

HIV, viral hepatitis and sexually transmissible infections in Australia  
**Annual Surveillance Report**

2014



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**Kirby Institute**

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## The Kirby Institute

**in collaboration with**

**Australian Gonococcal Surveillance Programme**

**Communicable Diseases Network Australia**

**Centre in Social Research in Health**

**National Serology Reference Laboratory, Australia**

**and collaborating networks in surveillance for HIV, viral hepatitis and sexually transmissible infections**

The Kirby Institute is funded by the Australian Government Department of Health and is affiliated with the Faculty of Medicine, UNSW. The Surveillance and Evaluation Program for Public Health at the Kirby Institute is responsible for the public health monitoring and evaluation of patterns of transmission of bloodborne viral and sexually transmissible infections and is a research associate of the Australian Institute of Health and Welfare. Its work is overseen by the Ministerial Advisory Committee on AIDS, Sexual Health and Hepatitis.



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# Preface

This report is the eighteenth annual review of available surveillance data pertaining to the occurrence of HIV, viral hepatitis and sexually transmissible infections in Australia. It is intended to be a reference document for organisations and individuals interested in the occurrence of these infectious diseases in Australia, drawing together relevant data from many sources into a single comprehensive report. The report is available at Internet address <http://www.kirby.unsw.edu.au>. The Australian HIV Public Access Dataset, holding records of cases of HIV infection, diagnosed in Australia by 31 December 2013 and reported by 31 March 2014 is also available through the website <http://www.kirby.unsw.edu.au>.

The main findings of the report are presented as text, supported by figures. The underlying data are presented as tables and follow the main report. The tables are provided with no commentary, except for brief explanatory footnotes. A methodological summary follows the tables, along with references to other documents and reports which provide further information.

The accompanying report *Bloodborne viral and sexually transmitted infections in Aboriginal and Torres Strait Islander people: Surveillance and Evaluation Report 2014* presents a detailed analysis of the occurrence of bloodborne viral and sexually transmitted infections in a format designed to be accessible for Aboriginal and Torres Strait Islander health services and communities. The report is available at Internet address <http://www.kirby.unsw.edu.au>

Some of the information regarding risk behaviour which appears in this report is also published, along with further behavioural data, in the report *HIV/AIDS, Hepatitis C and Sexually Transmissible Infections in Australia Annual Report of Trends in Behaviour 2014*, edited by the Centre in Social Research in Health. Specifically, data reported in Tables 5.1.1 and 7.1.2 of *HIV, viral hepatitis and sexually transmissible infections in Australia Annual Surveillance Report 2014* also appears in the report on behavioural data.

Unless specifically stated otherwise, all data provided in the report are to the end of 2013, as reported by 31 March 2014. All data in this report are provisional and subject to future revision.

This 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 all collaborating organisations, listed in the following section, to national surveillance for HIV, viral hepatitis and sexually transmissible infections is gratefully acknowledged.



# Acknowledgments

## National organisations

- Association for Prevention and Harm Reduction Programs, VIC
- Australasian Society for HIV Medicine, Sydney, NSW
- Australia and New Zealand Liver Transplant Registry, Brisbane, QLD
- Australian Federation of AIDS Organisations, Sydney, NSW
- Australian Government Department of Health, Canberra, ACT
- Australian Injecting and Illicit Drug Users' League
- Australian Institute of Health and Welfare, Canberra, ACT
- Australian Paediatric Surveillance Unit and its contributors, Westmead, NSW
- Australian Red Cross Blood Service, Melbourne, VIC
- Centre in Social Research in Health, UNSW, NSW
- Communicable Diseases Network Australia, Canberra, ACT
- Hepatitis Australia, Canberra, ACT
- National Aboriginal Community Controlled Health Organisation, ACT
- National Association of People with HIV Australia, Sydney, NSW
- National Drug and Alcohol Research Centre, UNSW, Sydney, NSW
- National Serology Reference Laboratory, Australia, Fitzroy, VIC

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- Queensland Health, Brisbane, QLD
- STI and BBV Section, Communicable Disease Control Branch, SA Health, Adelaide, SA
- Department of Health and Human Services, Hobart, TAS
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- Communicable Diseases Control Branch, Department of Health, Perth, WA

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- Microbiology Laboratory, Royal Darwin Hospital, Casuarina, NT
- Queensland Health Scientific Services, Coopers Plains, QLD
- Microbiology and Infectious Diseases Department, SA Pathology at Women's and Children's Hospital, North Adelaide, SA
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- The Microbiological Diagnostic Unit (PHL), Department of Microbiology and Immunology, University of Melbourne, Parkville, VIC
- Department of Microbiology and Infectious Diseases, PathWest Laboratory Medicine, Royal Perth Hospital, Perth, WA

## Collaborative group on sentinel surveillance in sexual health clinics

- Sydney Sexual Health Centre, Sydney Hospital, Sydney, NSW
- Royal Prince Alfred Hospital Sexual Health Clinic, Camperdown, NSW
- Brisbane Sexual Health Clinic, Brisbane, QLD
- Gold Coast Sexual Health Clinic, Miami, QLD
- Clinic 275, Adelaide, SA
- Melbourne Sexual Health Centre, Melbourne, VIC
- Fremantle Sexual Health Service, Fremantle, WA

## Genital Warts Surveillance Network

### Contributing organisations

- Northern Sydney Sexual Health Service, St Leonards; Royal Prince Alfred Hospital Sexual Health Clinic, Camperdown; Sydney Sexual Health Centre, Sydney, NSW
- NT Sexual Health and BBV Unit, NT
- Dolls House Sexual Health Clinic, Cairns; Gold Coast Sexual Health Service, Miami, QLD
- Hobart, Devonport and Launceston Sexual Health Service, TAS
- Melbourne Sexual Health Centre, Carlton, VIC
- Fremantle Hospital, Fremantle, WA

## Australian HIV Observational Database

- Tamworth Sexual Health Service, Tamworth; Blue Mountains Sexual Health Clinic, Katoomba; Holdsworth House Medical Practice, Darlinghurst; Illawarra Sexual Health, Wollongong; Royal Prince Alfred Hospital Sexual Health Clinic, Camperdown; Macquarie Sexual Health Centre, Dubbo; Nepean Sexual Health and HIV Clinic, Penrith; Holden Street Clinic, Gosford; Lismore Sexual Health & AIDS Services, Lismore; St Vincent's Hospital, Darlinghurst; Sydney Sexual Health Centre, Sydney, Dr Ellis General Medical Practice, Coffs Harbour; Taylor Square Private Clinic, Darlinghurst; East Sydney Doctors, Surry Hills, NSW
- Communicable Disease Centre, Royal Darwin Hospital, Darwin, NT
- AIDS Medical Unit, North Quay; Clinic 87, Sunshine Coast & Cooloola HIV Sexual Health Service, Nambour; Gladstone Road Medical Centre, Highgate Hill; Gold Coast Sexual Health Clinic, Miami; Cairns Sexual Health Services, Cairns Base Hospital, Cairns, QLD
- The Care and Prevention Program, Adelaide University, Adelaide, SA
- The Alfred Hospital, Prahran; Melbourne Sexual Health Centre, Carlton; Monash Medical Centre, Clayton; Prahran Market Clinic, South Yarra; The Centre Clinic, St Kilda; The Carlton Clinic, Carlton; Northside Clinic, Fitzroy North, VIC
- Department of Clinical Immunology, Royal Perth Hospital, Perth, WA

## Collaboration of Australian Needle and Syringe Programs

- Directions ACT; Canberra, ACT
- ACON Hunter; Central Coast NSP Services, Gosford, Long Jetty and Woy Woy; First Step Program, Port Kembla and Nowra; Health ConneXions, Liverpool; Hunter Harm Reduction Services, Newcastle; Kirketon Road Centre and Clinic 180, Kings Cross; Mid North Coast Harm Reduction, Coffs Harbour; Murrumbidgee Harm Reduction, Albury and Wagga Wagga; NSW Users and AIDS Association (NUAA), Surry Hills; Northern NSW Harm Reduction, Ballina, Byron Bay, Grafton, Lismore, Murwillumbah, Nimbin and Tweed Heads Northern Rivers Harm Reduction Service, Ballina, Byron Bay, Coffs Harbour, Grafton, Lismore, Murwillumbah, Nimbin, and Tweed Heads; Resource and Education Program for IDUs, Redfern; Central Access Service, Kogarah and Sutherland; South Court Primary Care NSP, Nepean; Western Sydney West HIV/Hepatitis C Prevention Service, Blacktown, 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 ATODS NSP, Cairns; Queensland Injectors Health Network (QuIHN), Brisbane, Gold Coast and Sunshine Coast; Kobi House, Toowoomba; West Moreton Sexual Health Service, Ipswich; Townsville ATODS NSP, QLD
- Drug and Alcohol Services South Australia, Adelaide; Hindmarsh Centre, Hindmarsh; Nunkuwarrin Yunti Community Health Centre, Adelaide; Street Link Youth Health Service, 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
- Anglicare NSP Service, Hobart and Glenorchy; Clarence Community Health Centre, Clarence; Devonport Community Health Centre, Devonport; Salvation Army Launceston, Launceston, TAS
- Barwon Health Drug and Alcohol Services, Geelong; Health Information Exchange, St Kilda; Health Works, Footscray; Inner Space, Collingwood; North Richmond NSP, North Richmond; 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 South Coast, WA
- St Vincent's Centre for Applied Medical Research (AMR) and NSW State Reference Laboratory for HIV at St Vincent's Hospital, Sydney, NSW

## Annual Surveillance Report 2014 Advisory Committee

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- Simon Donohoe, Australian Federation of AIDS Organisations, Sydney, NSW
- James Ward, Baker IDI Central Australia, NT
- Dr Benjamin Cowie, Victorian Infectious Diseases Reference Laboratory, VIC
- Associate Professor David Wilson (Chair), Professor Basil Donovan, Professor Lisa Maher, Associate Professor Rebecca Guy, Dr Marlene Kong, Dr Iryna Zablotska-Manos, Dr Jenny Iverson, Dr Lei Zhang, Ann McDonald, Andrew Nakhla, Megan Tapia, The Kirby Institute



# Summary

## HIV infection

- A total of 1 236 cases of newly diagnosed HIV infection was notified in Australia in 2013, similar to the number notified in 2012 (1 253). The rate of HIV diagnosis per 100 000 population increased from around 4.7 in 2004 – 2008 to 5.1 in 2009 – 2013.
- An estimated 26 800 people were living with HIV infection in Australia at the end of 2013.
- Trends in newly diagnosed HIV infection have differed across State and Territory health jurisdictions. In New South Wales, the rate of HIV diagnosis per 100 000 population declined steadily from around 6.1 in 2004 – 2008 to 5.5 in 2009 – 2013. In Victoria, the rate was stable at around 5.4 in 2004 – 2008 and 5.5 in 2009 – 2013. Population rates of HIV diagnosis increased in Queensland, from around 4.4 in 2004 to 2008, to 5.1 from 2009 to 2013, and in Western Australia, from 3.6 to 4.2. The rates of HIV diagnosis in the less populous jurisdictions with relatively few cases compared with the more populous jurisdictions show considerable variation from year to year. The rate of HIV diagnosis increased in the Australian Capital Territory from 2.0 in 2004 – 2008 to 3.7 in the five years 2009 – 2013, in the Northern Territory from 3.5 to 6.8, and in Tasmania, from 1.6 to 2.7, whereas in South Australia the rate remained stable at 3.6 and 3.4.
- HIV continued to be transmitted primarily through sexual contact between men, accounting for 71% of new HIV diagnoses in 2013.
- The number of notifications of newly acquired HIV infection in Australia increased from 261 in 2004 to 350 in 2013. Notifications of newly acquired HIV infection indicate the lower bound to the number of cases of recent HIV transmission that have actually occurred in Australia.
- The *per capita* rate of HIV diagnosis in the Aboriginal and Torres Strait Islander population was similar to that in the Australian-born non-Indigenous population during the years from 2004 to 2011 and was higher in 2012 and 2013. Aboriginal and Torres Strait Islander cases of HIV infection differed from Australian-born non-Indigenous cases newly diagnosed in the five years from 2009 to 2013 in that a substantially greater proportion were attributed to injecting drug use (12% compared with 3%) and heterosexual contact (21% compared with 13%). A substantially higher proportion of Aboriginal and Torres Strait Islander cases were among women (20%) compared with Australian-born non-Indigenous cases (5%).
- Of 1 417 cases of HIV infection newly diagnosed in 2009 – 2013, for which exposure to HIV was attributed to heterosexual contact, 56% were in people from high prevalence countries or their partners.

## Viral hepatitis

- The *per capita* rate of notification of hepatitis B infection in Australia in 2009 – 2013 was stable at around 31 per 100 000 population. The rate of notification of newly acquired hepatitis B infection steadily declined in Australia from 1.2 in 2009 to 0.7 per 100 000 population in 2013.
- An estimated 210 000 people were living in Australia in 2013 with hepatitis B infection. An estimated 389 (300 – 635) deaths in 2013 were attributable to chronic hepatitis B infection. The estimated prevalence of chronic hepatitis B infection in the Australian population in 2013 was 0.97%.
- The *per capita* rate of diagnosis of hepatitis C antibody declined from 52.7 in 2009 to 46.3 per 100 000 population in 2013. The rate of diagnosis of hepatitis C antibody in the Aboriginal and Torres Strait Islander population was more than three times the rate in the non-Indigenous population in 2013.
- An estimated 230 000 people were living in Australia with chronic hepatitis C infection, including 80 000 with moderate to severe liver disease. The estimated number of people living with moderate to severe liver disease has more than doubled (115% increase) over the past ten years. An estimated 630 (400 – 880) deaths attributable to chronic hepatitis C infection occurred in 2013.
- Chronic hepatitis B infection and chronic hepatitis C infection was the underlying cause of liver disease in 8 (3.6%) and 67 (30.2%) of 222 liver transplants in 2013.

- The reported annual number of notifications of newly acquired hepatitis C infection was stable at around 410 cases per year in 2009 – 2013 and accounted for 4% of new hepatitis C diagnoses in 2013.
- Based on reported cases, hepatitis B and hepatitis C transmission in Australia continued to occur predominantly among people with a recent history of injecting drug use.
- The proportion of people seen at needle and syringe programs who reported having injected drugs for five years or less was stable in 2009 – 2013 at around 11%. Within this group, hepatitis C prevalence declined from 21% in 2011 to 14% in 2013.

## Sexually transmissible infections other than HIV

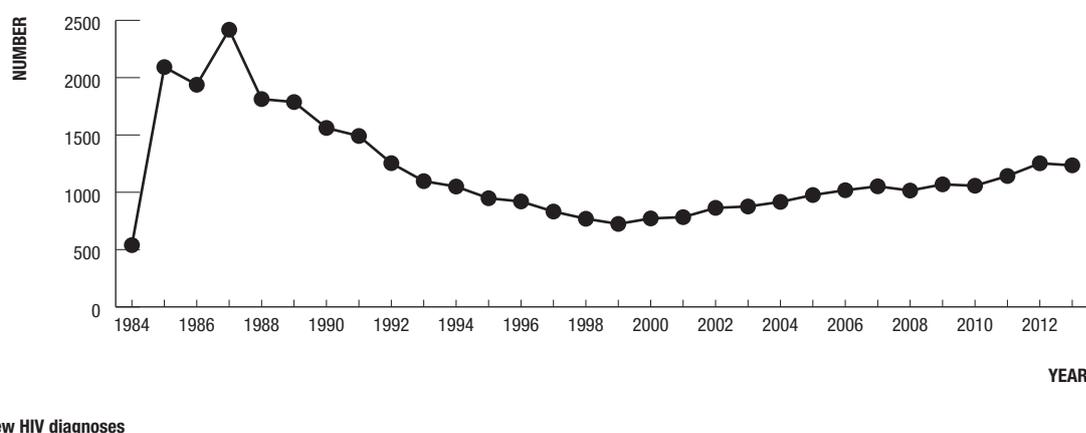
- Chlamydia was the most frequently reported notifiable condition in Australia in 2013 with 82 537 diagnoses. The population rate of diagnosis of chlamydia in 2013 was 359 per 100 000 population, a decline on the rate for 2012 (364). This is the first occurrence of a reversal in the increasing trend in rates of chlamydia diagnosis from the commencement of notification by all state and territory health jurisdictions in 1999.
- One case of donovanosis was notified in 2009, 2010 and 2012, demonstrating the continuing success of efforts to eliminate donovanosis from the Australian population.
- The number of cases of gonorrhoea notified in 2013 was 14 947. The rate of diagnosis of gonorrhoea increased by 72%, from 37.5 per 100 000 population in 2009 to 64.6 in 2013, with increasing diagnoses in both males and females.
- The number of cases of infectious syphilis notified in 2013 was 1 765, the highest number recorded in Australia. The rate of diagnosis of infectious syphilis increased among males from 5.0 in 2004 to 14.0 in 2013. Increased rates of diagnosis of infectious syphilis in 2013 occurred in New South Wales, Queensland, Tasmania and Victoria, particularly among gay men, and declining rates were reported in Western Australia and the Northern Territory.
- The rate of diagnosis of chlamydia in the Aboriginal and Torres Strait Islander population was three times that in the non-Indigenous population in 2009 – 2013. The rate of diagnosis of gonorrhoea in the Aboriginal and Torres Strait Islander population was between 13 to 24 times higher than the rate in the non-Indigenous population.
- Following the introduction of vaccination against human papilloma virus, the proportion of young women aged 21 years or younger who were diagnosed with genital warts at their first visit to a sexual health centre decreased from 14% in 2007 to 1% in 2013.

# Main Findings

## HIV infection

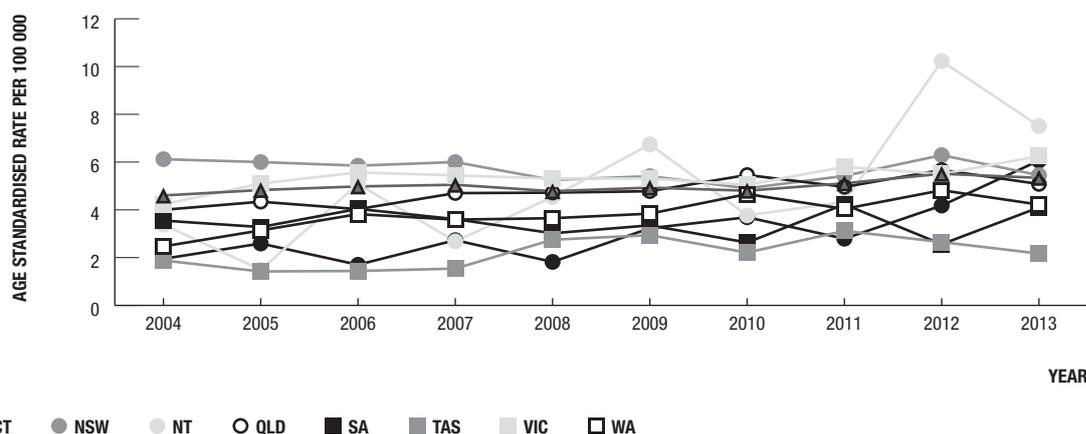
A total of 1 236 cases of HIV infection was notified in Australia in 2013, similar to the number notified in 2012 (1 253). Annual counts of new HIV diagnoses in 2012 and 2013 were as high as those in 1992 (Figure 1). The rate of HIV diagnosis per 100 000 population increased from around 4.7 in 2004 – 2008 to 5.1 in 2009 – 2013, a 9% increase over the past 10 years.

