of non-Indigenous males and females respectively (Figure 32).

Figure 32 Newly acquired hepatitis B diagnosis in selected age groups by Aboriginal and Torres Strait Islander status¹ and year



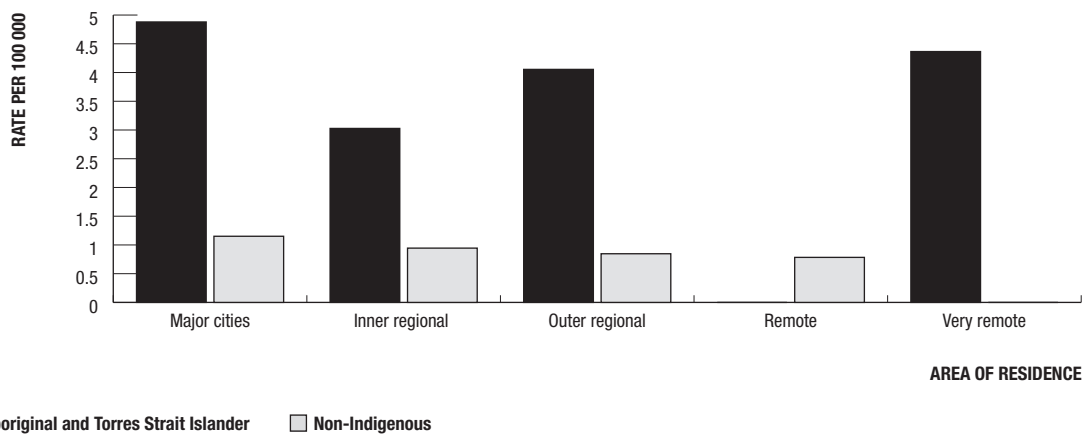
¹ Jurisdictions (NSW, NT, QLD, SA, VIC and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

Figure 33 Newly acquired hepatitis B diagnosis by Aboriginal and Torres Strait Islander status, State/Territory¹ and year



¹ Jurisdictions (NSW, NT, QLD, SA, VIC and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

Figure 34 Newly acquired hepatitis B diagnosis by Aboriginal and Torres Strait Islander status¹ and area of residence, 2010



¹ Jurisdictions (NSW, NT, QLD, SA, VIC & WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

In 2010, the rate of newly acquired hepatitis B diagnosis in the Aboriginal and Torres Strait Islander population was higher among those resident in all areas with a rate ranging from 5, 3 and 4 per 100 000 in major cities, regional and remote areas respectively, compared with a rate of 1 per 100 000 in the non-Indigenous population across all geographic areas of 1 per 100 000 (Figure 34).

Chronic hepatitis B infection

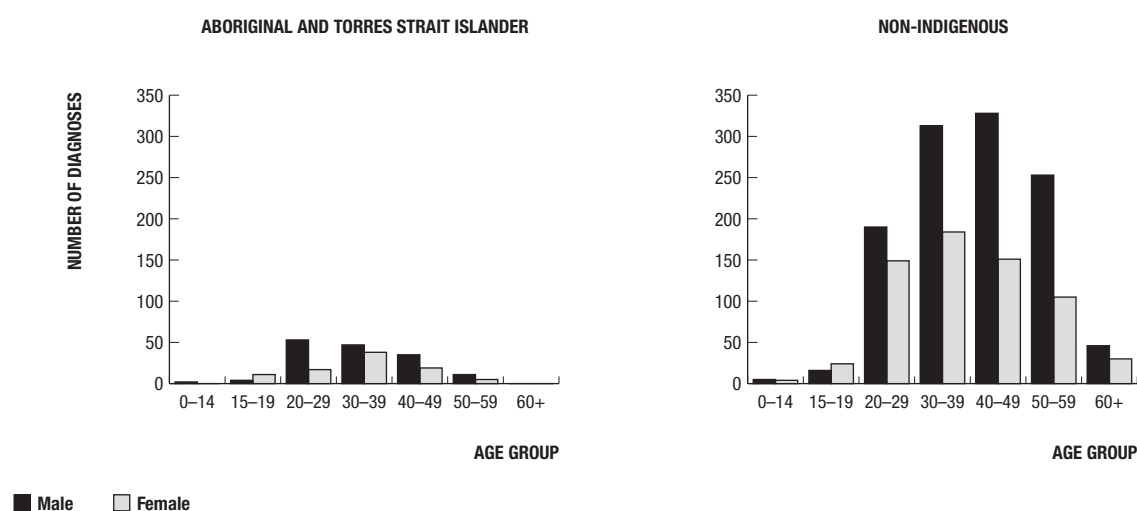
In 2007, 2.5% of the Australian population identified as Aboriginal and or Torres Strait Islander but accounted for an estimated 16% of the Australian population living with chronic hepatitis B infection. Estimated prevalence of chronic hepatitis B infection in the Aboriginal and Torres Strait Islander population ranged from 2% for urban Aboriginal and Torres Strait Islander populations to 8% in rural populations. Remote Aboriginal communities are likely to have even higher prevalence rates.

Hepatitis B vaccination, including universal infant vaccination, commenced in many Aboriginal and Torres Strait Islander Australian communities in the early 1990s. Evaluation of the impact of these programs has, however, been limited. “Catch-up” hepatitis B vaccination programs were introduced for Aboriginal and Torres Strait Islander children and adolescents in the late 1990s but coverage appears to be incomplete. Following notification of hepatitis B infection in several Aboriginal and Torres Strait Islander adolescents, a survey of vaccination status among adolescents in the community was undertaken. Only 44% were fully vaccinated, and more than 90% of the incompletely vaccinated adolescents had hepatitis B infection including 26% with chronic infection. Access to hepatitis B treatment and care services is limited, partly because of overall poor access to health care services in many Indigenous communities.

Hepatitis C Infection

In 2010, there were 458 diagnoses of HCV made among Aboriginal and Torres Strait Islander people, representing 6% of all cases reported for Indigenous status.

Figure 35 Number of diagnoses of hepatitis C antibody by Aboriginal and Torres Strait Islander status¹, sex and age group, 2010



¹ Jurisdictions (NT, SA and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

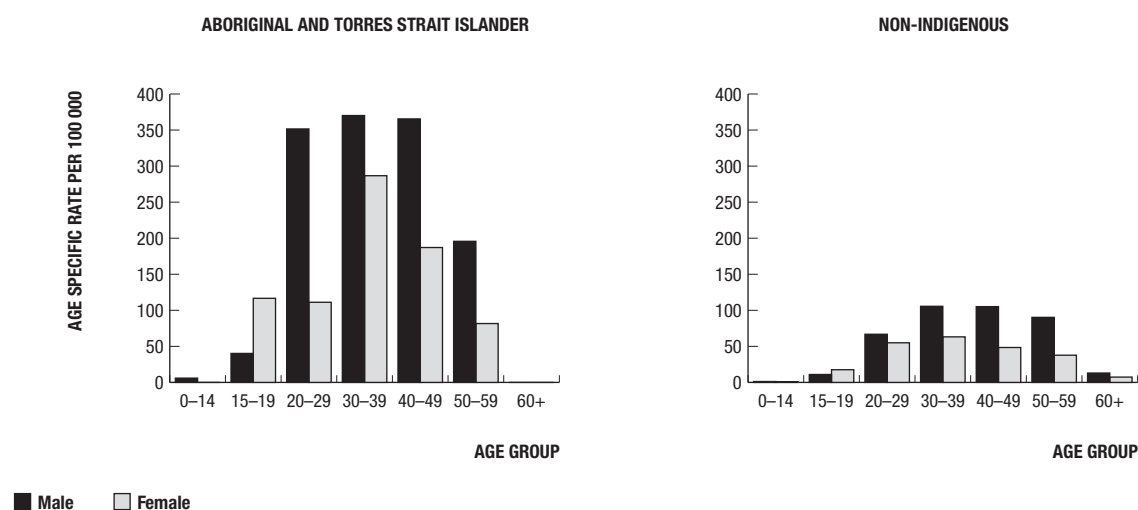
Information on Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses of hepatitis C antibody in 2010 in the Northern Territory, South Australia, Western Australia and Tasmania. In these jurisdictions Aboriginal and Torres Strait Islander people comprised 15%, 13% (South Australia and Western Australia) and 5% respectively of all HCV diagnoses in the respective jurisdiction.

In South Australia and Western Australia where completeness of reporting for Aboriginal and Torres Strait Islander status is greater than 90%, Aboriginal and Torres Strait Islander people account for 13% of all diagnoses in each jurisdiction.

In the period 2006 to 2010, the rate of newly diagnosed hepatitis C in the Aboriginal and Torres Strait Islander population increased from 120 in 2005 to 141 in 2010 whereas the rate in the non-Indigenous population decreased from 48 per 100 000 in 2006 to 43 per 100 000 in 2010 (Figure 35).