Figure 1 Newly diagnosed HIV infection in Australia by year



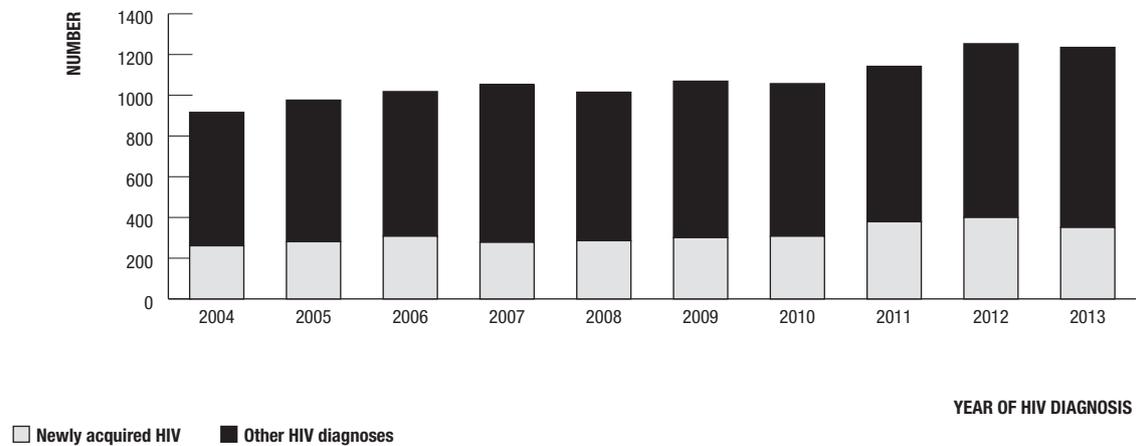
Recent trends in the population rate of newly diagnosed HIV infection have differed across Australia. In New South Wales, the rate of HIV diagnosis has remained relatively stable, or slightly declined, from 6.1 per 100 000 population in 2004 to 4.9 in 2010 and 5.5 in 2013 (Figure 2). The rate of HIV diagnosis in the Australian Capital Territory increased substantially from 3.2 in 2009 to 6.1 in 2013. The rate of HIV diagnosis remained stable in Victoria in the years 2004 – 2008 and 2009 – 2013 at around 5.3 and 5.5, respectively, and at around 3.5 and 3.3 in South Australia. Population rates of HIV diagnosis increased over time in the Northern Territory, from 3.5 in 2004 – 2008 to 6.8 in 2009 – 2013, in Queensland, from around 4.4 to 5.1, in Tasmania, from 1.6 to 2.7, and in Western Australia, from 3.6 to 4.2.

Figure 2 Newly diagnosed HIV infection, 2004 – 2013, by year and State/Territory

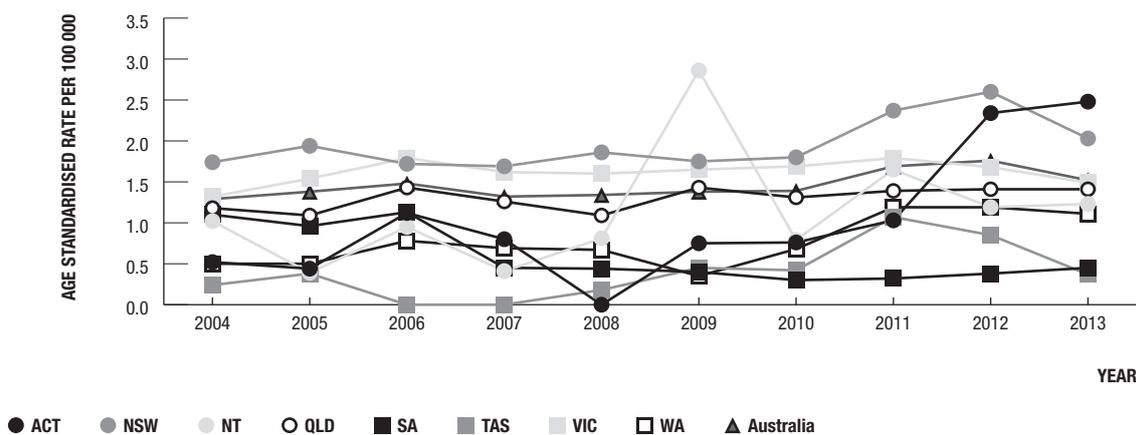


Of 1 236 cases of HIV infection newly diagnosed in Australia in 2013, 208 (16.8%) had been previously diagnosed overseas (Table 1.1.3). These cases have generally been included in past counts and are included in the count for 2013.

**Figure 3 Newly diagnosed HIV infection in Australia, 2004 – 2013, by newly acquired HIV status and year**

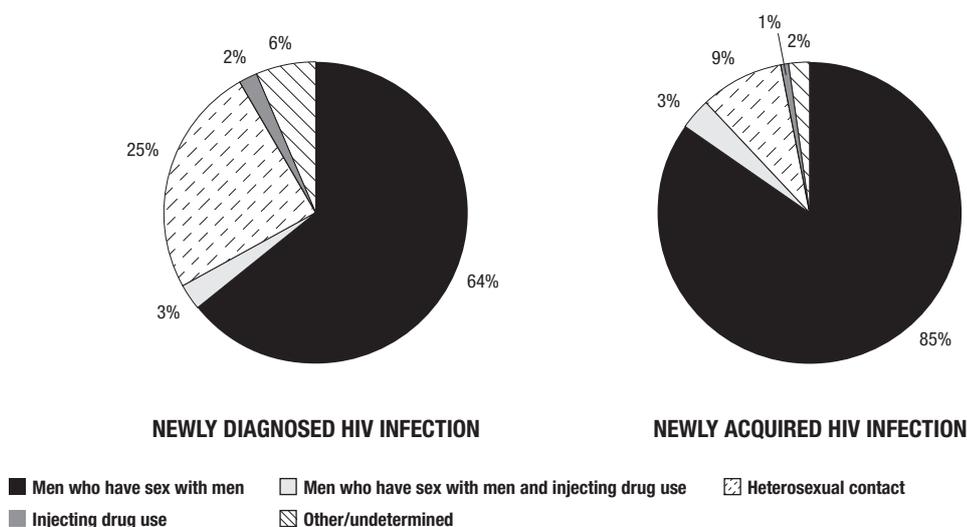


**Figure 4 Newly acquired HIV infection, 2004 – 2013, by State/Territory and year**



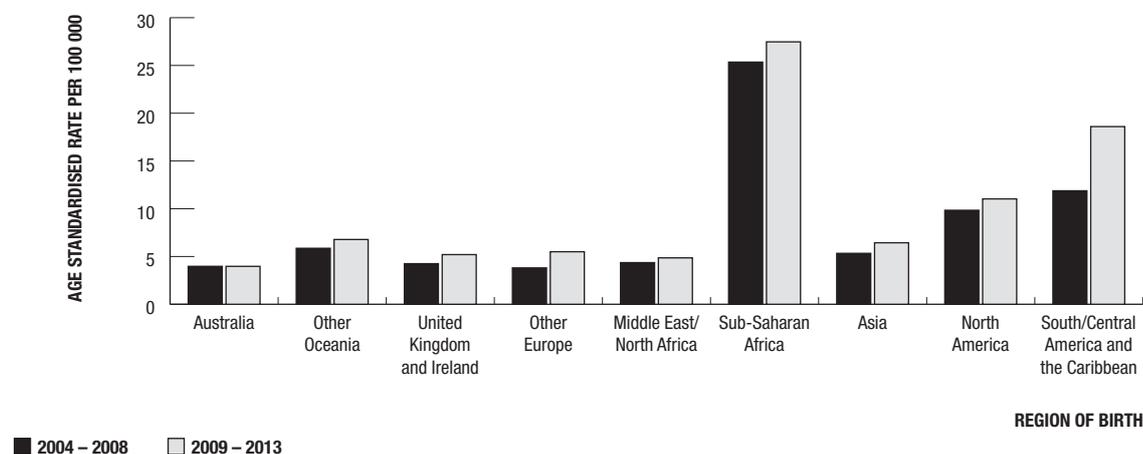
Among cases of newly diagnosed HIV infection, the proportion who acquired the infection in the 12 months prior to diagnosis gradually increased from 28% in 2009 to 33% in 2011 and then declined in 2013 to 28% (Figure 3). In New South Wales, the population rate of diagnosis of newly acquired HIV infection was stable at around 1.7 from 2004 to 2010, then increased to 2.6 in 2012 and declined to 2.0 in 2013 (Figure 4). The rate of diagnosis of newly acquired HIV infection in the Australian Capital Territory increased sharply from 0.8 in 2009 to 2.5 in 2013. In Victoria, the rate was around 1.7 from 2006 to 2012 and declined to 1.5 in 2013. In South Australia, the rate dropped from 1.1 in 2004 to 2006 to 0.4 in 2007 to 2013. The rate in Queensland increased from 1.2, from 2004 to 2008, to 1.4 from 2009 to 2013, in Tasmania from 1.6 to 2.7 and in Western Australia from 0.7 to 1.1.

**Figure 5** Newly diagnosed HIV infection and diagnoses of newly acquired HIV infection in Australia, 2009 – 2013, by HIV exposure category



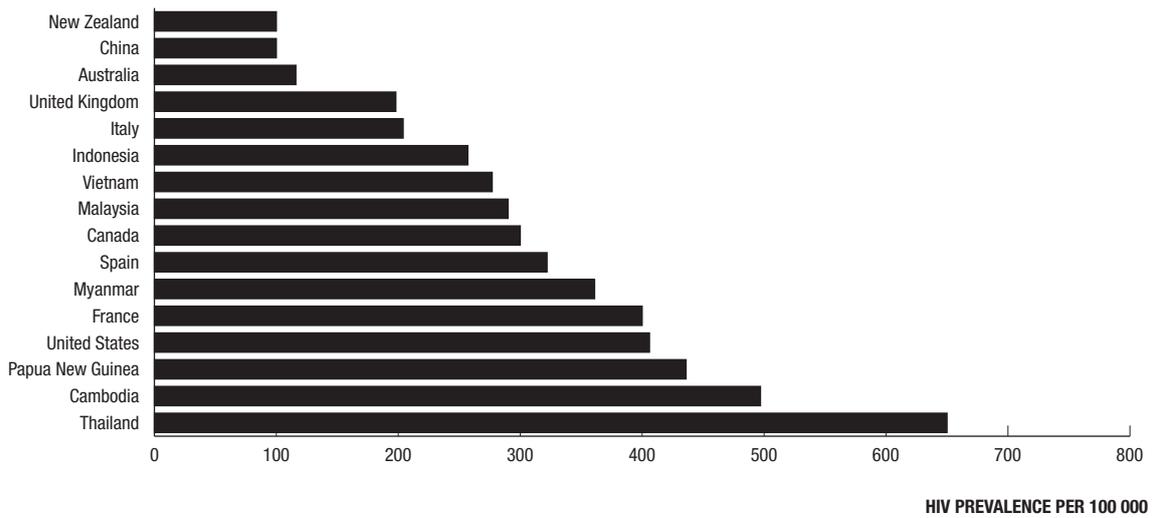
Transmission of HIV in Australia continues to occur primarily through sexual contact between men (Figure 5). In 2009 – 2013, 67% of new HIV diagnoses occurred among men who have sex with men (71% of reported exposure routes), 25% were attributed to heterosexual contact, 2% to injecting drug use and exposure was undetermined in 6%. Men who have sex with men accounted for 88% of diagnoses of newly acquired HIV infection. Exposure to HIV was attributed to heterosexual contact and injecting drug use in 9% and 1%, respectively, of diagnoses of newly acquired HIV infection.

**Figure 6** Rate of HIV diagnosis in Australia, 2004 – 2013, by country/region of birth and year



People born in Australia accounted for 53% of cases of HIV infection newly diagnosed in 2009 – 2013. Among Australian-born cases, the rate of HIV diagnosis was stable at 4.0 in 2004 – 2013 (Figure 6). The rate of HIV diagnosis in the overseas-born population increased from 6.7 in 2004 – 2008 to 7.8 in 2009 – 2013. The population rate of HIV diagnosis in the sub-Saharan African-born and Asian-born populations in the 5 years from 2009 to 2013 compared with the previous 5 years increased by 66%; the rate in the Oceania population other than Australia increased by 62%. Among cases of HIV infection newly diagnosed in the past five years, 10% were in people who reported speaking a language other than English at home.

**Figure 7 HIV prevalence in selected countries**

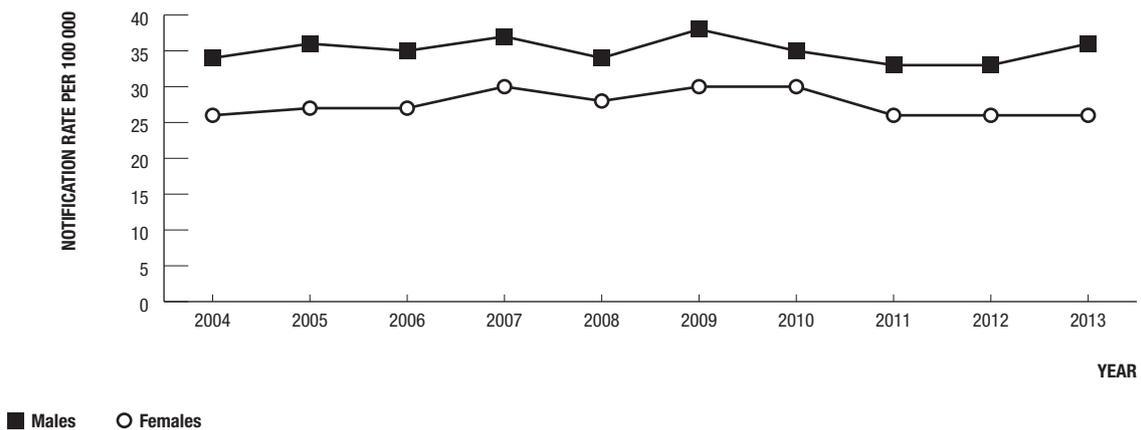


At the end of 2013, an estimated 26 800 (ranging from the lowest value of 24 500 to a highest value of 30 900) people were living in Australia with HIV infection. As an overall national prevalence (116 per 100 000, range 114 – 134), the level of HIV infection in Australia is lower than in the United Kingdom in 2013 (198 per 100 000 population) and three-to-four-fold lower than in the United States in 2010 (406 per 100 000).

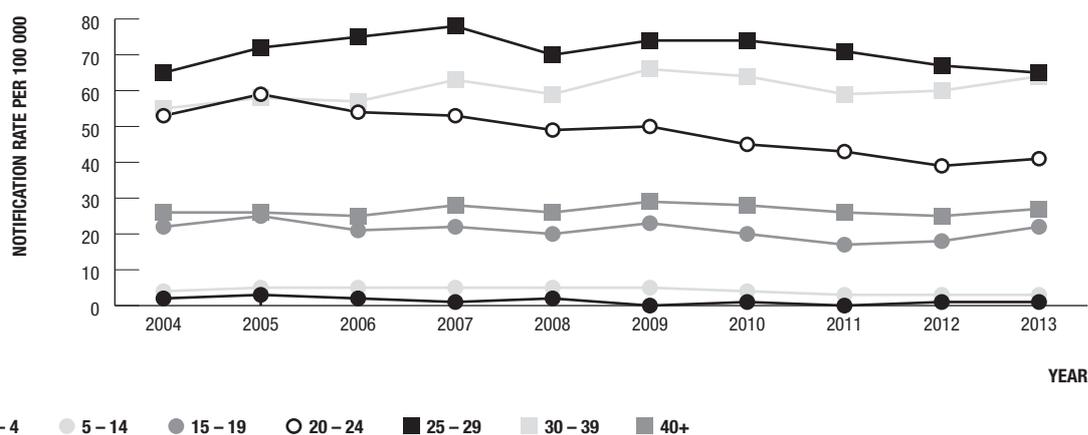
## Viral hepatitis

The population rate of reported diagnoses of hepatitis A infection in Australia remained at or below 1.3 per 100 000 population in 2009 – 2013, except in 2009, when a large multi-jurisdictional outbreak of hepatitis A infection resulted in an increased rate of 2.6 (Table 2.1.1).

**Figure 8 Hepatitis B notifications, 2004 – 2013, by year and sex**

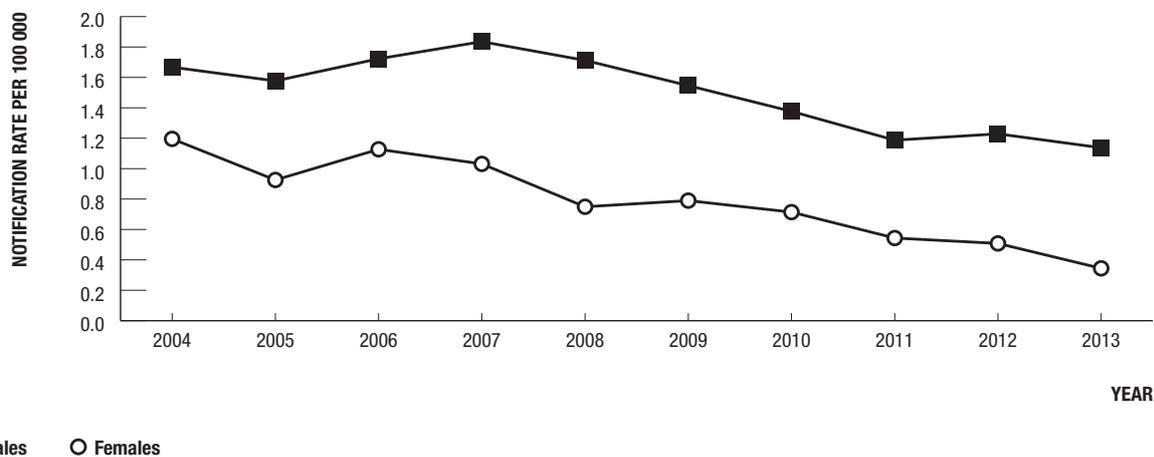


**Figure 9 Hepatitis B notifications, 2004 – 2013, by year and age group**

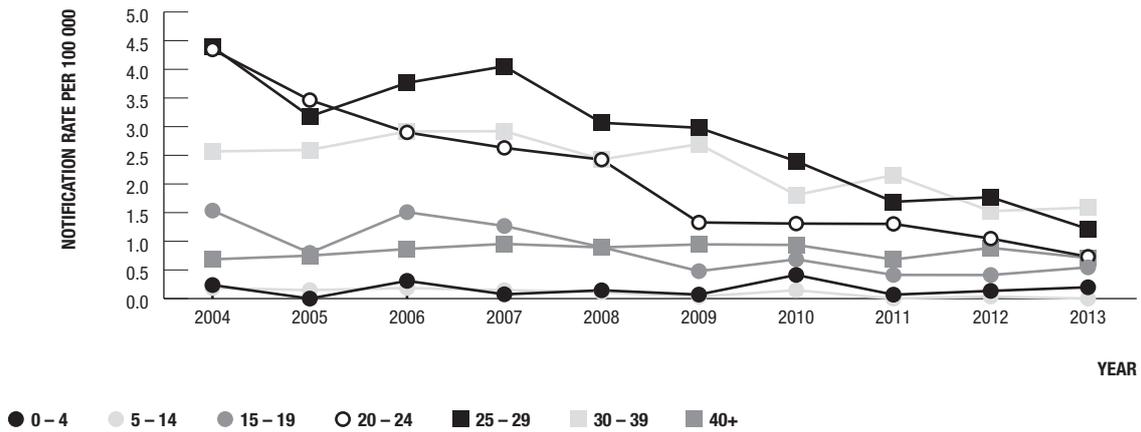


The population rate of diagnosis of hepatitis B infection in Australia declined slightly from 33.8 per 100 000 population in 2009 to 30.9 in 2013 (Figure 8). The decreases in the rate of hepatitis B diagnosis were mainly among people aged 20 – 24 years, from 53.2 in 2004 to 41.3 in 2013 (Figure 9). The number and rate of diagnosis of newly acquired hepatitis B decreased from 253 and 1.2 in 2009 to 171 and 0.7 in 2013 (Figure 10). The rate of diagnosis of newly acquired hepatitis B infection declined substantially from 2004 among people aged older than 20 years (Figure 11). Adolescent “catch up” vaccination programs may have contributed to this reduction. However, the rate of diagnosis of newly acquired hepatitis B infection also declined among those aged 30 years or older. Notifications of newly acquired hepatitis B infection have declined in people born overseas but increased in people born in Australia (Table 2.1.8).