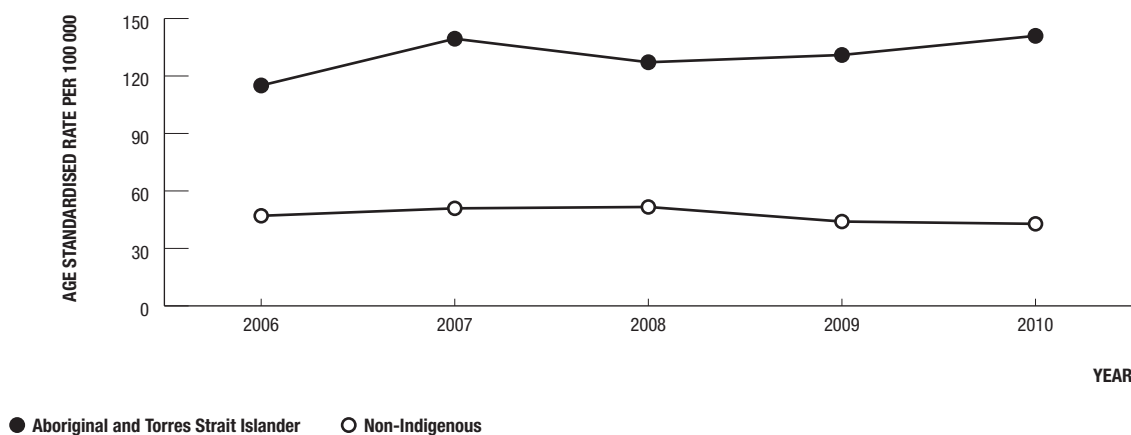
In 2010, the rate of diagnosis of hepatitis C antibody in the Aboriginal and Torres Strait Islander population resident in South Australia, Western Australia and Tasmania increased from 2009 while rates decreased in the same jurisdictions among non-Indigenous people. Over the period 2006 – 2010 the rate of diagnosis in the Northern Territory decreased by 14% in the Aboriginal and Torres Strait Islander population and by 29% in the non-Indigenous population resident in the Northern Territory. (Figure 36). In South Australia over the past five years, the rate of diagnoses of HCV among Aboriginal and Torres Strait Islander people has increased from 206 to 270 per 100 000 and in the non-Indigenous population the rate decreased slightly from 34 to 30 per 100 000 population. In Western Australia the population rate has increased from 2006 at 163 to 2010 at 196 per 100 000 population. In the same state the rate in the non-Indigenous population decreased from 48 to 43 per 100 000 population.

Figure 36 Rate of hepatitis C antibody by Aboriginal and Torres Strait Islander status¹, sex and age group, 2010



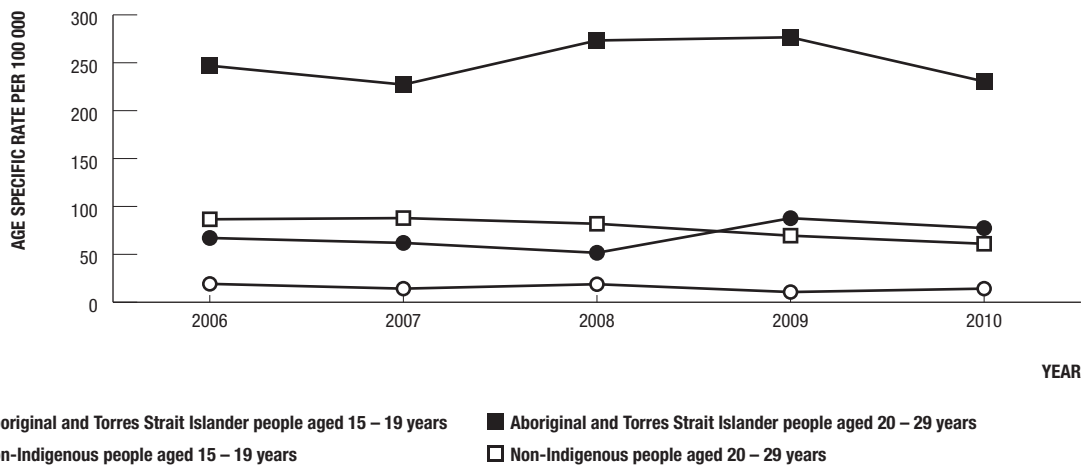
¹ Jurisdictions (NT, SA and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

Figure 37 Age standardised rate of hepatitis C antibody by Aboriginal and Torres Strait Islander status¹ and year