**Figure 10 Newly acquired hepatitis B notifications, 2004 – 2013, by year and sex**

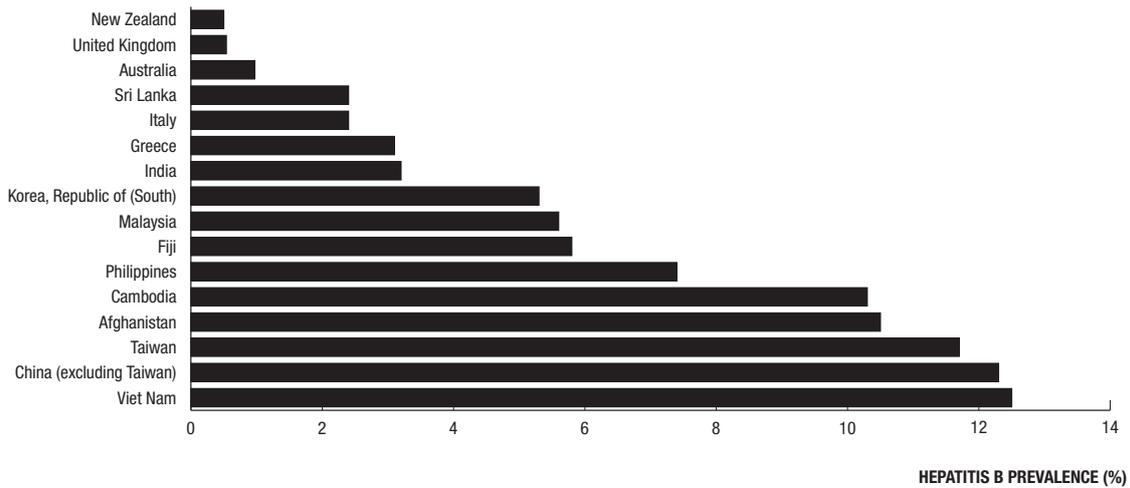


**Figure 11** Newly acquired hepatitis B notifications, 2004 – 2013, by year and age group



In 2013, the estimated number of people living in Australia with chronic hepatitis B was 210 000. As a national prevalence (0.97%), the level of hepatitis B infection in Australia is greater than in New Zealand and the United Kingdom but substantially less than prevalence levels in several other major countries of birth of people living in Australia (Figure 12).

**Figure 12** Estimated prevalence of chronic hepatitis B infection in Australia by country of birth



The number and rate of diagnosis of hepatitis C infection per 100 000 population declined from 11 480 and 52.7 in 2009 to 10 698 and 46.3 in 2013. Declines have been observed in all age groups. In the past ten years, the rate declined in most age groups but most prominently in the 25 – 29 year age group (by 50%), and by 43% in the 20 – 24 year age group (Figure 13).

Figure 13 Hepatitis C notifications, 2004 – 2013, by year and age group

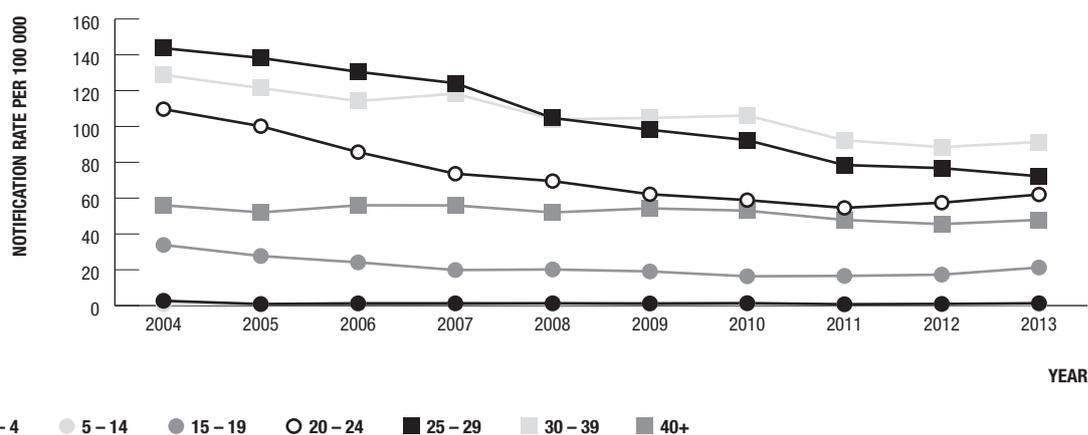
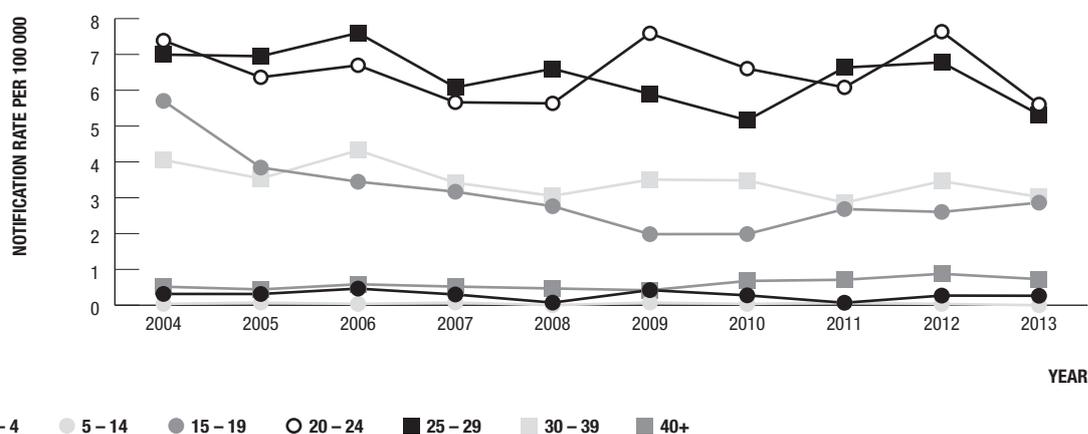


Figure 14 Newly acquired hepatitis C notifications, 2004 – 2013, by year and age group



Around 4.0% of cases of hepatitis C infection diagnosed in 2009 – 2013 were documented as having been acquired within the previous two years. Reports of newly acquired hepatitis C continued to occur at the highest rate among adults aged 20 – 24 and 25 – 29 years (Figure 14) (Table 2.1.13). Among people who inject drugs seen at the Kirketon Road Centre in Sydney, hepatitis C incidence ranged 5.4 per 100 person years to 13.0 between 2009 and 2013 (Table 4.3.1). Hepatitis C incidence among hepatitis C negative people who inject drugs enrolled in the Hepatitis C Incidence and Transmission Study – community (HITS-c) in Sydney was 10.2 per 100 person years in 2009 and 3.9 in 2013 (Table 4.3.2).

The proportion of diagnoses of newly acquired hepatitis B infection among overseas-born people was lower (Europe, North and South America and the Caribbean) or higher (Oceania, Middle East, Africa and Asia) than the proportion of people in Australia from these countries (Table 2.1.8). By contrast, the proportion of diagnoses of newly acquired hepatitis C was substantially lower than the proportion of people in Australia who were born overseas (Table 2.1.14).

An estimated 210 000 (172 000 – 249 000) people were living with hepatitis B infection and 389 (300 – 635) deaths were attributed to chronic hepatitis B infection in 2013 (Table 6.2.1). The prevalence of chronic hepatitis B infection in the Australian population was 0.97% and was greater than 10% among people born in Vietnam, China, Taiwan, Afghanistan and Cambodia (Table 2.4.1)

There were an estimated 5 400 (range 5 000 – 5 800) incident cases of hepatitis C in Australia in 2013 (Table 6.3.1). An estimated 310 000 (240 000 – 325 000) people living in Australia in 2013 had been exposed to hepatitis C virus. Of these, 80 000 people were estimated to have cleared their infection, and 230 000 (180 000 – 245 000) had chronic hepatitis C infection. Of these, 155 000 (115 000 – 165 000) had early liver

disease (stage F0/1), 64 000 (43 600 – 79 000) had moderate-to-severe liver disease (stage F2/3), and 11 400 (7 100 – 17 000) were living with hepatitis C related cirrhosis. The estimated number of people with at least moderate liver disease has more than doubled (115% increase) over the last 10 years.

Hepatitis C prevalence in 2013 was approximately 140 times lower among blood donors (0.01%) than the estimated prevalence of hepatitis C infection in the Australian population as a whole (1.4%) (Figure 38).

## Sexually transmissible infections other than HIV

Chlamydia was the most frequently reported infection in Australia in 2013, with 82 537 newly diagnosed cases. The population rate of reported diagnoses reached a peak in 2012 at 364 per 100 000 population and declined slightly to 359 in 2013. The rate among women peaked in 2011 at 422 per 100 000 population and declined to 410 in 2013 whereas the rate among men peaked in 2012 at 307 and declined to 303 in 2013 (Figure 15). This is the first time in recent history that there has been a decline in rates of chlamydia diagnosis.

Figure 15 Chlamydia notifications, 2004 – 2013, by year and sex

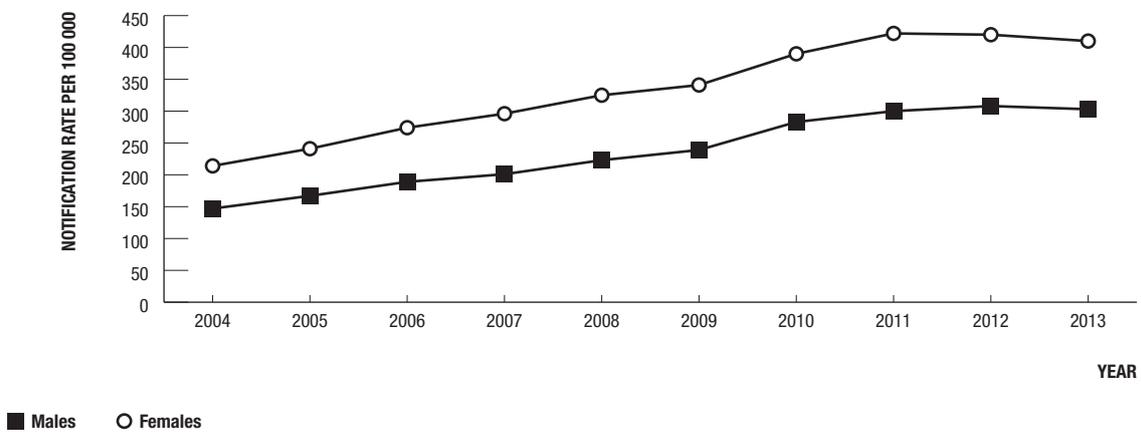
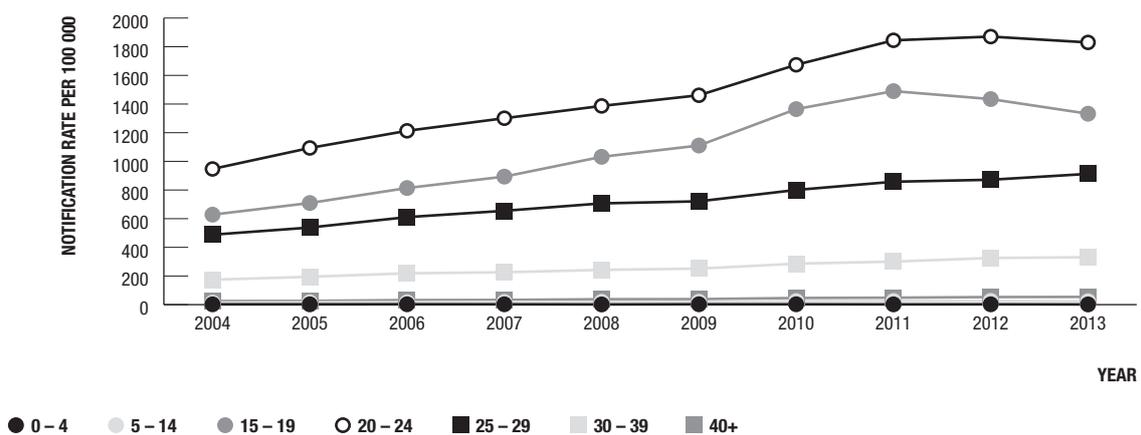


Figure 16 Chlamydia notifications, 2004 – 2013, by year and age group



The decline in the rate of chlamydia diagnosis commenced first in Western Australia in 2011 and in the Australian Capital Territory, New South Wales, Tasmania and Victoria in 2012. Rates of chlamydia diagnosis have not yet declined in the Northern Territory, Queensland or South Australia. Chlamydia diagnoses in the 15 – 24 year age group accounted for 61% of the annual number of diagnoses in 2011 and 57.8% of diagnoses in 2013 (Figure 16). In 2009 – 2013, the female-to-male sex ratio in the 15 – 19 year age group was 3:1 whereas it was 1:1 in the 25 – 29 year age group. Age- and sex-specific patterns of diagnosis may have been influenced by differential testing rates.

Figure 17 Gonorrhoea notifications, 2004 – 2013, by year and sex

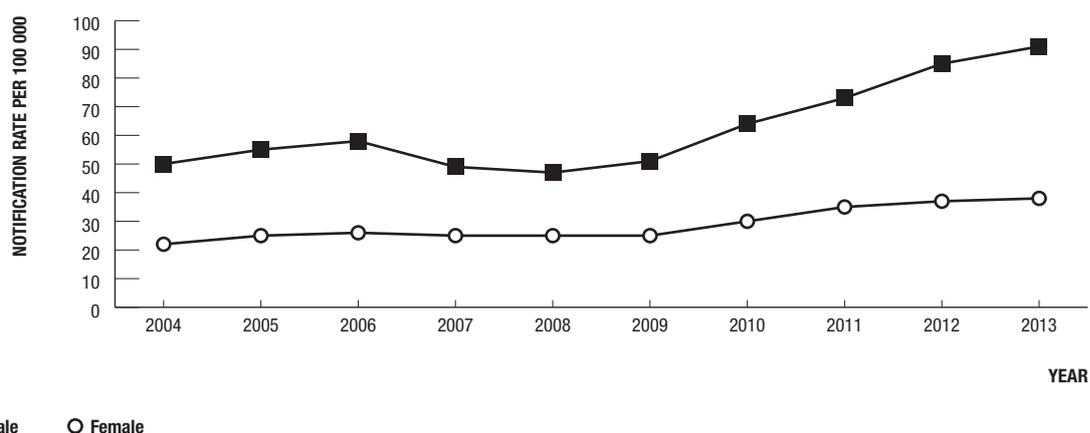
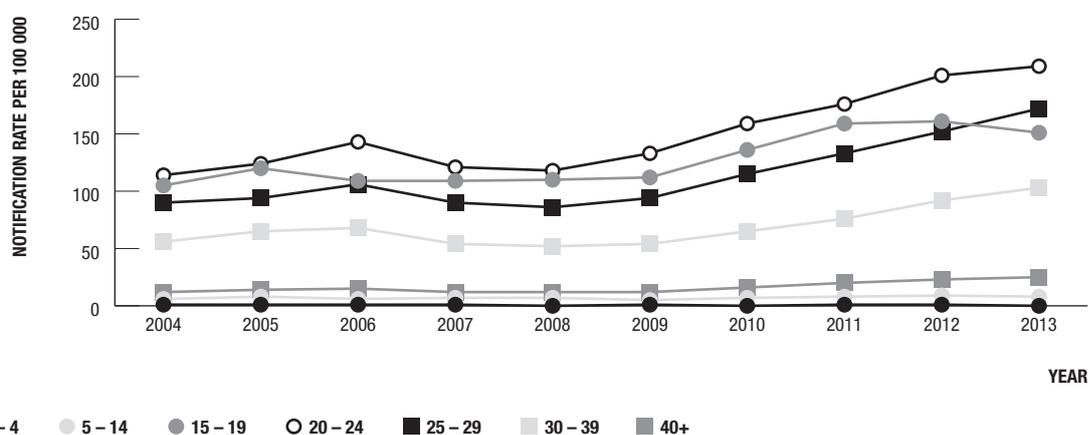


Figure 18 Gonorrhoea notifications, 2004 – 2013, by year and age group



The population rate of diagnosis of gonorrhoea among males and females was relatively stable in 2004 – 2008 at around 50 and 25, respectively, followed by a substantial increase in diagnosis rates among males, from 51 in 2009 to 91 in 2013, and a comparatively small increase among females, from 25 in 2009 to 38 in 2013 (Figure 17). The rates of diagnosis of gonorrhoea increased by at least 2-fold in the Australian Capital Territory, New South Wales, South Australia and Tasmania. In the past ten years, the rate of gonorrhoea diagnosis continued to increase in all age groups except the 15 – 19 year age group. The rate of gonorrhoea diagnosis was highest in the 15 – 19 year age group at 161 in 2012 and declined to 151 in 2013 (Figure 18). The proportion of gonorrhoea diagnoses among people aged 15 – 19 years was 19% in 2009 – 2011 and declined to 17% and 15% in 2012 and 2013, respectively.

Figure 19 Infectious syphilis notifications, 2004 – 2013, by year and sex

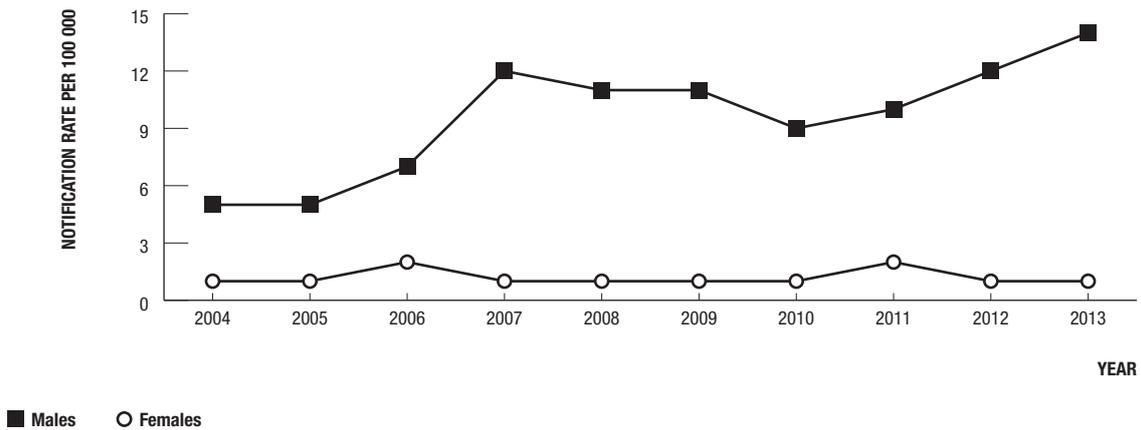
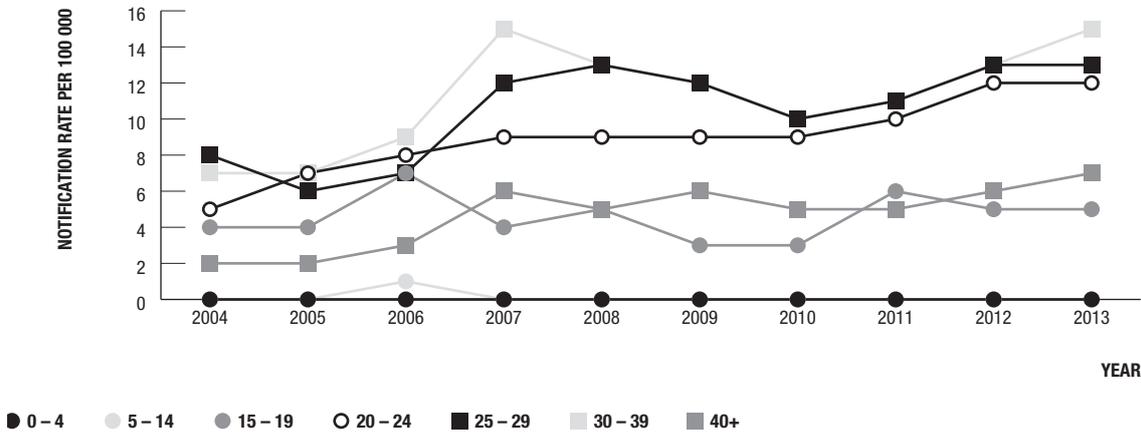


Figure 20 Infectious syphilis notifications, 2004 – 2013, by year and age group



The rate of diagnosis of infectious syphilis among men increased to greater than 9.0 per 100 000 population in the years 2007 – 2009 and increased again from 9.0 in 2010 to 14.0 in 2013 whereas the rate among women remained stable at 1.0 per 100 000 population (Figure 19). Diagnoses of infectious syphilis were almost completely confined to men who have sex with men. Over the past five years, New South Wales, Queensland and Victoria recorded increasing rates of diagnosis of infectious syphilis whereas rates were stable or declining in Western Australia and in the Northern Territory. The rate of diagnosis of infectious syphilis was highest in the 30 – 39, 25 – 29 and in the 20 – 24 year age groups (Figure 20).