¹ Jurisdictions (NT, SA and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

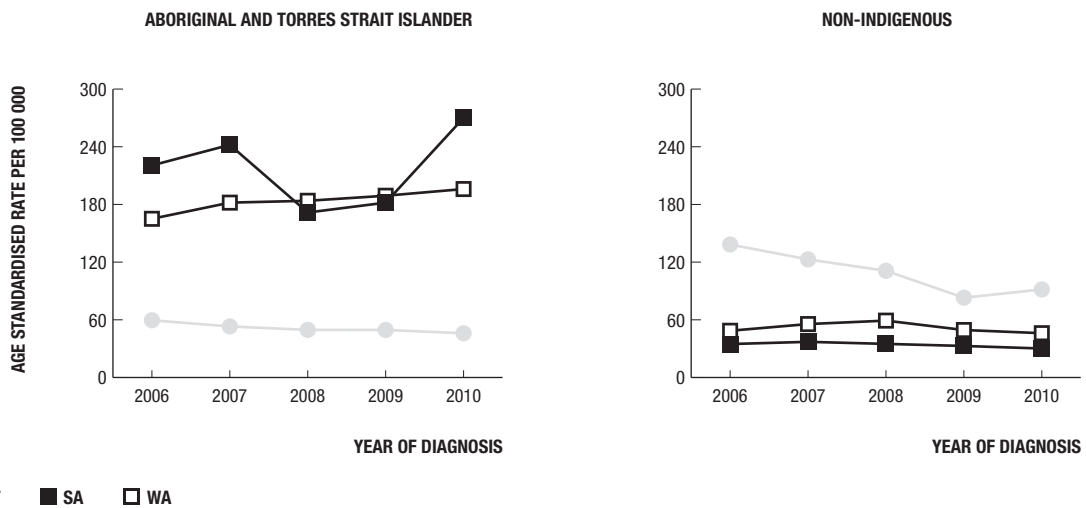
Figure 38 Hepatitis C antibody in selected age groups by Aboriginal and Torres Strait Islander status¹ and year



¹ Jurisdictions (NT, SA and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

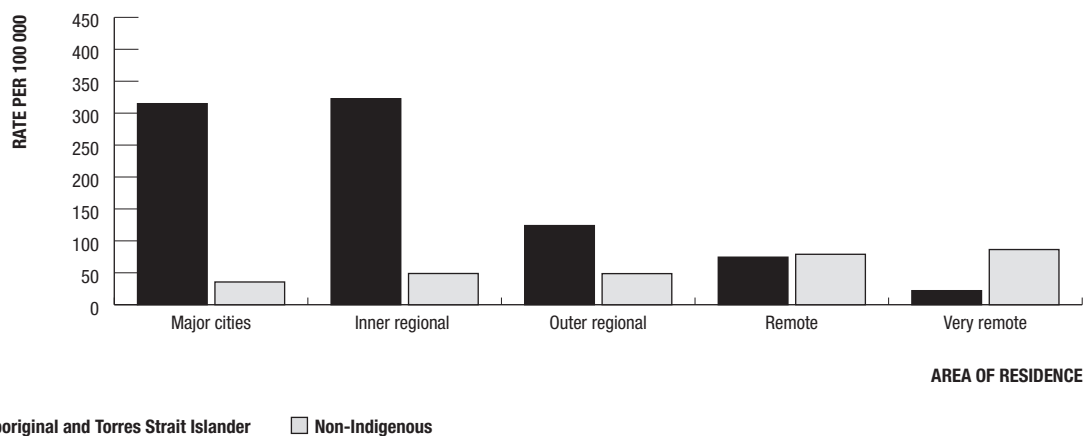
In 2010, the rate of diagnosis of hepatitis C antibody diagnosed in the 15-19 and 20-29 year age group among men and women in the Aboriginal and Torres Strait Islander population was 4 and 3.8 times the rate of that diagnosed in the same age group in the non-Indigenous population. (Figure 37). (Figure 38).

Figure 39 Hepatitis C antibody by Aboriginal and Torres Strait Islander status, State/Territory¹ and year



¹ Jurisdictions (NT, SA and WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses

Figure 40 Hepatitis C infection, by Aboriginal and Torres Strait Islander status¹ and area of residence, 2010



¹ Jurisdictions (NT, SA & WA) in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses.

In 2010, the rate of HCV diagnoses reported in South Australia, Western Australia and Northern Territory and Tasmania among Aboriginal and Torres Strait Islander people in major cities, inner regional and outer regional areas was 8.7, 6.6 and 2.5 times the rate of diagnosis of non-Indigenous people resident in the same areas and jurisdictions. Rates of diagnosis were less among Aboriginal and Torres Strait Islander people resident in remote and very remote areas than for non-Indigenous people.

2010 Australian Needle Syringe Program Survey

Data routinely collected from the Australian Needle Syringe Program Survey provides an insight into the demographics, risk behaviour, and blood-borne virus prevalence among people who inject drugs who attend Needle syringe programs. In the period 2006 – 2010, 11% of all clients participating in the annual survey identified as Aboriginal and or Torres Strait Islander. Hepatitis C antibody prevalence was consistently higher among Aboriginal and Torres Strait Islander survey respondents compared to non-Indigenous participants for all years, except for 2010 where the rate of HCV antibody prevalence was 47% among Aboriginal and Torres Strait Islander participants compared with 54% of non-Indigenous participants. In 2010, HIV prevalence remained low, at less than 1% in both the Aboriginal and Torres Strait Islander population and in the non-Indigenous population.