The rates of notification of chlamydia and gonorrhoea in the Northern Territory continue to be substantially greater than those in other states and territories. No cases of donovanosis were diagnosed in Australia in 2013, maintaining virtual elimination.

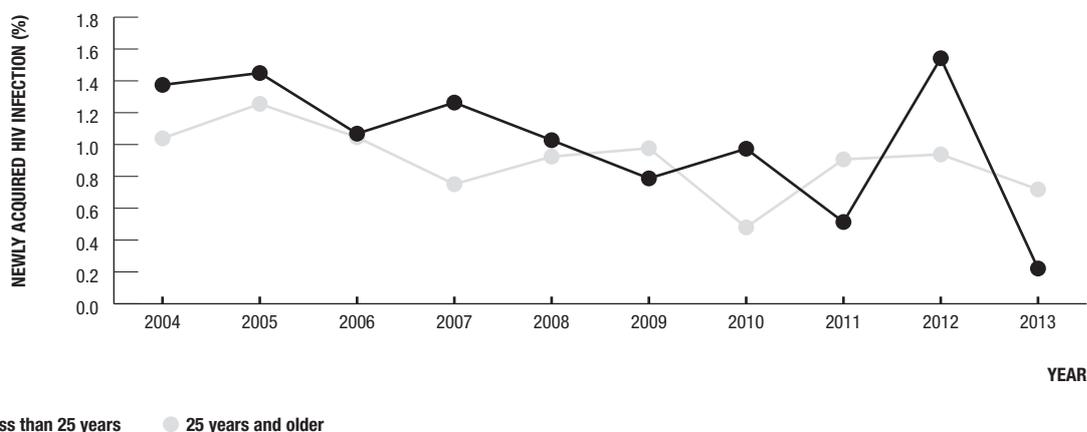
# HIV, viral hepatitis and sexually transmissible infections in selected populations

Population groups regarded as priorities for prevention and health promotion activities under the most recent national strategies for HIV, hepatitis B, hepatitis C, sexually transmissible infections (STI) and the National Aboriginal and Torres Strait Islander Blood Borne Viruses and Sexually Transmissible Infections Strategy, include people living with infection, gay and other men who have sex with men, Aboriginal and Torres Strait Islander people, people from high HIV prevalence countries and their partners, travellers and migrant workers, sex workers, people who inject drugs, young people, non-hepatitis B vaccinated people and people in custodial settings. These population groups were identified as priority groups because they are recognised as either experiencing ongoing HIV, hepatitis B, hepatitis C or STI transmission, burdens of these infections or having the potential for increases in transmission.

## Men who have sex with men

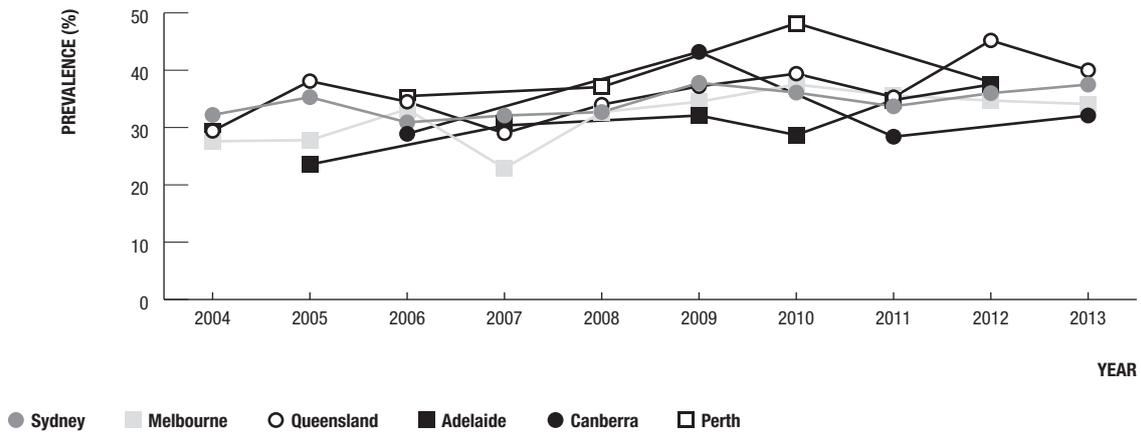
Men who have sex with men continue to make up the majority of people with diagnosed HIV infection in Australia. The overall number of new HIV diagnoses in this category was 3 343 in 2004 – 2008 and 3 863 in 2009 – 2013. Sexual transmission between men accounted for a greater proportion of diagnoses of newly acquired HIV infection in 2009 – 2013 (88%) than total HIV diagnoses (67%) among men. This difference is likely to reflect higher frequency of HIV antibody testing among men who have sex with men than among other groups at risk of HIV infection.

**Figure 21** Newly acquired HIV infection among men who have sex with men seen at sexual health clinics, 2004 – 2013, by year and age group



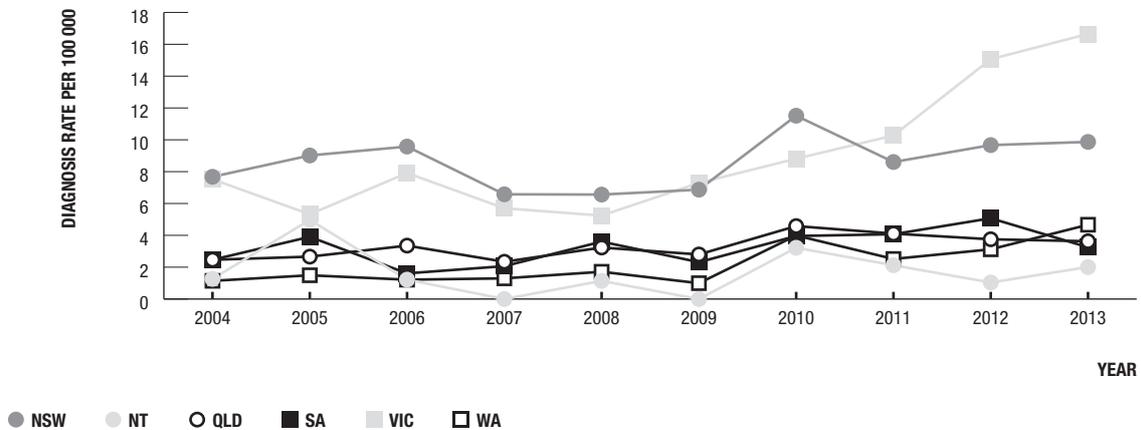
Among men who have sex with men seen at metropolitan sexual health clinics, the percentage of those younger than 25 years of age who were diagnosed with newly acquired HIV infection in the ten years from 2004 to 2013 dropped to its lowest point (0.2) in 2013. Among men aged 25 years and older, the percentage with newly acquired infection declined from 1.0% in 2004 to 0.7% in 2013 (Figure 21).

**Figure 22** Prevalence of condom-less anal intercourse with casual partners reported by men in Gay Community Periodic Surveys



The proportion of Sydney respondents to the Gay Community Periodic Survey who reported condom-less anal intercourse with casual partners increased from around 32% in 2004 – 2008 to 36% in 2009 – 2013 (Figure 22). The same survey carried out in Queensland indicated that the proportion of respondents reporting unsafe sexual behaviour increased from around 32% in 2004 – 2008 to around 39% in 2009 – 2013. The respondents in Melbourne also indicated an increase in unsafe sexual behaviour, from around 28% in 2004 – 2008, to 35% in 2009 – 2013. A recent decline in unsafe sexual behaviour was reported in Perth.

**Figure 23** Gonococcal rectal infection among men, 2004 – 2013, by State/Territory and year

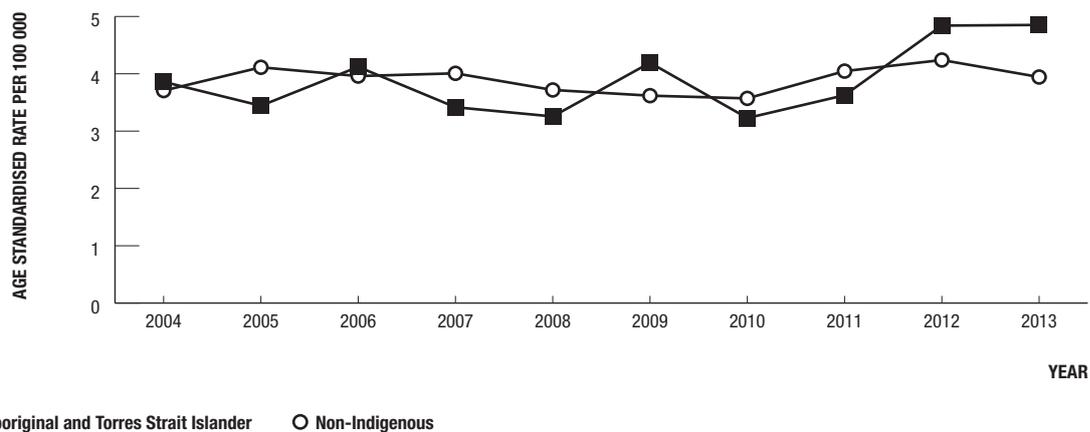


Surveillance data for gonorrhoea also provide an indication of unsafe sexual behaviour among men who have sex with men in Australia. The rate of rectal gonococcal isolates among men in New South Wales increased from around 6.0 in 2004 – 2008 to 6.9 in 2009 – 2013. In Victoria, the rate of rectal gonococcal isolates more than doubled over the past five years, from 7.3 in 2009 to 16.6 in 2013 (Figure 23).

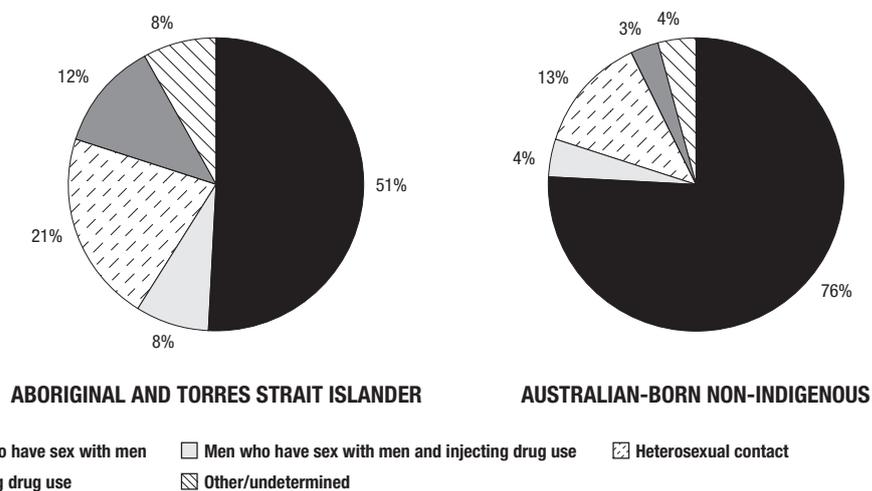
## Aboriginal and Torres Strait Islander people

The rates of HIV diagnosis *per capita* in the Aboriginal and Torres Strait Islander and in the Australian-born non-Indigenous population were similar in 2004 – 2013 (Figure 24). In the Aboriginal and Torres Strait Islander population, the rate of HIV diagnosis was relatively stable in 2004 – 2011 at around 3.5 and increased to 4.8 per 100 000 population in 2012 and 2013. In the Australian-born non-Indigenous population, the rate of HIV diagnosis was also relatively stable at around 3.8 in 2004 – 2011 and then increased to 4.2 in 2012 and declined to 3.9 in 2013. 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 (see Tables 1.3.1 – 1.3.2).

**Figure 24** HIV diagnoses in the Australian born population, 2004 – 2013, by Aboriginal and Torres Strait Islander status and year



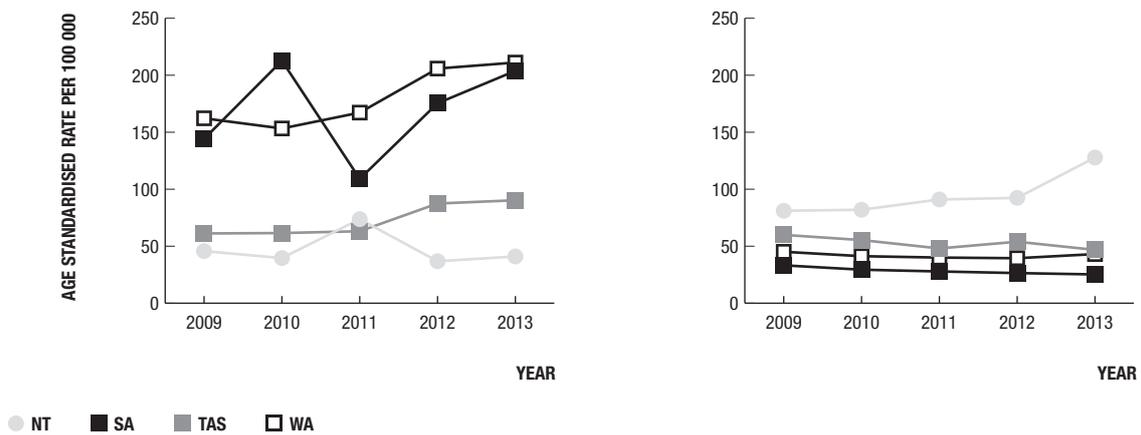
**Figure 25** Newly diagnosed HIV infection, 2009 – 2013, by Aboriginal and Torres Strait Islander status and HIV exposure category



In 2009 – 2013, the most frequently reported route of HIV transmission was sexual contact between men in both the Australian-born non-Indigenous cases (80%) and in the Aboriginal and Torres Strait Islander cases (59%). Heterosexual contact was the reported source of exposure to HIV in 21% of Aboriginal and Torres Strait Islander cases and in 13% of Australian-born non-Indigenous cases (Figure 25). Aboriginal and Torres Strait Islander cases differed from non-Indigenous cases in that a greater proportion of infections were attributed to injecting drug use (12% among Aboriginal and Torres Strait Islander cases vs 3% for non-Indigenous cases), and a greater proportion of infections were among women (20.3% among Aboriginal and Torres Strait Islander cases vs 4.8% for non-Indigenous cases in 2009 – 2013).

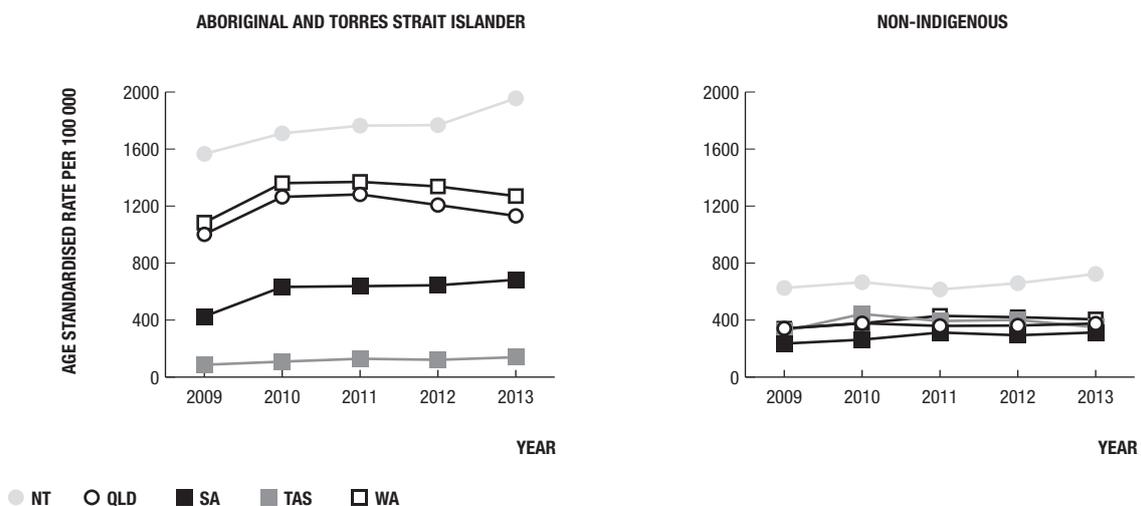
The rate of notification of hepatitis B infection in the Aboriginal and Torres Strait Islander population resident in the Australian Capital Territory, Northern Territory, South Australia, Tasmania and Western Australia declined from 100.2 in 2009 to 72.3 in 2013, and the rate of diagnosis of newly acquired hepatitis B infection was 3.5 or less in 2009 – 2013. In the non-Indigenous population, the rate of notification of hepatitis B increased from 28.6 in 2009 to 32.3 in 2013. The population rate of notification of newly acquired hepatitis B infection was around 1 per 100 000 population in 2009 – 2013.

**Figure 26 Hepatitis C notifications, 2009 – 2013, by Aboriginal and Torres Strait Islander status, State/Territory and year**



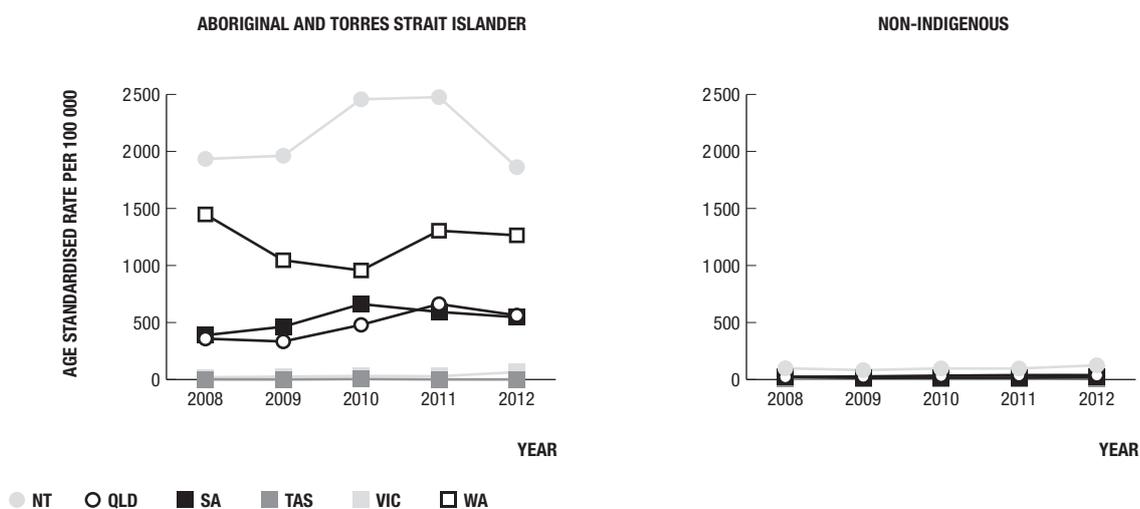
The population rate of notification of hepatitis C infection in the Aboriginal and Torres Strait Islander population resident in the Northern Territory, South Australia, Tasmania and Western Australia increased from 109.6 in 2009 to 141.9 per 100 000 population in 2013 and decreased in the non-Indigenous population from 43.6 in 2009 to 40.6 in 2013. In the Northern Territory, the rate of hepatitis C notification in the non-Indigenous population increased from 81.0 in 2009 to 127.8 in 2013 but has remained relatively stable in the Aboriginal and Torres Strait Islander population. In South Australia, Tasmania and Western Australia, the rate of hepatitis C notification was substantially greater in the Aboriginal and Torres Strait Islander population than in the non-Indigenous population.

**Figure 27 Chlamydia notifications, 2009 – 2013, by Aboriginal and Torres Strait Islander status, State/Territory and year**



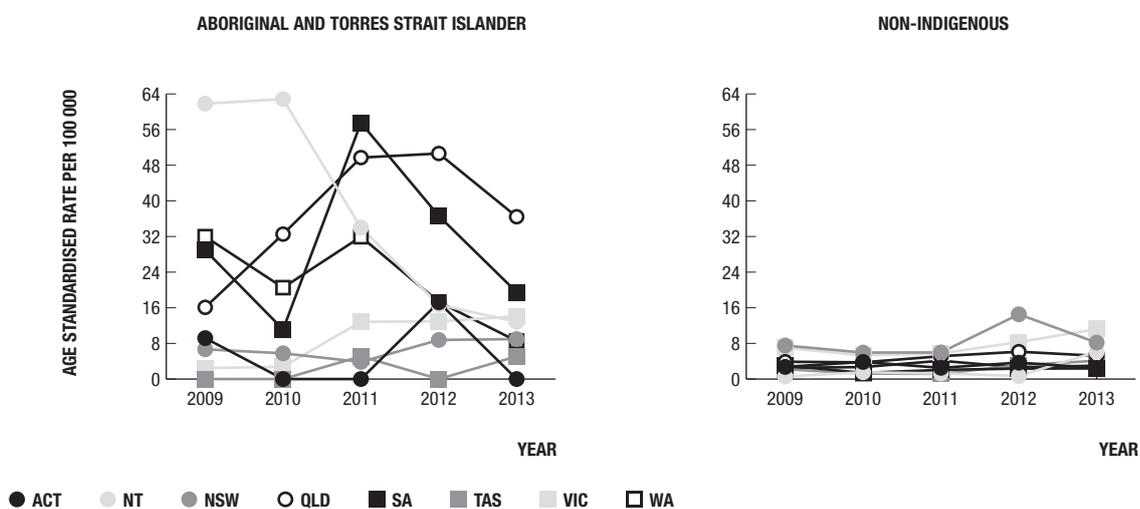
The rate of notification of chlamydia in the Aboriginal and Torres Strait Islander population was around 1 220 in 2009 – 2013. In the non-Indigenous population resident in State/Territory jurisdictions other than the Australian Capital Territory, New South Wales and Victoria, the rate of chlamydia notification increased steadily from 327 in 2009 to 379 in 2013 (Figure 27).

**Figure 28** Gonorrhoea notifications, 2009 – 2013, by Aboriginal and Torres Strait Islander status, State/Territory and year



The rate of notification of gonorrhoea in the Aboriginal and Torres Strait Islander population resident in State/Territory jurisdictions other than the Australian Capital Territory and New South Wales increased from 588 in 2009 to 788 in 2011 and declined to 694 in 2013. In the non-Indigenous population, the rate of gonorrhoea notification increased from 23.9 in 2009 to 47.9 in 2013 (Figure 28).

**Figure 29** Infectious syphilis notifications, 2009 – 2013, by Aboriginal and Torres Strait Islander status, State/Territory and year

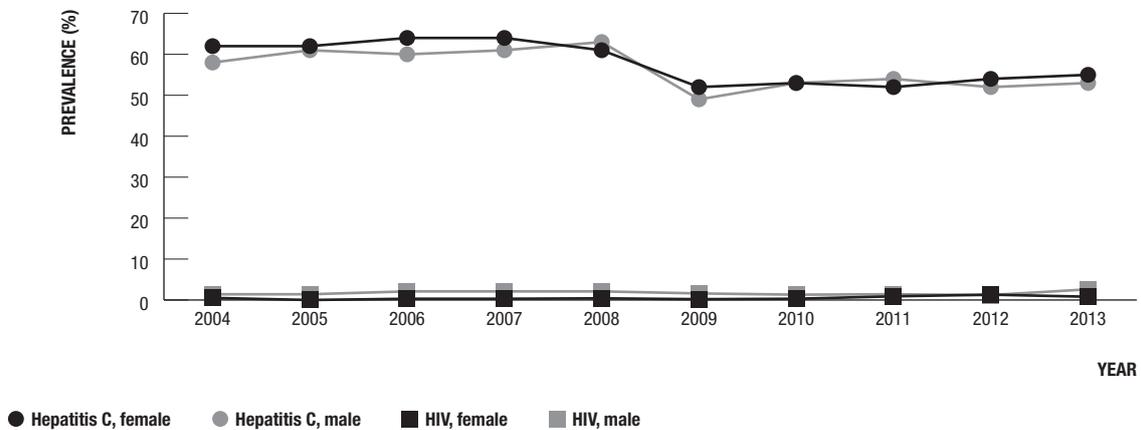


The rate of notification of infectious syphilis in the Aboriginal and Torres Strait Islander population increased from 19.7 in 2009 to 27.4 in 2011 and declined to 17.7 in 2013 (Figure 29). The rate of infectious syphilis notification in the Aboriginal and Torres Strait Islander population resident in the Northern Territory declined from 61.8 in 2009 to 12.8 in 2013 whereas the rate increased in Queensland, from 16.1 in 2009 to 36.4 in 2013. The rate of notification of infectious syphilis in the non-Indigenous population was stable at around 5.6 per 100 000 population in 2009 – 2013.

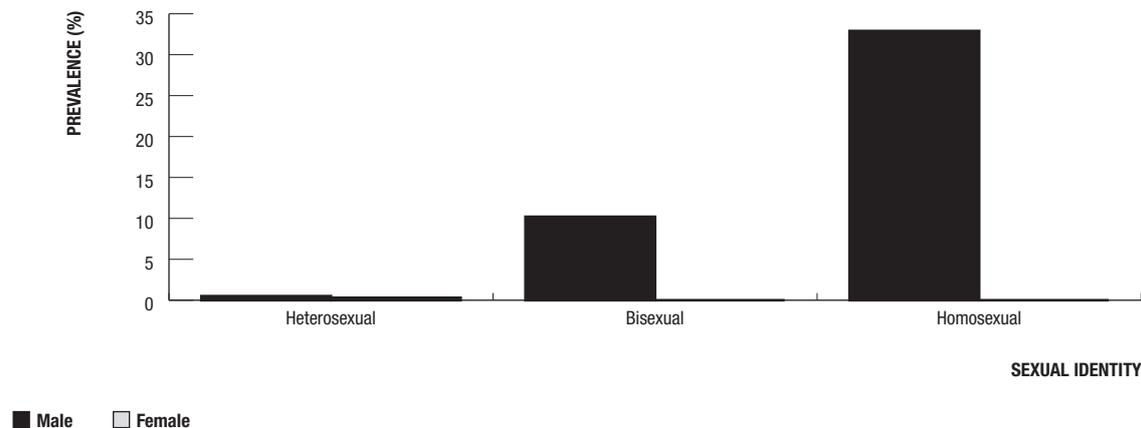
## People who inject drugs

In 2004 – 2013, approximately 6% of HIV notifications in Australia were in people with a history of injecting drug use, of whom more than half were men who also reported sex with men.

**Figure 30 HIV and hepatitis C prevalence in needle and syringe programs, 2004 – 2013, by year and sex**



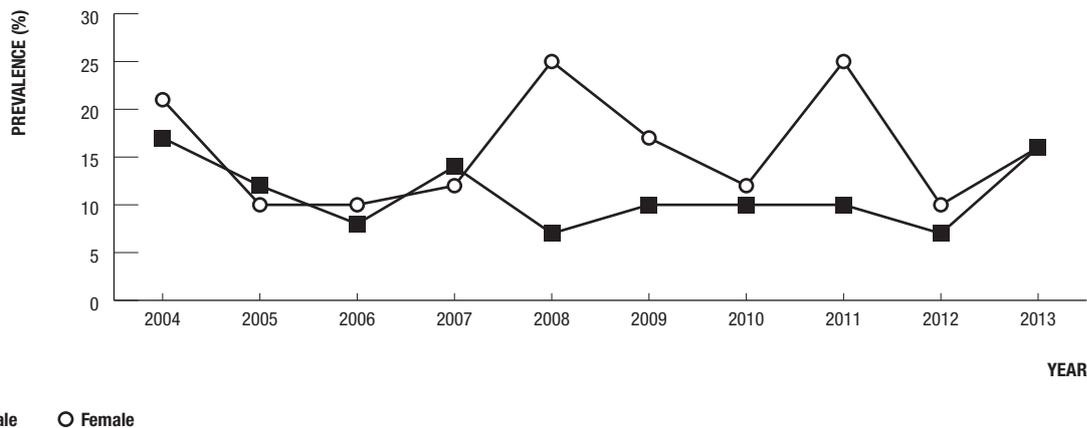
**Figure 31 HIV prevalence at needle and syringe programs, 2013, by sexual identity**



HIV prevalence among people who inject drugs attending needle and syringe programs has remained low (at 1 – 2% during 2004 – 2013) (Figure 30) but in the subgroup of homosexual men, prevalence was 33% in 2013 (Figure 31). Of 3 249 men and 2 034 women with a history of injecting drug use who were tested for HIV antibody at metropolitan sexual health centres in 2004 – 2013, 7 males (0.2%) and one woman (0.2%) was diagnosed with HIV infection (Figures 36 and 37).

In contrast to the low HIV prevalence, hepatitis C antibody prevalence among people attending needle and syringe programs remained high during 2004 – 2013 (Figure 30). Hepatitis C prevalence decreased among both males and females from around 62% in 2008 to around 53% in 2009 and has remained stable since 2009. The decline in hepatitis C prevalence in 2009 was not explained by demographic or laboratory factors.

**Figure 32** Prevalence of sharing among recent initiates to injecting<sup>1</sup> seen at needle and syringe programs, 2004 – 2013, by year and sex



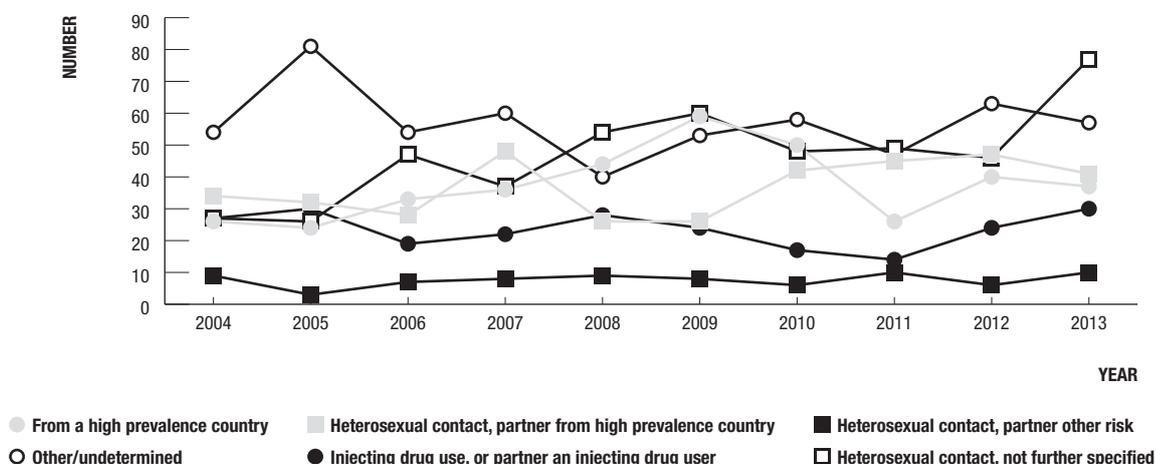
<sup>1</sup> With a history of injecting drug use less than five years who were tested for HIV or hepatitis C

The proportion of people attending needle and syringe programs who reported having initiated injection drug use in the previous five years remained stable at 9% – 12% between 2009 – 2013; hepatitis C prevalence among this group declined from 20% in 2009 to 14% in 2013. Fluctuations in the prevalence of reported sharing of injecting equipment among women with a history of injecting drug use of less than five years may be attributable to the relatively small number of women with a short duration of injecting drug use (Figure 32). The low proportion of people in the survey who reported initiation of injection drug use in the previous five years (around 13% in 2013) and the low proportion of survey respondents aged younger than 20 years (around 2% in 2013) suggests that there has been a decrease in the prevalence of injecting drug use among young people in Australia.

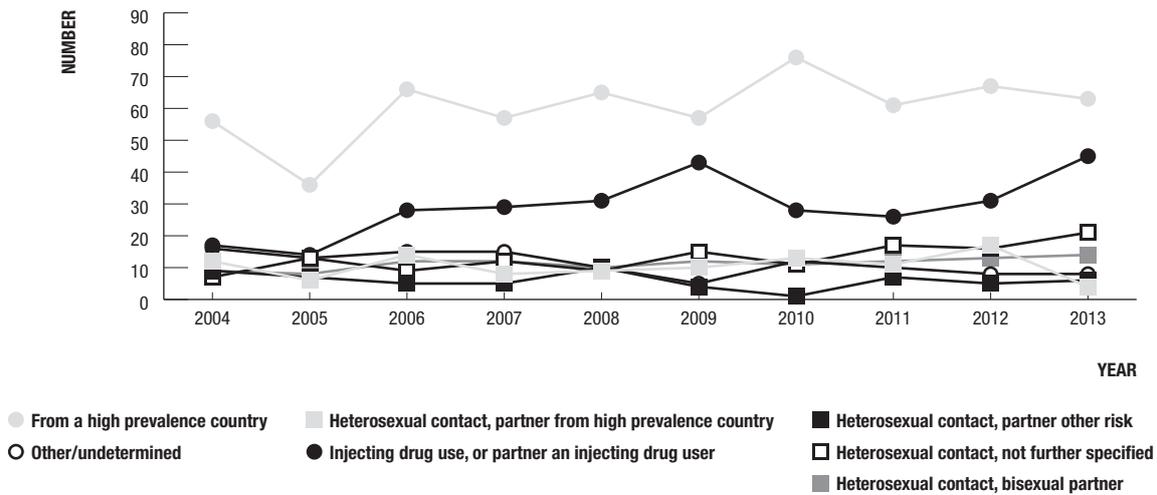
### Heterosexual transmission of HIV infection

The number of new HIV diagnoses for which exposure to HIV was attributed to heterosexual contact increased from 1 132 in 2004 – 2008 to 1 417 in 2009 – 2013, a 25% increase. These levels account for 22.7% and 24.6% of total HIV diagnoses in 2004 – 2008 and in 2009 – 2013, respectively.

**Figure 33** Newly diagnosed HIV infection among men who report an exposure other than sex with men, 2004 – 2013, by year and exposure category



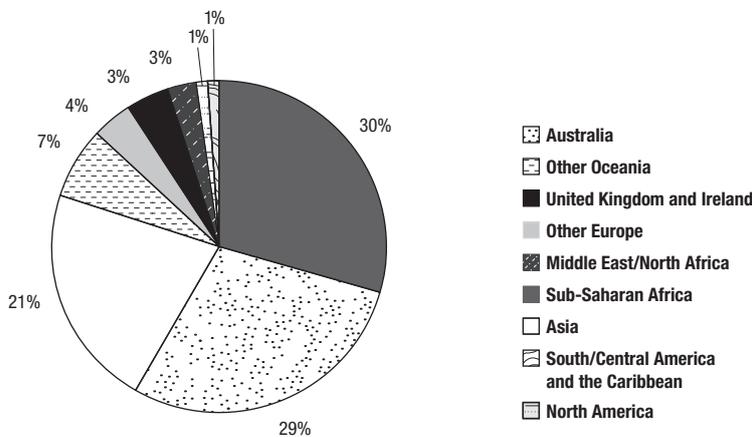
**Figure 34** Newly diagnosed HIV among women, 2004 – 2013, by year and HIV exposure category



Cases whose HIV infection was acquired in a high HIV prevalence country accounted for 39% and 37% of HIV diagnoses attributed to heterosexual contact in 2004 – 2008 and 2009 – 2013, respectively. In both five-year intervals, the majority of cases came from high HIV prevalence countries in sub-Saharan Africa (63% in 2004 – 2008 and 75% in 2009 – 2013), South East Asia (29% in 2004 – 2008 and 21% in 2009 – 2013) and North Africa/Middle East (7% in 2004 – 2008 and 4% in 2009 – 2012). Women accounted for 63% and 60% of cases from high prevalence countries in 2004 – 2008 and in 2009 – 2013, respectively.

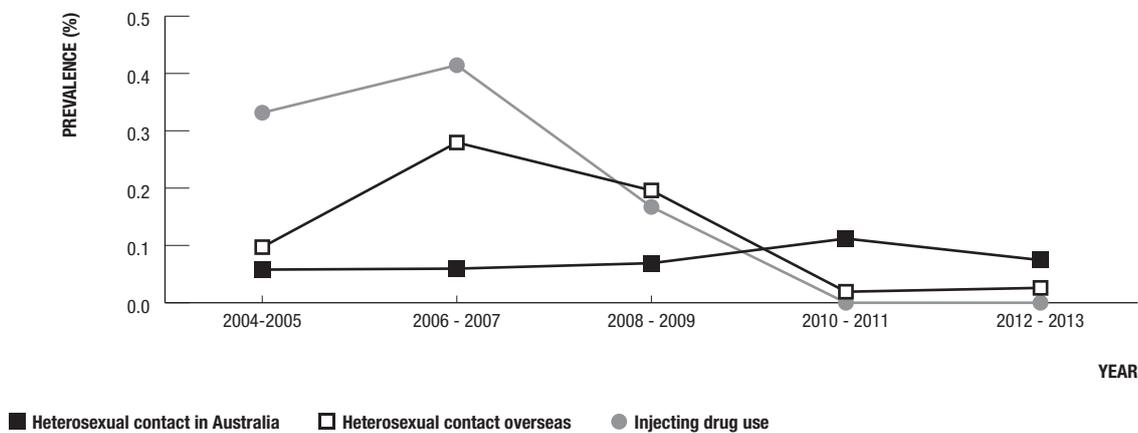
Excluding cases from a high prevalence country, the number whose exposure to HIV was attributed to heterosexual contact increased by 28%, from 689 in 2004 – 2008 to 880 in 2009 – 2013. Men and women with HIV infection who reported a partner from a high prevalence country accounted for 31% and 29% of heterosexual cases newly diagnosed in 2004 – 2008, and in 2009 – 2013, respectively. Of new HIV diagnoses in 2009 – 2013 for which the country of birth of the heterosexual partner was reported (73.5%), 27% of partners were from a high HIV prevalence country in sub-Saharan Africa, 71% were from a high HIV prevalence country in South East Asia and 2% were from high HIV prevalence countries in North Africa/Middle East. Cases with partners with other risks for HIV infection accounted for 25% and 19% of diagnoses in 2004 – 2008 and in 2009 – 2013, respectively. Heterosexual contact, not further specified, was reported in 45% of cases attributed to heterosexual contact in 2004 – 2008 and 51% in 2009 – 2013. The source of exposure to HIV remained undetermined for substantial numbers of men in 2004 – 2013 (Figure 33).

**Figure 35** HIV infection attributed to heterosexual contact, 2009 – 2013, by region of birth

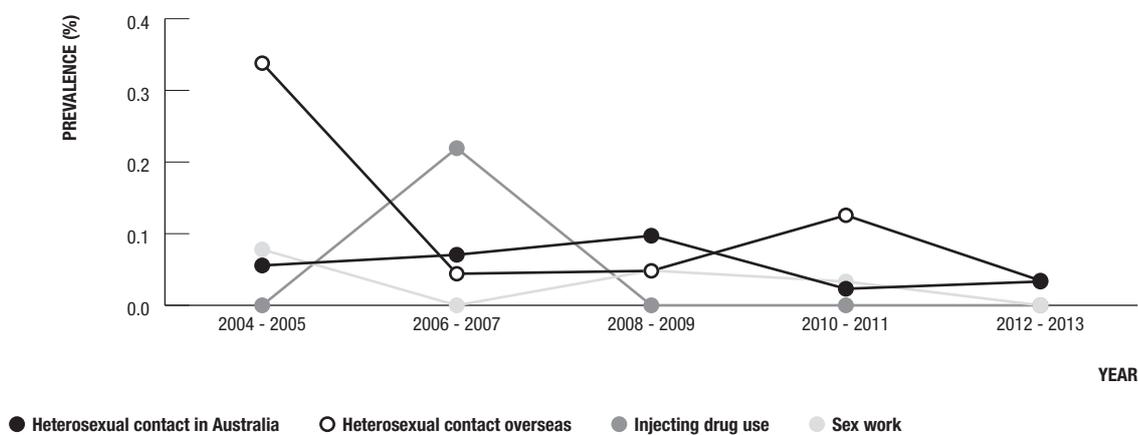


Among 1 417 cases of HIV infection diagnosed in Australia in 2009 – 2013 for which exposure to HIV was attributed to heterosexual contact, the country of birth was reported as Australia in 29%, sub-Saharan Africa in 30% and Asia in 22% of cases (Figure 35).