Methodological notes

National surveillance for sexually transmissible infections

Notification of specific sexually transmissible infections to the National Notifiable Diseases Surveillance System

Diagnoses of specific sexually transmissible infections were notified by State/Territory health authorities to the National Notifiable Disease Surveillance System, maintained by the Australian Government Department of Health and Ageing. Chlamydia was notifiable in all health jurisdictions except New South Wales prior to 1998; chlamydia was made notifiable in New South Wales in 1998. Gonorrhoea was a notifiable condition in all health jurisdictions and infectious syphilis became notifiable in all jurisdictions in 2004. In most health jurisdictions, diagnoses of sexually transmissible infections were notified by the diagnosing laboratory, the medical practitioner, hospital or a combination of these sources (see Table below).

Table Source of notification of specific sexually transmissible infections to the National Notifiable Diseases Surveillance System by State/Territory

Diagnosis	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Gonorrhoea	Doctor Laboratory Hospital	Laboratory	Doctor Laboratory	Doctor Laboratory Hospital	Doctor Laboratory	Doctor Laboratory Hospital	Doctor Laboratory	Doctor
Infectious syphilis	Doctor Laboratory Hospital	Doctor Laboratory Hospital	Doctor Laboratory	Doctor Laboratory Hospital	Doctor Laboratory	Doctor Laboratory Hospital	Doctor Laboratory	Doctor
Chlamydia	Doctor Laboratory Hospital	Laboratory	Doctor Laboratory	Doctor Laboratory Hospital	Doctor Laboratory	Laboratory	Doctor Laboratory	Doctor
Donovanosis	Not notifiable	Laboratory	Doctor Laboratory	Doctor Laboratory Hospital	Doctor Laboratory	Laboratory	Doctor Laboratory	Doctor Laboratory

National surveillance for sexually transmissible infections among Aboriginal and Torres Strait Islander people

Information on Aboriginal and Torres Strait Islander status in diagnosed cases of chlamydia, gonorrhoea and infectious syphilis was sought through doctor notification in the Australian Capital Territory, the Northern Territory, Queensland, South Australia, Victoria and Western Australia. New South Wales and Tasmania were the only health authorities that sought information on Aboriginal and Torres Strait Islander status through laboratory notification.

Population rates of diagnosis of specific sexually transmissible infections were calculated by year and State/Territory of diagnosis using *Experimental estimates of Aboriginal and Torres Strait Islander Australians June 2006* (ABS 2008), available through the Australian Bureau of Statistics.

Rate of diagnosis of sexual transmitted infections by area of residence

The rate of diagnosis of sexually transmitted infections in Australia in 2009 by area of residence and Aboriginal and Torres Strait Islander status was calculated using the 2006 census population distribution, based on the Australian Standard Geographical Classification (ASGC) (ABS 2003; ABS 2004). The ASGC uses Aria+ methodology, which assigns each locality to one of five remoteness classifications based on its distance by road to different categories of service centre. The service centres are categorised according to population size. Hobart and Darwin are not category A service centres (service centres with a population size of 250 000 or above) and therefore are classed as “Inner Regional” and “Outer Regional” areas, respectively, based on their distance to the nearest category A service centre. The five remoteness classifications are: Major cities, Inner Regional, Outer Regional, Remote and Very Remote.

National surveillance for newly diagnosed HIV infection

National HIV Registry

Newly diagnosed HIV infection is a notifiable condition in each State/Territory health jurisdiction in Australia. Cases of newly diagnosed HIV infection were notified through State/Territory health authorities to the national HIV surveillance centre on the first occasion of diagnosis in Australia. Information sought at notification of HIV infection included State/Territory of diagnosis, name code (based on the first two letters of the family name and the first two letters of the given name), sex, date of birth, Aboriginal and Torres Strait Islander status, date of HIV diagnosis, CD4+ cell count at diagnosis, source of exposure to HIV and evidence of newly acquired HIV infection. Information on country of birth has been reported by all health jurisdictions for cases of HIV infection newly diagnosed in Australia from 1 January 2002. Information on language spoken at home has been reported by health jurisdictions in New South Wales, Victoria and Queensland for cases of HIV infection newly diagnosed from 1 January 2004 and by all jurisdictions from 2008. Reporting of a previous HIV diagnosis overseas was introduced for cases of HIV infection newly diagnosed in Australia from 1 January 2007 (Table 1.1.3). Late HIV diagnosis was defined as newly diagnosed HIV infection with a CD4+ cell count of less than 200 cells/ μ l.