**Figure 36 HIV prevalence among heterosexually active men seen at sexual health clinics, 2004 – 2013, by year and HIV exposure category**

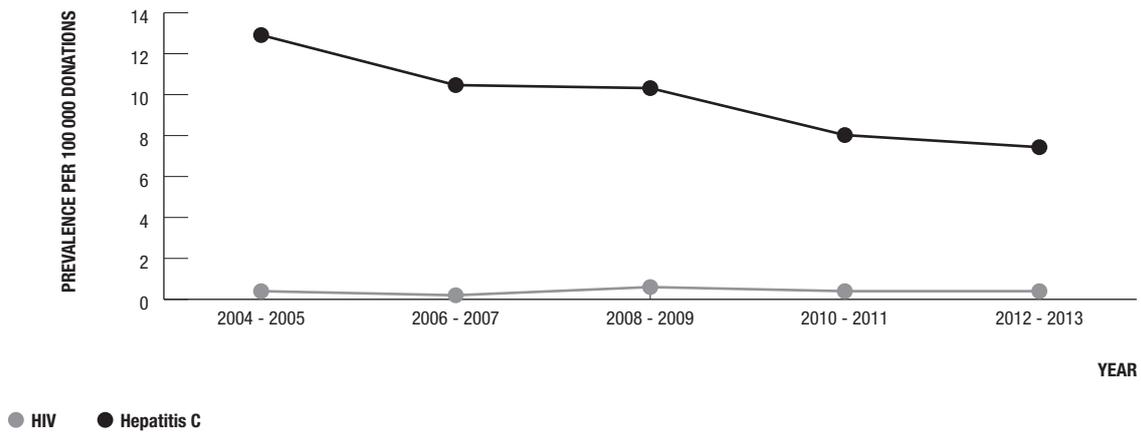


**Figure 37 HIV prevalence among heterosexually active women seen at sexual health clinics, 2004 – 2013, by year and HIV exposure category**



HIV prevalence has remained below 0.5% among heterosexually active men and women seen through metropolitan sexual health clinics. In 2004 – 2013, HIV prevalence was less than 0.2% among men and women who reported a history of heterosexual contact in Australia (Figures 36 and 37). HIV prevalence remained less than 0.3% among men who reported heterosexual contact overseas. HIV prevalence remained low among women self-identifying as sex workers, with or without a history of injecting drug use (Figure 37).

**Figure 38 HIV and hepatitis C prevalence per 100 000 donations in blood donors, 2004 – 2013, by year**

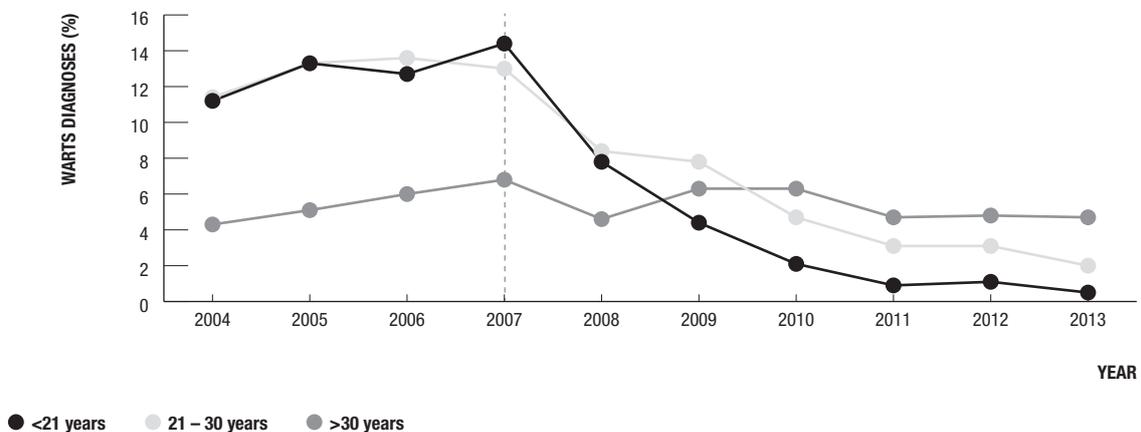


Levels of HIV infection in blood donors, who undergo a screening interview to exclude those with recognised risk factors for HIV infection, have been below 1 per 100 000 donations since 1985 (Figure 38).

### Monitoring genital warts

The Genital Warts Surveillance Network aims to determine the population effects of the national human papillomavirus (HPV) vaccination program that began in mid-2007 by monitoring the diagnosis rates of genital warts in various populations, and determining HPV vaccination rates.

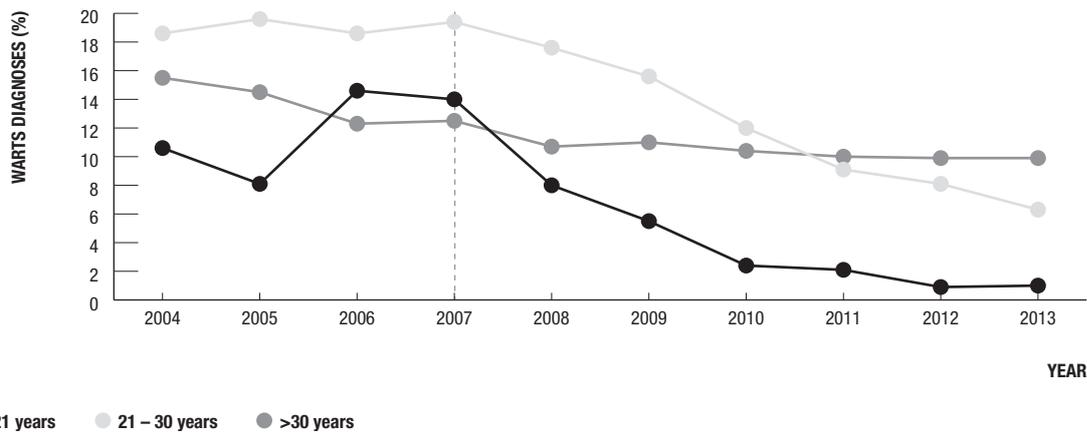
**Figure 39 Proportion of Australian born women diagnosed with genital warts at first visit, 2004 – 2013, by year and age group**



The dotted line represents the start of the national HPV vaccination program in mid-2007.

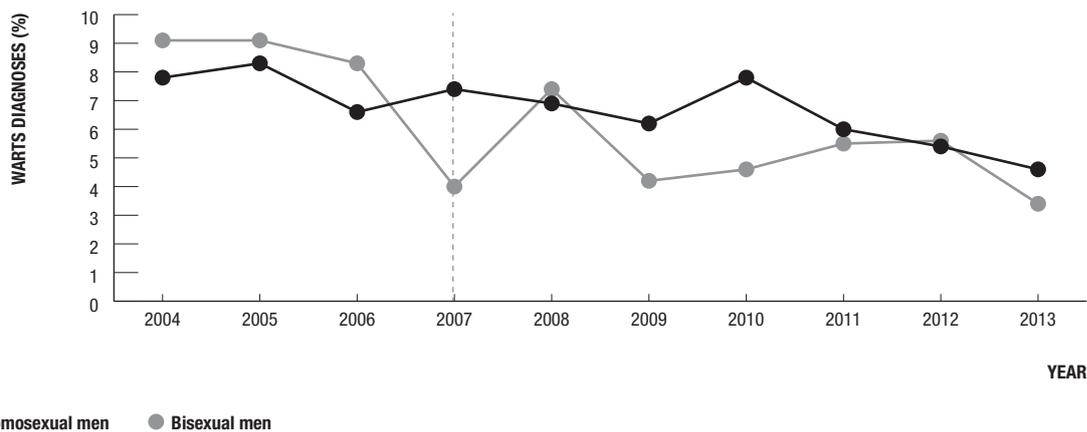
Information available from six sexual health services included in the Genital Warts Surveillance Network indicates that the genital warts diagnosis rate among Australian-born women, aged 21 years or younger in July 2007 and thus eligible for free HPV vaccine, was greater than 14% in 2007 and then declined to 0.5% in 2013 (Figure 39). Among Australian-born heterosexual men in the same age group, the genital warts diagnosis rate was 14% in 2007 and declined to 1% in 2013 (Figure 40). The genital warts diagnosis rate among homosexual and bisexual men has not followed a declining trend to the extent observed in the heterosexual population (Figure 41).

**Figure 40** Proportion of Australian born heterosexual men diagnosed with genital warts at first visit, 2004 – 2013, by year and age group



The dotted line represents the start of the national HPV vaccination program in mid-2007.

**Figure 41** Proportion of Australian born homosexual and bisexual men diagnosed with genital warts at first visit, 2004 – 2013, by year

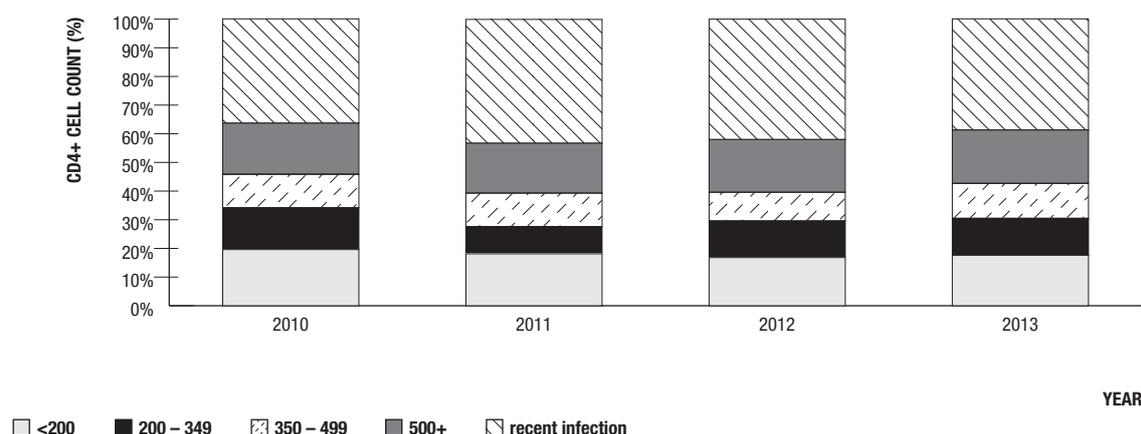


The dotted line represents the start of the national HPV vaccination program in mid-2007.

## Illness and treatment in people with HIV infection and viral hepatitis

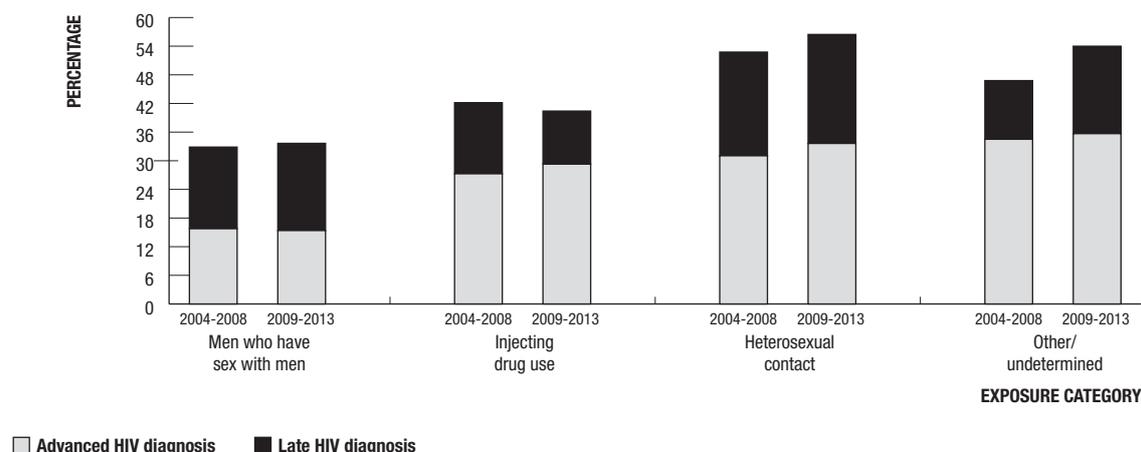
In the past 10 years, the proportion of cases diagnosed with advanced HIV infection, measured by a CD4+ cell count of less than 200 cells/ $\mu$ l, has remained relatively stable at about 20% (Figure 42). The proportion with a late diagnosis, defined by a CD4+ cell count of less than 350 cells/ $\mu$ l at HIV diagnosis, has also remained relatively stable at 39% (Table 1.1.1).

**Figure 42** Diagnoses of newly acquired HIV infection and CD4+ cell count among other new HIV diagnoses in Australia, 2010 – 2013, by year



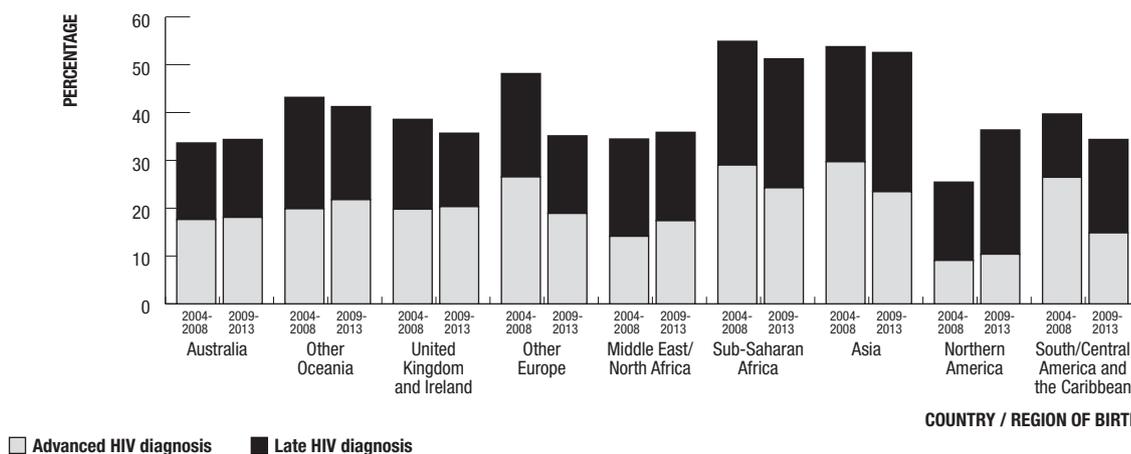
The extent of advanced and late HIV diagnosis differed by exposure category. Advanced and late HIV diagnoses were least common among men who have sex with men (Figure 43). In 2009 – 2013, around 15% and 3% of HIV diagnoses among men who have sex with men were advanced and late HIV diagnoses, respectively, whereas advanced and late diagnoses accounted for 29% and 40% of diagnoses among people who injected drugs and for 34% and 56% of diagnoses among people with a history of heterosexual contact. Cases born in high HIV prevalence countries in sub-Saharan Africa and South East Asia had a relatively high rate of diagnosis with advanced HIV infection (Figure 44).

**Figure 43** Late and advanced HIV diagnoses<sup>1</sup>, 2004 – 2013, by year and exposure category



<sup>1</sup> A late HIV diagnosis is defined as newly diagnosed HIV infection with a CD4 count of less than 350 cells/ $\mu$ l and advanced HIV infection as less than 200 cells/ $\mu$ l.

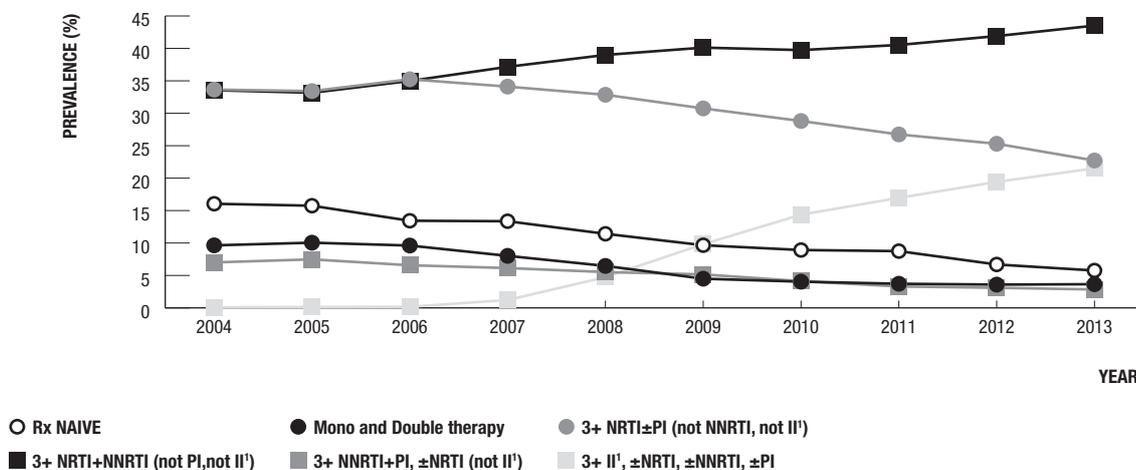
Figure 44 Late and advanced HIV diagnoses<sup>1</sup>, 2004 – 2013, by year and region of birth



1 A late HIV diagnosis is defined as newly diagnosed HIV infection with a CD4 count of less than 350 cells/ $\mu$ l and advanced HIV infection as less than 200 cells/ $\mu$ l

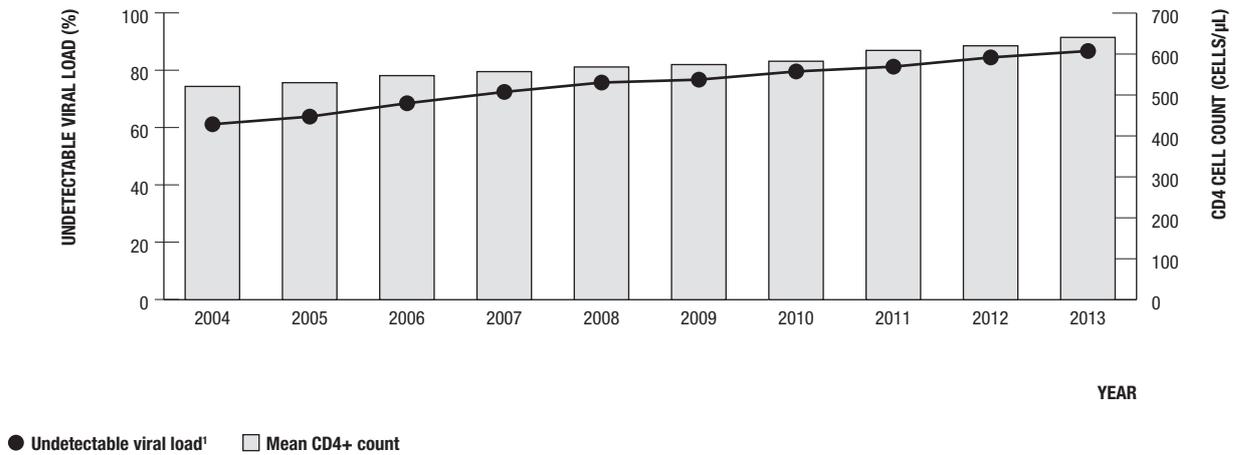
There is no comprehensive registry of advanced illness related to hepatitis B and C in Australia. One indicator of the extent of illness caused by hepatitis C is the number of liver transplants due to chronic infection. Of 222 people who had a liver transplant in 2013, 67 (30.2%) had hepatitis C infection whereas hepatitis B was the primary cause of liver failure for 8 (3.6%) people having liver transplants (Table 2.3.1).