In New South Wales, information on cases of newly diagnosed HIV infection was sought only from the diagnosing doctor prior to 2008. From 2008, information was also sought from the doctors to whom the person with HIV infection was referred, and follow up was carried out for cases for which the information sought at HIV notification was incomplete. These new procedures resulted in more complete information on new HIV diagnoses and reassignment of cases found to have been newly diagnosed in earlier years.

The surveillance systems for newly diagnosed HIV infection are described in Guy *et al* (2007) and McDonald *et al* (1994b). The National Serology Reference Laboratory, Australia (Dax and Vandenbelt 1993), carried out monitoring of HIV antibody testing.

National surveillance for newly diagnosed HIV infection among Aboriginal and Torres Strait Islander people

Information on Aboriginal and Torres Strait Islander status was routinely sought at diagnosis of HIV infection in the Northern Territory, Queensland, South Australia, Tasmania and Western Australia from 1985. Information on Aboriginal and Torres Strait Islander status was available for cases of HIV infection newly diagnosed in New South Wales from January 1992, from June 1998 in Victoria and from January 2005 in the Australian Capital Territory. Nationally, information on Aboriginal and Torres Strait Islander status at diagnosis of HIV infection was sought prospectively from May 1995. For HIV diagnoses prior to 1995, Aboriginal and Torres Strait Islander status was obtained retrospectively through State/Territory health authorities. In 2000 – 2009, Aboriginal and Torres Strait Islander status was reported at HIV diagnosis by State/Territory health authorities other than the Australian Capital Territory prior to January 2005 and Victoria prior to June 1998 in 98% of Australian born cases. Further information is available in Guthrie *et al* (2000).

Population rates of newly diagnosed HIV infection by Aboriginal and Torres Strait Islander status were calculated using *Experimental estimates of Aboriginal and Torres Strait Islander Australians June 2006* (ABS 2008). The area of residence by Aboriginal and Torres Strait Islander status was calculated using the 2006 census population distribution, based on the Australian Standard Geographical Classification. The rate of HIV diagnosis in the non-Indigenous population was calculated using cases other than those whose exposure to HIV occurred in a high HIV prevalence country and the Australian population other than populations from high HIV prevalence countries in sub-Saharan Africa and South East Asia.

Global comparisons

The data in Figure 28 were obtained from the following sources:

- Centers for Disease Control and Prevention. *HIV Surveillance Report 2008; 20*. Centers for Disease Control and Prevention, Atlanta, Georgia. 2010
- Health Protection Agency. *HIV in the United Kingdom: 2009*: London: Health Protection Agency, Centre for Infections. November 2009
- Joint United Nations Programme on HIV/AIDS (UNAIDS). *2008 Report on the global HIV/AIDS epidemic*. UNAIDS, 2008. <http://www.unaids.org>
- Joint United Nations Programme on HIV/AIDS (UNAIDS). *2.5 Million People living with HIV in India: press release*. UNAIDS, 2007. <http://www.unaids.org/in>
- National Center for HIV/AIDS Dermatology and STDs (NCHADS). *Consensus Workshop on HIV Estimation for Cambodia*. NCHADS, 2007. <http://www.nchads.org/>
- Public Health Agency of Canada. *Summary: Estimates of HIV prevalence and incidence in Canada, 2008*. Centre for Communicable Diseases and Infection Control, Public Health Agency of Canada 2009

National surveillance for viral hepatitis

Notification of viral hepatitis to the National Notifiable Diseases Surveillance System

New diagnoses of hepatitis B, newly acquired hepatitis B and prevalent cases of hepatitis C infection were notifiable conditions in all State/Territory health jurisdictions in Australia. Cases were notified by the diagnosing laboratory, medical practitioner, hospital or a combination of these sources, through State/Territory health authorities, to the National Notifiable Diseases Surveillance System. Population rates of diagnosis of viral hepatitis were calculated for each State/Territory using yearly population estimates, provided by the Australian Bureau of Statistics.

Hepatitis B infection and hepatitis C infection was classified as newly acquired if evidence was available of acquisition in the 24 months prior to diagnosis (Communicable Diseases Network Australia 2004). Diagnoses of newly acquired hepatitis B infection was notifiable in all health jurisdictions. Diagnoses of newly acquired hepatitis C infection were recorded in all health jurisdictions other than Queensland.

National surveillance for viral hepatitis among Aboriginal and Torres Strait Islander people

Information was sought on Aboriginal and Torres Strait Islander status for diagnoses of prevalent and newly acquired hepatitis B, and prevalent and newly acquired hepatitis C cases notified to the National Notifiable Diseases Surveillance System. Population rates of diagnoses of viral hepatitis were calculated by year and State/Territory of diagnosis (in those jurisdictions for which Aboriginal and Torres Strait Islander status was reported in more than 50% of diagnoses in each year 2005 – 2009) using *Experimental estimates of Aboriginal and Torres Strait Islander Australians June 2006* (ABS 2008).

HIV and hepatitis C seroprevalence among people who inject drugs

All clients attending needle and syringe program (NSP) sites during one week in, 2006 (45 sites), 2007 (53 sites), 2008 (52 sites) and 2009 (51 sites), 2010 (53 sites) were asked to complete a brief, self-administered questionnaire and to provide a finger prick blood spot sample for HIV and hepatitis C antibody testing. NSP sites were selected on the basis of large numbers of clients and representation from all State/Territory health jurisdictions. Further information is available in MacDonald *et al* (1997 and 2000).

References

Australian Bureau of Statistics. 2006 Census of population and housing. Australia (Australia) by age by sex. Canberra: Australian Bureau of Statistics, 2007

Australian Bureau of Statistics. *Experimental estimates of Aboriginal and Torres Strait Islander Australians June 2006*. Canberra: Australian Bureau of Statistics (Catalogue No 3238), 2008

Australian Bureau of Statistics. *Experimental estimates and projections, Aboriginal and Torres Strait Islander Australians*. (Catalogue No 3238.0). Canberra: Australian Bureau of Statistics, 2008

Australian Bureau of Statistics. *Census paper. ASGC Remoteness Classification: purpose and use. Census Paper No. 03/01*. Canberra: Australian Bureau of Statistics, 2003

Australian Government Department of Health and Ageing. Third National Aboriginal and Torres Strait Islander Blood Borne Viruses and Sexually Transmissible Infections Strategy 2010 – 2013. Commonwealth of Australia, Canberra 2010

Australian Government Department of Health and Ageing. National Hepatitis B Strategy, 2010 – 2013. Commonwealth of Australia, Canberra 2010

Australian Government Department of Health and Ageing. Third National Hepatitis C Strategy, 2010 – 2013. Commonwealth of Australia, Canberra 2010

Australian Government Department of Health and Ageing. Sixth National HIV Strategy, 2010 – 2013. Commonwealth of Australia, Canberra 2010

Australian Government Department of Health and Ageing. Second National Sexually Transmissible Infections Strategy 2010 – 2013. Commonwealth of Australia, Canberra 2010

Centers for Disease Control and Prevention. *HIV Surveillance Report 2008; 20*. Centers for Disease Control and Prevention, Atlanta, Georgia. 2010

Commonwealth of Australia 1997. The National Indigenous Australians' Sexual Health Strategy 1996-97 to 1998-99 – a Report of the ANCARD Working Party on Indigenous Australians' Sexual Health. Australian Government Publishing Service, Canberra, March 1997

Communicable Diseases Network Australia. Interim surveillance case definitions for the Australian National Notifiable Diseases Surveillance System. Version 1, 1 January 2004. www.cda.gov.au/surveil/nndss/casedefs

Dax EM and Vandenbelt TA. HIV antibody testing in Australia. *J Acquir Immune Defic Syndr* 1993; 6 (suppl 1) S24-S28

Guthrie JA, Dore GJ, McDonald AM and Kaldor JM for the National HIV Surveillance Committee. HIV and AIDS in Aboriginal and Torres Strait Islander Australians: 1992 – 1998. *Medical Journal of Australia* 2000; 172: 266-269

Guy RJ, McDonald AM, Bartlett MJ, Murray JC, Giele CM, Davey TM, Appuhamy RD, Knibbs R, Coleman D, Hellard ME, Grulich AE, Kaldor JM. HIV diagnoses in Australia: diverging epidemics within a low prevalence country. *MJA* 2007; 13 Jun 2007

Health Protection Agency. HIV in the United Kingdom: 2009 report. London: Health Protection Agency, Centre for Infections. November 2009

Joint United Nations Programme on HIV/AIDS (UNAIDS). 2008 Report on the global HIV/AIDS epidemic. UNAIDS, 2008. <http://www.unaids.org>

MacDonald M, Wodak A, Ali R, Crofts N, Cunningham P, Dolan K, Kelaher M, Loxley W, van Beek I and Kaldor J on behalf of the Collaboration of Australian Needle Exchanges. HIV prevalence and risk behaviour in needle exchange attenders: a national study. *Medical Journal of Australia* 1997; 166: 237-240

MacDonald MA, Wodak AD, Dolan KA, van Beek I, Cunningham PH and Kaldor J on behalf of the Collaboration of Australian NSPs. Hepatitis C virus antibody prevalence among injecting drug users at selected needle and syringe programs in Australia, 1995-1997. *Medical Journal of Australia* 2000; 172(2): 57-61