Figure 45 Treatment uptake among people enrolled on the Australian HIV Observational Database, 2004 – 2013



1 II = Integrase Inhibitor.

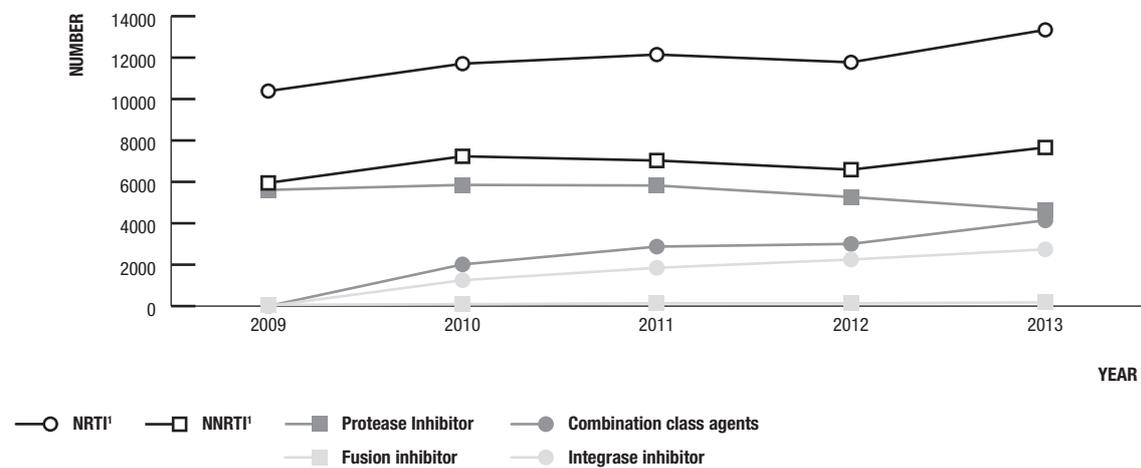
**Figure 46 HIV viral load and CD4+ cell count among people enrolled on the Australian HIV Observational Database, 2004 – 2013, by year**



1 Undetectable viral load equals 50 copies/ml or less.

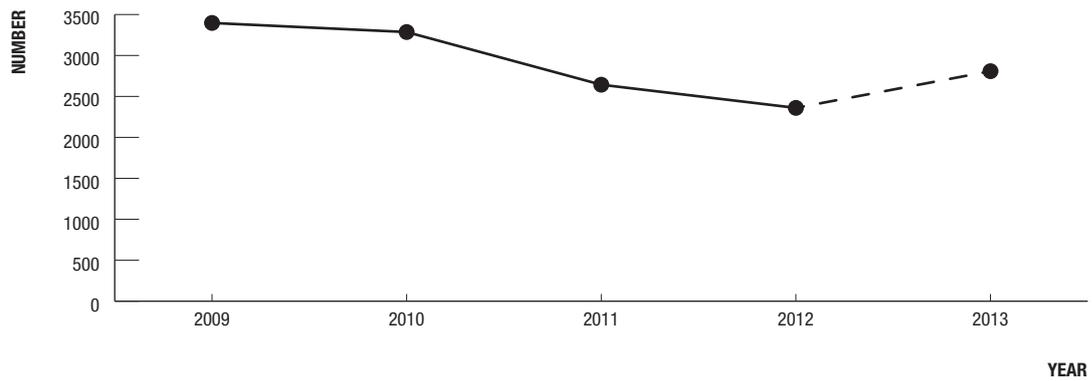
The Australian HIV Observational Database (AHOD) indicated that 90% of 2 328 people under follow up in 2013 were receiving triple combination antiretroviral treatment for HIV infection (Figure 45). Of people receiving antiretroviral therapy who were monitored through AHOD, the proportion with undetectable viral load (<50 copies/ml) has increased from 58% in 2004 to 88% in 2013. The mean CD4+ cell count also steadily increased to 640 cells/µL in 2013 (Figure 46). Of people enrolled in the Australian HIV Observational Database in 2013, 9% had been diagnosed with both HIV and hepatitis C antibody.

**Figure 47 Estimated number of people dispensed drugs for HIV infection, 2009 – 2013, by class of drug and year**



1 Includes NRTI/NNRTIs in fixed dose combinations with other classes

Figure 48 Estimated number of people dispensed drugs for hepatitis C infection, 2009 – 2013, by year



● Hepatitis C infection

Note Estimates from April 2013 based on PBS item reports; this is a change in methodology due to a change in data reporting from PBS and therefore caution should be taken in comparing trends between 2013 and pre-2013 data.

Use of antiretroviral therapy by men who have sex with men participating in the Gay Community Periodic Surveys in Melbourne increased from 51.5% in 2008 to 72.6% in 2011, resulting in the highest reported uptake among in Australia in 2011. The percentage of men in Sydney who reported use of antiretroviral therapy increased from 73.5% in 2009 to 76.6% in 2013.



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# 1 National surveillance for newly diagnosed HIV infection

## 1.1 National HIV Registry

**Table 1.1.1** Characteristics of cases of newly diagnosed HIV infection by year. Number of cases, median age, language spoken at home, median CD4+ cell count and State/Territory of HIV diagnosis, and percent of total cases by late and advanced HIV infection status, sex and HIV exposure category

Characteristic	Year of HIV diagnosis										Total <sup>1</sup>
	≤ 04	05	06	07	08	09	10	11	12	13	
<b>Total cases</b>	<b>25 469</b>	<b>976</b>	<b>1 018</b>	<b>1 052</b>	<b>1 015</b>	<b>1 069</b>	<b>1 057</b>	<b>1 142</b>	<b>1 253</b>	<b>1 236</b>	<b>35 287</b>
Males (%)	92.3	90	85.1	86.8	85.8	86.2	85.2	87.3	87.3	86.9	90.7
<b>Median age (years)</b>											
Male	33	37	38	38	37	37	37	37	36	37	34
Female	29	32	31	32	31	32	31	34	33	33	31
<b>Language spoken at home<sup>2</sup></b>											
English	553	662	660	788	758	799	762	881	901	609	7 373
Other language	53	55	74	82	69	114	114	116	146	115	938
Not reported	310	259	284	182	188	156	181	145	206	512	2 423
<b>Late and advanced HIV infection status at HIV diagnosis<sup>3</sup></b>											
Late HIV diagnosis (%) <sup>4</sup>	36.5	36.2	43.2	37.8	38.2	41.1	43.0	36.9	37.2	37.4	38.8
Advanced HIV diagnosis (%) <sup>4</sup>	20.2	20.8	23.3	19.6	18.0	20.1	21.0	19.8	18.1	18.6	19.9
Median CD4+ cell count (cells/μl)	445	450	408	422	420	406	400	430	435	432	423
<b>State/Territory</b>											
Australian Capital Territory	291	8	6	9	7	12	14	11	17	24	399
New South Wales	14 661	409	400	415	368	384	351	391	458	401	18 238
Northern Territory	145	3	11	6	11	16	6	9	27	19	253
Queensland	2 706	172	164	195	201	209	242	223	259	236	4 607
South Australia	952	51	62	56	47	53	42	67	41	69	1 440
Tasmania	111	7	7	7	13	14	10	15	13	11	208
Victoria	5 293	262	288	287	286	292	282	328	316	365	7 999
Western Australia	1 310	64	80	77	82	89	110	98	122	111	2 143
<b>HIV exposure category (%)<sup>5</sup></b>											
Men who have sex with men	77.6	72.0	66.7	67.9	65.5	64.4	66.4	70.7	70.5	66.0	74.7
Men who have sex with men and injecting drug use	4.4	4.5	4.3	3.0	3.4	3.7	2.2	2.9	2.8	3.7	4.1
Injecting drug use <sup>6</sup>	4.1	3.5	2.8	2.8	3.3	2.4	2.4	1.9	2.3	2.4	3.6
Heterosexual contact	11.0	19.4	25.5	25.2	27.1	28.3	28.3	23.3	23.8	26.6	15.3
<i>Person from a high prevalence country</i>	2.9	6.7	10.4	9.4	11.2	11.4	12.7	8.0	9.1	8.3	4.9
<i>Partner with/at risk of HIV infection</i>	4.2	8.2	7.3	9.1	7.1	6.7	7.9	8.5	8.1	7.7	5.3
<i>Not further specified</i>	3.9	4.5	7.9	6.7	8.7	10.2	7.7	6.9	6.5	10.6	5.1
Haemophilia/coagulation disorder	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Receipt of blood/tissue	1.1	0.1	0.0	0.1	0.1	0.1	0.0	0.2	0.3	0.4	0.8
Mother with/at risk of HIV infection	0.3	0.6	0.6	0.9	0.6	1.1	0.6	0.9	0.3	0.8	0.5
Health care setting	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Other/undermined exposure	14.6	8.6	6.2	6.0	4.2	5.1	6.3	4.2	5.6	4.9	11.9

1 Not adjusted for multiple reporting.

2 Language spoken at home was sought among cases of HIV infection newly diagnosed from 1 January 2004. Total number with language spoken at home in 2004 – 2013 only.

3 Late diagnosis, advanced infection and median CD4+ cell count for HIV diagnoses in 2004 only. Total percentage with late HIV diagnosis and advanced HIV infection, and median CD4+ cell count for diagnoses in 2004 – 2013 only.

4 Late HIV diagnosis was defined as newly diagnosed HIV infection with a CD4+ cell count of less than 350 cells/μl, and advanced HIV infection as newly diagnosed infection with a CD4+ cell count of less than 200 cells/μl.

5 The "Other/undetermined" exposure category was excluded from the calculation of the percentage of cases attributed to each HIV exposure category.

6 Excludes men who have sex with men.

Source: State/Territory health authorities

Table I.1.2 Number of new diagnoses of HIV infection<sup>1</sup>, cumulative to 31 December 2013, by age group, year and sex

Age group (years)	Sex	Year of HIV diagnosis										Total
		≤ 2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	
0 – 1	M	45	0	1	1	1	0	1	1	0	1	51
	F	23	1	3	1	1	2	1	1	0	1	34
2 – 12	M	90	2	2	4	4	3	3	3	1	0	112
	F	24	2	1	5	1	8	2	5	0	6	54
13 – 19	M	449	10	9	8	7	10	12	12	18	14	549
	F	101	3	6	2	6	3	3	6	6	11	147
20 – 24	M	2 794	71	54	64	86	71	70	91	110	97	3 508
	F	281	13	18	11	23	12	20	9	20	16	423
25 – 29	M	4 683	113	118	129	134	153	140	172	205	185	6 032
	F	389	14	36	29	25	33	37	25	31	23	642
30 – 39	M	8 884	323	301	310	277	305	277	309	327	308	11 621
	F	474	43	49	55	57	53	61	55	64	55	966
40 – 49	M	4 353	218	242	253	234	233	245	238	241	264	6 521
	F	185	16	25	19	22	22	17	35	23	25	389
50 – 59	M	1 552	99	101	96	89	115	105	126	126	134	2 543
	F	72	4	9	12	7	10	9	6	10	20	159
60+	M	512	41	38	47	39	31	47	45	66	69	935
	F	73	1	2	4	2	3	2	2	3	4	96
Not reported	M	134	1	0	1	0	0	0	0	0	0	136
	F	32	0	0	0	0	0	0	0	0	0	32
Sub-total	M	23 496	878	866	913	871	921	900	997	1 094	1 072	32 008
	F	1 654	97	149	138	144	146	152	144	157	161	2 942
<b>Total<sup>2</sup></b>		<b>25 469</b>	<b>976</b>	<b>1 018</b>	<b>1 052</b>	<b>1 015</b>	<b>1 069</b>	<b>1 057</b>	<b>1 142</b>	<b>1 253</b>	<b>1 236</b>	<b>35 287</b>

1 Not adjusted for multiple reporting.

2 Totals include 88 people whose sex was reported as transgender and 249 people whose sex was not reported.

Source: State/Territory health authorities

**Table 1.1.3** Number of new diagnoses of HIV infection in Australia in 2013, by State/Territory and whether or not HIV infection was newly diagnosed in Australia

State/Territory	Place of first diagnosis of HIV infection		Total diagnoses
	Newly diagnosed in Australia	Newly diagnosed overseas	
Australian Capital Territory	21	3	24
New South Wales	354	47	401
Northern Territory	13	6	19
Queensland	181	55	236
South Australia	58	11	69
Tasmania	10	1	11
Victoria	307	58	365
Western Australia	84	27	111
<b>Total</b>	<b>1 028</b>	<b>208</b>	<b>1 236</b>

Source: State/Territory health authorities

Table 1.1.4 Number (percent) of new HIV diagnoses in Australia, 2009 – 2013, and age standardised rate per 100 000 population by year of HIV diagnosis and region of birth

Region/Country of birth	2009			2010			2011			2012			2013		
	Number	%	Age standardised rate												
Australia	566	53.0	3.7	562	53.1	3.7	630	55.2	4.1	675	53.9	4.3	634	51.3	4.1
Overseas born	479	44.8	7.9	469	44.3	7.3	488	42.7	7.5	559	44.6	8.0	566	45.8	8.1
Other Oceania	49	4.6	6.5	43	4.1	6.0	62	5.4	8.1	65	5.2	8.1	77	6.2	9.5
United Kingdom and Ireland	59	5.5	6.2	43	4.1	4.8	57	5.0	6.1	58	4.6	6.9	49	4.0	5.5
Other Europe	46	4.3	5.5	54	5.1	5.8	51	4.5	6.6	53	4.2	7.0	56	4.5	6.5
Middle East/North Africa	21	2.0	5.9	13	1.2	3.3	17	1.5	5.1	19	1.5	5.1	31	2.5	8.3
Sub-Saharan Africa	115	10.8	37.7	122	11.5	36.9	86	7.5	36.3	92	7.3	26.2	98	7.9	28.9
Asia	152	14.2	6.8	159	15.0	6.8	168	14.7	6.9	216	17.2	8.5	191	15.5	7.7
Northern America	15	1.4	11.2	17	1.6	12.2	16	1.4	11.4	25	2.0	15.6	19	1.5	12.3
South/Central America and the Caribbean	22	2.1	15.6	18	1.7	14.1	31	2.7	21.7	31	2.5	19.8	45	3.6	35.3
<b>Total with a reported country of birth</b>	<b>1 045</b>	<b>97.8</b>	<b>4.8</b>	<b>1 031</b>	<b>97.4</b>	<b>4.7</b>	<b>1 118</b>	<b>97.9</b>	<b>5.0</b>	<b>1 234</b>	<b>98.5</b>	<b>5.4</b>	<b>1 200</b>	<b>97.1</b>	<b>5.2</b>
Not reported	24	2.2		26	2.5		24	2.1		19	1.5		36	2.9	
<b>Total</b>	<b>1 069</b>	<b>100</b>		<b>1 057</b>	<b>100</b>		<b>1 142</b>	<b>100</b>		<b>1 253</b>	<b>100</b>		<b>1 236</b>	<b>100</b>	

1 Population estimates by country of birth and age group from the Australian Bureau of Statistics

Source: State/Territory health authorities

**Table 1.1.5 Median CD4+ cell count at diagnosis of HIV infection (number of HIV diagnoses with a CD4+ cell count), 2009 – 2013, by State/Territory, HIV exposure category, newly acquired infection status, sex and year**

Characteristic	Sex	Year of HIV diagnosis				
		2009	2010	2011	2012	2013
<b>State/Territory</b>						
Australian Capital Territory	M	275 (6)	640 (10)	460 (10)	515 (14)	420 (20)
	F	218 (2)	465 (2)	— (1)	215 (2)	345 (4)
New South Wales	M	410 (307)	413 (290)	440 (333)	460 (387)	433 (344)
	F	340 (42)	356 (29)	257 (30)	442 (42)	360 (32)
Northern Territory	M	433 (10)	418 (4)	307 (7)	272 (19)	390 (9)
	F	680 (5)	— (1)	— (1)	372 (8)	502 (8)
Queensland	M	435 (146)	375 (182)	430 (168)	480 (219)	460 (197)
	F	380 (24)	405 (40)	420 (22)	350 (30)	320 (35)
South Australia	M	379 (40)	357 (36)	432 (44)	440 (28)	338 (49)
	F	353 (9)	582 (6)	313 (16)	440 (9)	339 (15)
Tasmania	M	713 (10)	340 (9)	363 (11)	336 (13)	229 (8)
	F	216 (3)	— (1)	357 (4)	— (0)	279 (3)
Victoria	M	442 (230)	419 (208)	433 (192)	425 (128)	454 (195)
	F	322 (25)	388 (30)	298 (22)	399 (21)	318 (16)
Western Australia	M	344 (56)	399 (71)	372 (62)	444 (90)	464 (75)
	F	299 (24)	364 (28)	380 (27)	420 (25)	382 (22)
<b>HIV exposure category</b>						
Men who have sex with men <sup>1</sup>	M	449 (626)	435 (623)	452 (667)	470 (719)	457 (691)
Injecting drug use <sup>2</sup>	M	352 (18)	400 (17)	250 (14)	559 (16)	4980 (22)
	F	— (1)	511 (7)	275 (6)	360 (5)	— (0)
Heterosexual contact	M	284 (126)	320 (115)	340 (119)	338 (118)	360 (141)
	F	320 (121)	357 (120)	347 (106)	377 (123)	340 (123)
Other/undetermined	M	320 (32)	309 (38)	349 (26)	307 (38)	320 (39)
	F	465 (12)	437 (10)	457 (11)	620 (9)	405 (12)
<b>Newly acquired HIV infection status</b>						
Diagnoses of newly acquired infection <sup>3</sup>	M	550 (259)	524 (275)	510 (319)	550 (325)	504 (291)
	F	630 (13)	516 (12)	592 (15)	498 (16)	515 (12)
Other HIV diagnoses <sup>4</sup>	M	360 (546)	330 (535)	380 (508)	370 (573)	399 (606)
	F	307 (121)	358 (125)	318 (108)	377 (121)	324 (123)
<b>Total</b>		<b>406 (941)</b>	<b>400 (948)</b>	<b>430 (950)</b>	<b>435 (1036)</b>	<b>430 (1035)</b>

1 Includes males who also reported a history of injecting drug use.

2 Excludes men who have sex with men.

3 Newly acquired HIV infection was defined as newly diagnosed HIV infection with a negative or indeterminate HIV antibody test result, or a diagnosis of primary HIV infection within one year of HIV diagnosis.

4 Totals include 9 people whose sex was reported as transgender.

Source: State/Territory health authorities

Table 1.1.6 Number of new diagnoses of HIV infection for which exposure to HIV was attributed to heterosexual contact, by exposure category of the heterosexual partner, year and sex

HIV exposure category	Year of HIV diagnosis										Total		
	2009		2010		2011		2012		2013			2009 – 2013	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female		Male	Female
Person from a high prevalence country	59	57	50	76	26	61	41	67	37	63	213	324	537
Sub-Saharan Africa	55	38	44	53	25	39	32	42	27	45	183	217	400
South East Asia	3	17	4	21	1	20	8	23	5	13	21	94	115
North Africa/Middle East	1	2	2	2	0	2	1	2	5	5	9	13	22
Partner from a high prevalence country	26	10	42	13	45	11	47	17	41	4	201	55	256
Sub-Saharan Africa	7	8	2	7	5	8	2	4	5	4	21	31	52
South East Asia	15	1	25	0	28	1	37	5	33	0	138	7	145
North Africa/Middle East	0	0	0	0	0	1	0	2	0	0	0	0	3
South East Asia	1	0	3	1	3	1	3	5	1	0	11	7	18
North Africa/Middle East	3	1	12	5	9	0	5	1	2	0	31	7	38
Heterosexual contact with partner at risk	69	66	54	45	59	53	54	55	90	79	326	298	624
Injecting drug use	1	4	0	5	0	3	2	3	3	7	6	22	28
Bisexual man	4	4	1	1	7	7	5	5	6	6	23	23	23
Partner with medically acquired HIV	0	1	0	1	0	0	0	1	0	0	0	3	3
Partner with HIV infection whose exposure was other than those above	8	14	6	10	10	17	6	15	10	21	40	77	117
Not further specified	60	43	48	28	49	26	46	31	77	45	280	173	453
<b>Total</b>	<b>154</b>	<b>133</b>	<b>146</b>	<b>134</b>	<b>130</b>	<b>125</b>	<b>142</b>	<b>139</b>	<b>168</b>	<b>146</b>	<b>650</b>	<b>631</b>	<b>1 281</b>

Source: State/Territory health authorities

**Table 1.1.7** Number of specimens tested for HIV antibody in public health laboratories, 2004 – 2013, by State/Territory and year of test

State/ Territory	Year of HIV antibody test									
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ACT <sup>1</sup>	14 388	15 551	16 565	17 602	19 443	20 173	—	21 316	22 435	22 837
NSW	347 064	356 046	322 569	251 724	191 873	114 041	151 320	119 225	128 425	117 771
NT	15 323	15 217	7 247	6 686	7 782	6 360	6 924	8 466	10 065	12 083
QLD	206 322	222 558	238 509	251 430	253 778	210 315	135 198	144 908	148 677	114 565
SA	83 970	88 158	88 552	80 664	95 696	62 560	61 252	64 010	42 501	66 137
TAS	12 754	13 041	12 573	12 248	13 346	4 126	4 447	4 571	16 038	16 302
VIC	152 284	165 461	183 508	253 145	231 844	224 300	148 623	235 822	200 331	280 280
WA	102 694	114 203	101 277	104 540	124 688	167 695	134 241	133 468	173 890	187 650
<b>Total</b>	<b>934 799</b>	<b>990 235</b>	<b>970 800</b>	<b>978 039</b>	<b>938 450</b>	<b>809 570</b>	<b>642 005</b>	<b>731 786</b>	<b>742 362</b>	<b>817 625</b>

<sup>1</sup> The number of specimens tested for HIV antibody in the ACT in 2010 was not available.