- McDonald AM, Gertig DM, Crofts N and Kaldor JM for the National HIV Surveillance Committee. A national surveillance system for newly acquired HIV infection in Australia. *American Journal of Public Health* 1994b; 84(12): 1923-1928
- National Center for HIV/AIDS Dermatology and STDs (NCHADS). Consensus Workshop on HIV Estimation for Cambodia. NCHADS, 2007. <http://www.nchads.org/>
- National Centre in HIV Epidemiology and Clinical Research. *HIV/AIDS, Hepatitis C and Sexually Transmissible Infections in Australia Annual Surveillance Report 2000*. National Centre in HIV Epidemiology and Clinical Research, The University of New South Wales, Sydney, NSW. 2000. <http://www.nchechr.unsw.edu.au/>
- National Centre in HIV Epidemiology and Clinical Research. *HIV/AIDS, viral hepatitis and sexually transmissible infections in Australia Annual Surveillance Report 2001*. National Centre in HIV Epidemiology and Clinical Research, The University of New South Wales, Sydney, NSW. 2001. <http://www.nchechr.unsw.edu.au/>
- National Centre in HIV Epidemiology and Clinical Research. *HIV/AIDS, viral hepatitis and sexually transmissible infections in Australia Annual Surveillance Report 2002*. National Centre in HIV Epidemiology and Clinical Research, The University of New South Wales, Sydney, NSW. 2002. <http://www.nchechr.unsw.edu.au/>
- National Centre in HIV Epidemiology and Clinical Research. *HIV/AIDS, viral hepatitis and sexually transmissible infections in Australia Annual Surveillance Report 2003*. National Centre in HIV Epidemiology and Clinical Research, The University of New South Wales, Sydney, NSW. 2003. <http://www.nchechr.unsw.edu.au/>
- National Centre in HIV Epidemiology and Clinical Research. *HIV/AIDS, viral hepatitis and sexually transmissible infections in Australia Annual Surveillance Report 2004*. National Centre in HIV Epidemiology and Clinical Research, The University of New South Wales, Sydney, NSW; Australian Institute of Health and Welfare, Canberra, ACT. 2004. <http://www.nchechr.unsw.edu.au/>
- National Centre in HIV Epidemiology and Clinical Research. *HIV/AIDS, viral hepatitis and sexually transmissible infections in Australia Annual Surveillance Report 2005*. National Centre in HIV Epidemiology and Clinical Research, The University of New South Wales, Sydney, NSW; Australian Institute of Health and Welfare, Canberra, ACT. 2005. <http://www.nchechr.unsw.edu.au/>
- National Centre in HIV Epidemiology and Clinical Research. *HIV/AIDS, viral hepatitis and sexually transmissible infections in Australia Annual Surveillance Report 2006*. National Centre in HIV Epidemiology and Clinical Research, The University of New South Wales, Sydney, NSW; Australian Institute of Health and Welfare, Canberra, ACT. 2006. <http://www.nchechr.unsw.edu.au/>
- National Centre in HIV Epidemiology and Clinical Research. *HIV/AIDS, viral hepatitis and sexually transmissible infections in Australia Annual Surveillance Report 2007*. National Centre in HIV Epidemiology and Clinical Research, The University of New South Wales, Sydney, NSW 2007. <http://www.nchechr.unsw.edu.au/>
- National Centre in HIV Epidemiology and Clinical Research. *HIV/AIDS, viral hepatitis and sexually transmissible infections in Australia Annual Surveillance Report 2008*. National Centre in HIV Epidemiology and Clinical Research, The University of New South Wales, Sydney, NSW 2008. <http://www.nchechr.unsw.edu.au/>
- National Centre in HIV Epidemiology and Clinical Research. *HIV/AIDS, viral hepatitis and sexually transmissible infections in Australia Annual Surveillance Report 2009*. National Centre in HIV Epidemiology and Clinical Research, The University of New South Wales, Sydney, NSW 2009. <http://www.nchechr.unsw.edu.au/>
- Public Health Agency of Canada. *HIV and AIDS in Canada. Surveillance report to December 31 2008*. Surveillance and Risk Assessment Division, Centre for Communicable Diseases and Infection Control, Public Health Agency of Canada, 2009
- Ward JS, Guy RJ, Akre SP, Middleton MG, Giele CM, Su JY, Davis CA, Wand H, Knox JB, Fagan PS, Donovan B, Kaldor JM, Russell DB. Epidemiology of syphilis in Australia: moving toward elimination of infectious syphilis from remote Aboriginal and Torres Strait Islander communities? *MJA* 2011; 194 (10): 525 – 529

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Infectious syphilis ■
HIV ■
Hepatitis B ■
Hepatitis C ■
Gonorrhoea ■
Chlamydia ■