Source: National Serology Reference Laboratory, Australia

## 1.2 Monitoring incident HIV infection

Table 1.2.1 Characteristics of diagnoses of newly acquired HIV infection, 2004 – 2013, by year. Total number of cases, median age and number of cases by State/Territory, HIV exposure category, evidence of newly acquired infection, sex and year

Characteristic	Sex	Year of HIV diagnosis										Total <sup>1,2</sup>
		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	
<b>Total cases</b>		261	281	308	278	286	301	308	379	400	350	3 152
Males (%)	M	94.3	96.8	93.5	95.7	95.1	94.7	95.5	95.5	95.7	95.7	95.3
Median age (years)	M	35	35	36	35	36	36	35	35	33	34	35
	F	23	27	35	35	31	29	38	35	26	37	31
<b>State/Territory</b>												
Australian Capital Territory	M	2	1	3	2	0	3	3	4	10	8	36
	F	0	0	1	0	0	0	0	0	0	1	2
New South Wales	M	113	128	110	112	123	114	125	166	178	144	1 313
	F	5	3	7	4	6	8	2	4	8	3	50
Northern Territory	M	2	1	2	1	2	4	2	2	2	3	21
	F	0	0	0	0	0	3	0	1	1	0	5
Queensland	M	42	42	57	48	44	60	54	58	61	60	526
	F	3	1	1	4	2	2	4	4	3	5	29
South Australia	M	15	15	17	7	6	6	4	5	6	7	88
	F	1	0	0	0	1	0	1	0	0	0	3
Tasmania	M	1	2	0	0	1	2	2	5	4	2	19
	F	0	0	0	0	0	0	0	0	0	0	0
Victoria	M	62	74	85	82	81	88	89	97	94	85	837
	F	4	4	8	3	5	2	5	4	2	2	39
Western Australia	M	9	9	14	14	15	8	15	25	28	26	163
	F	1	1	2	1	0	0	1	4	2	3	15
<b>HIV exposure category</b>												
Men who have sex with men	M	209	234	246	230	240	246	265	327	346	292	2 635
Men who have sex with men and injecting drug use	M	13	15	15	6	11	11	7	7	14	16	114
Injecting drug use <sup>3</sup>	M	2	2	2	2	0	3	1	2	3	2	19
	F	4	1	2	1	3	0	1	1	1	0	14
Heterosexual contact	M	16	9	16	20	18	19	13	21	15	17	164
	F	10	8	16	10	11	14	12	15	15	14	125
Health care setting	M	2	0	0	0	0	0	0	0	0	0	2
	F	0	0	0	0	0	0	0	0	0	0	0
Other/undetermined	M	5	12	9	8	3	6	8	5	5	8	69
	F	0	0	1	1	0	1	0	1	0	0	4
<b>Evidence of newly acquired infection</b>												
Testing history only	M	105	128	150	122	123	136	131	142	158	161	1 356
	F	10	5	7	5	7	5	7	4	2	3	55
Primary HIV infection only	M	46	49	44	61	60	52	80	98	93	66	649
	F	3	2	9	5	5	6	1	9	10	5	55
Testing history and primary HIV infection	M	95	95	94	83	89	97	83	122	132	108	998
	F	1	2	3	2	2	4	5	4	4	6	33

1 Newly acquired HIV infection was defined as newly diagnosed infection with a negative or indeterminate HIV antibody test result or a diagnosis of primary HIV infection within one year of HIV diagnosis.

2 Totals include 6 people whose sex was reported as transgender.

3 Excludes men who have sex with men.

Source: State/Territory health authorities

**Table 1.2.2** Number and percentage of isolates with resistance at one or more loci, by drug class against which resistance was detected and year

Year of diagnosis	Drug class against which resistance was detected				
	Total	% non-B subtypes	PI <sup>1</sup> Number (%)	NRTI <sup>1</sup> Number (%)	NNRTI <sup>1</sup> Number (%)
2009	108	6.5	1 (0.9)	6 (5.5)	8 (7.4)
2010	88	13.6	1 (1.1)	7 (7.9)	4 (4.5)
2011	94	10.6	2 (2.1)	4 (4.3)	1 (1.1)
2012	91	25.3	0 (0.0)	4 (3.3)	7 (7.7)
2013	97	21.6	3 (1.0)	4 (4.1)	3 (3.1)

<sup>1</sup> **PI:** protease inhibitor; **NRTI:** Nucleoside reverse transcriptase inhibitor; **NNRTI:** Non-nucleoside reverse transcriptase inhibitor.

Source: NSW State Reference Laboratory for HIV/AIDS; Victorian Infectious Diseases Reference Laboratory

### 1.3 National surveillance for newly diagnosed HIV infection in Aboriginal and Torres Strait Islander people

Table 1.3.1 Characteristics of cases of newly diagnosed HIV infection in Aboriginal and Torres Strait Islander people, 2004 – 2013, by year. Number of cases, median age and percent (number) of total cases by sex, newly acquired infection, HIV status at diagnosis, State/Territory and HIV exposure category

Characteristic	Year of HIV diagnosis										Total <sup>1,2</sup>
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	
<b>Total cases</b>	22	20	23	19	19	24	22	23	33	26	231
<b>Males (%)</b>	72.7	85.0	73.9	84.2	79.0	83.3	68.2	73.9	81.8	84.6	78.8
<b>Median age (years)</b>	29	33	31	33	36	37	35	33	27	37	33
<b>Newly acquired HIV infection (%)<sup>1</sup></b>	31.8 (7)	15.0 (3)	30.4 (7)	26.3 (5)	31.6 (6)	29.2 (7)	22.7 (5)	21.7 (5)	30.3 (10)	34.6 (9)	27.7 (64)
<b>Late and advanced HIV infection status at HIV diagnosis (%)<sup>2,3</sup></b>											
Late HIV diagnosis	40.0	35.7	17.6	46.7	46.7	50.0	30.0	40.9	41.7	52.4	40.5
Advanced HIV diagnosis	35.0	14.3	11.8	13.3	20.0	36.4	10.0	36.4	29.2	33.3	25.3
<b>State/Territory (%)</b>											
Australian Capital Territory	0	0	0	0	0	0	0	0	0	0	0
New South Wales	4	3	9	8	8	9	7	5	11	8	72
Northern Territory	1	0	0	0	1	0	1	2	2	1	8
Queensland	5	9	6	5	2	8	8	8	14	9	74
South Australia	2	0	0	1	4	2	1	1	1	2	14
Tasmania	1	0	0	0	0	1	0	1	0	1	4
Victoria	4	2	2	3	0	1	3	1	5	5	26
Western Australia	5	6	6	2	4	3	2	5	0	0	33
<b>HIV exposure category (%)<sup>4</sup></b>											
Men who have sex with men	52.4 (11)	35.0 (7)	47.8 (11)	47.4 (9)	47.4 (9)	52.6 (10)	60.0 (12)	63.6 (14)	71.9 (23)	24.0 (6)	50.9 (112)
Men who have sex with men, and injecting drug use	0.0 (0)	25.0 (5)	4.3 (1)	15.8 (3)	5.3 (1)	15.8 (3)	5.0 (1)	0.0 (0)	3.1 (1)	20.0 (5)	9.1 (20)
Injecting drug use <sup>5</sup>	19.0 (4)	15.0 (3)	21.7 (5)	15.8 (3)	36.8 (7)	10.5 (2)	20.0 (4)	4.5 (1)	6.3 (2)	24.0 (6)	16.8 (37)
Heterosexual contact	28.6 (6)	25.0 (5)	26.1 (6)	21.1 (4)	10.5 (2)	21.1 (4)	15.0 (3)	27.3 (6)	18.8 (6)	32.0 (8)	22.7 (50)
Haemophilia/coagulation disorder	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
Receipt of blood/tissue	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
Mother with/at risk of HIV infection	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	4.5 (1)	0.0 (0)	0.0 (0)	0.5 (1)
Health care setting	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
Other/undermined exposure	4.5 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	20.8 (5)	9.1 (2)	4.3 (1)	3.0 (1)	3.8 (1)	4.8 (11)

1. Newly acquired HIV infection was defined as newly diagnosed infection with a negative or indeterminate HIV antibody test result or a diagnosis of primary HIV infection within one year of HIV diagnosis.

2. Late diagnosis and advanced infection for HIV diagnoses in 2004 only. Total percentage with late HIV diagnosis and advanced HIV infection in 2004 – 2013 only.

3. Late HIV diagnosis was defined as newly diagnosed HIV infection with a CD4+ cell count of less than 350 cells/μl, and advanced HIV infection as newly diagnosed infection with a CD4+ cell count of less than 200 cells/μl.

4. The "Other/undetermined" exposure category was excluded from the calculation of the percentage of cases attributed to each HIV exposure category.

5. Excludes men who have sex with men.

Source: State/Territory health authorities

**Table 1.3.2** Rate of diagnosis of HIV infection<sup>1</sup>, 2009 – 2013, by area of residence, Aboriginal and Torres Strait Islander status and year

Area of residence	Aboriginal and Torres Strait Islander status	Year of diagnosis				
		2009	2010	2011	2012	2013
Major cities	Aboriginal and Torres Strait Islander	8	6	5	9	6
	non-Indigenous <sup>2</sup>	6	6	6	6	6
Inner regional	Aboriginal and Torres Strait Islander	1	2	2	4	2
	non-Indigenous <sup>2</sup>	2	2	2	2	2
Outer regional	Aboriginal and Torres Strait Islander	2	3	3	3	5
	non-Indigenous <sup>2</sup>	3	3	3	4	4
Remote	Aboriginal and Torres Strait Islander	0	2	0	2	2
	non-Indigenous <sup>2</sup>	2	1	1	3	3
Very remote	Aboriginal and Torres Strait Islander	2	1	4	0	1
	non-Indigenous <sup>2</sup>	4	3	2	9	4
<b>Total</b>	<b>Aboriginal and Torres Strait Islander</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>4</b>
	<b>non-Indigenous<sup>2</sup></b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>5</b>

Source: State/Territory health authorities

## 1.4 National surveillance for perinatal exposure to HIV

Table 1.4.1 Number and population rate<sup>1</sup> of perinatal exposure to HIV among children born in Australia, 2004 – 2013, by State/Territory and year of birth

State/ Territory	Year of birth									
	2004 – 2005		2006 – 2007		2008 – 2009		2010 – 2011		2012 – 2013	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	0	0.0	0	0.0	1	10.3	3	29.2	7	64.1
NSW	26	14.7	19	10.1	28	14.1	30	15.0	36	18.3
NT	0	0.0	0	0.0	0	0.0	0	0.0	1	12.2
QLD	13	12.8	14	12.3	13	10.1	10	7.8	8	6.3
SA	1	2.9	4	10.5	4	10.0	4	10.0	5	12.2
TAS	0	0.0	1	7.6	1	7.5	3	23.1	0	0.0
VIC	7	5.6	17	12.5	32	22.5	31	21.8	45	29.1
WA	3	5.8	2	3.5	0	0.0	7	11.0	6	8.9
<b>Total</b>	<b>50</b>	<b>9.6</b>	<b>57</b>	<b>10.1</b>	<b>79</b>	<b>13.1</b>	<b>88</b>	<b>14.5</b>	<b>108</b>	<b>17.4</b>

1 Average annual rate of perinatal HIV exposure per 100 000 livebirths. Number of livebirths by State/Territory and year from Births, Australia (Australian Bureau of Statistics).

Source: Australian Paediatric Surveillance Unit; State/Territory health authorities

Table 1.4.2 Number of perinatally exposed children born in Australia, 2004 – 2013, and number with diagnosed HIV infection by year of the child's birth and time of the woman's HIV diagnosis relative to the child's birth

Child's year of birth	Interval of the woman's HIV diagnosis					
	Before or at the birth		After the birth		Total	
	Number exposed	Number with HIV	Number exposed	Number with HIV	Number exposed	Number with HIV
2004 – 2005 <sup>1</sup>	45	0	4	2	50	2
2006 – 2007	52	3	5	3	57	6
2008 – 2009 <sup>2</sup>	76	0	0	0	79	1
2010 – 2011 <sup>3</sup>	85	1	2	0	88	1
2012 – 2013 <sup>4</sup>	99	1	3	2	108	3
<b>Total</b>	<b>357</b>	<b>5</b>	<b>14</b>	<b>7</b>	<b>382</b>	<b>13</b>

1 Total includes 1 HIV negative child born in 2004 – 2005 whose mother's date of HIV diagnosis was not reported.

2 Total includes 3 children born in 2008 – 2009 (2 HIV negative and 1 with HIV infection) whose mother's date of HIV diagnosis was not reported.

3 Total includes 1 HIV negative child born in 2010 – 2011 whose mother's date of HIV diagnosis was not reported.

4 Total includes 7 children born in 2012 – 2013 (all HIV negative) whose mother's date of HIV diagnosis was not reported.

Source: Australian Paediatric Surveillance Unit; State/Territory health authorities

## 1.5 Global comparisons for HIV

Table 1.5.1 Estimated HIV prevalence in selected countries

Country	HIV prevalence	
	2013 <sup>1</sup>	Rate <sup>2</sup>
<b>Africa</b>		
Mauritius <sup>3</sup>	9 635	743
Somalia <sup>3</sup>	32 313	308
South Africa <sup>3</sup>	6 274 091	11 842
Sudan South <sup>3</sup>	153 108	1 355
Zambia <sup>3</sup>	1 110 409	7 638
Zimbabwe <sup>3</sup>	1 390 293	9 826
<b>Asia Pacific</b>		
Australia	26 800	116
Cambodia <sup>3</sup>	75 248	497
China <sup>4</sup>	780 000	<100
Indonesia <sup>3</sup>	641 359	257
Japan <sup>4</sup>	7 900	<100
Malaysia <sup>3</sup>	86 324	290
Myanmar <sup>3</sup>	192 465	361
New Zealand <sup>5</sup>	2 600	<100
Papua New Guinea <sup>3</sup>	31 945	436
Philippines <sup>5</sup>	15 000	<100
Republic of Korea <sup>3</sup>	15 000	<100
Thailand <sup>3</sup>	435 284	650
Vietnam <sup>3</sup>	248 646	277
<b>Europe</b>		
France <sup>5</sup>	160 000	400
Germany <sup>6</sup>	77 513	<100
Italy <sup>3</sup>	122 018	204
Spain <sup>3</sup>	150 424	322
United Kingdom <sup>3</sup>	126 660	198
<b>North America</b>		
Canada <sup>3</sup>	71 000	300
United States <sup>7</sup>	1 144 500	406

1 Estimated number of people living with HIV/AIDS.

2 Rate per 100 000 population.

3 Estimated HIV prevalence in people in all age in 2013.

4 Estimated HIV prevalence in people in all age in 2011.

5 Estimated HIV prevalence in people aged 15 – 49 years in 2011.

6 Estimated HIV prevalence in people in all age in 2012.

7 Estimated HIV prevalence for people aged ≥13 in 2010.



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## 2 National surveillance for viral hepatitis

### 2.1 Notification of viral hepatitis to the National Notifiable Diseases Surveillance System

Table 2.1.1 Number and rate<sup>1</sup> of diagnosis of hepatitis A infection, 2009 – 2013, by State/Territory and year

State/ Territory	Year of diagnosis									
	2009		2010		2011		2012		2013	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	6	1.5	5	1.3	3	0.7	1	0.3	4	1.0
NSW	98	1.4	83	1.2	57	0.8	42	0.6	62	0.8
NT	1	0.4	3	1.9	3	1.1	3	1.0	0	0.0
QLD	56	1.3	40	0.9	26	0.6	34	0.7	45	1.0
SA	59	3.7	4	0.3	6	0.4	7	0.4	11	0.7
TAS	5	1.1	4	0.8	4	0.8	2	0.4	0	0.0
VIC	303	5.5	96	1.8	34	0.6	61	1.1	53	0.9
WA	35	1.5	32	1.4	12	0.5	14	0.6	14	0.5
<b>Total</b>	<b>563</b>	<b>2.6</b>	<b>267</b>	<b>1.2</b>	<b>145</b>	<b>0.6</b>	<b>164</b>	<b>0.7</b>	<b>189</b>	<b>0.8</b>

<sup>1</sup> Age standardised rate per 100 000 population. Population estimates by State/Territory and year from Australian Demographic Statistics (Australian Bureau of Statistics).

Source: National Notifiable Diseases Surveillance System

Table 2.1.2 Number of diagnoses of hepatitis A infection, 2009 – 2013, by age group, year and sex

Age group	Year of diagnosis														
	2009			2010			2011			2012			2013		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
0 – 4	13	6	19	12	14	26	5	4	9	6	3	9	8	3	11
5 – 14	29	20	49	35	24	59	15	9	24	12	24	36	18	23	41
15 – 19	22	23	45	9	14	23	6	5	11	6	5	11	10	8	18
20 – 24	47	38	85	11	10	21	9	3	12	7	8	15	15	7	22
25 – 29	26	24	50	12	15	27	11	9	20	17	10	27	10	8	18
30 – 39	56	64	120	21	15	36	18	14	32	9	9	18	22	10	32
40 – 49	35	43	78	11	15	26	5	2	7	10	7	17	9	4	13
50 – 59	26	38	64	14	9	23	7	6	13	3	2	5	12	6	18
60+	25	28	53	9	17	26	9	8	17	10	16	26	8	7	15
<b>Total</b>	<b>279</b>	<b>284</b>	<b>563</b>	<b>134</b>	<b>133</b>	<b>267</b>	<b>85</b>	<b>60</b>	<b>145</b>	<b>80</b>	<b>84</b>	<b>164</b>	<b>112</b>	<b>76</b>	<b>189</b>

<sup>1</sup> Total includes cases whose sex was not reported.

Source: National Notifiable Diseases Surveillance System

Table 2.1.3 Number and rate<sup>1</sup> of diagnosis of hepatitis B infection, 2009 – 2013, by State/Territory and year

State/Territory	Year of diagnosis									
	2009		2010		2011		2012		2013	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	107	28.5	96	24.9	95	24.0	106	26.1	111	27.3
NSW	2 810	39.9	2 604	36.6	2 503	34.9	2 319	32.0	2 539	34.6
NT	161	74.9	162	73.4	167	73.0	196	79.3	331	129.7
QLD	1 055	24.3	1 114	25.3	875	19.6	874	19.3	951	20.7
SA	451	28.4	429	26.9	431	27.0	432	26.7	294	18.1
TAS	84	18.1	55	11.8	51	11.0	71	15.5	58	12.3
VIC	2 010	36.6	1 953	35.1	1 984	35.3	1 908	33.4	1 884	32.4
WA	703	30.6	775	33.2	648	27.0	831	33.0	983	37.8
<b>Total</b>	<b>7 381</b>	<b>33.8</b>	<b>7 188</b>	<b>32.5</b>	<b>6 754</b>	<b>30.2</b>	<b>6 737</b>	<b>29.6</b>	<b>7 151</b>	<b>30.9</b>

<sup>1</sup> Age standardised rate per 100 000 population. Population estimates by State/Territory and year from *Australian Demographic Statistics* (Australian Bureau of Statistics).

Source: National Notifiable Diseases Surveillance System

Table 2.1.4 Number of diagnoses of hepatitis B infection, 2009 – 2013, by age group, year and sex

Age group	Year of diagnosis														
	2009			2010			2011			2012			2013		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
0 – 4	2	4	6	9	7	16	4	3	7	5	5	10	6	8	14
5 – 14	70	42	112	65	39	105	47	25	73	47	30	78	44	24	68
15 – 19	176	115	291	143	107	254	117	95	212	165	73	238	216	73	292
20 – 24	383	354	748	328	349	686	323	306	635	312	278	596	370	251	628
25 – 29	540	601	1 156	531	654	1 202	566	585	1 164	575	515	1 100	565	530	1 099
30 – 39	1 097	973	2 099	1 078	955	2 054	1 002	896	1 923	1 038	922	1 981	1 184	915	2 117
40 – 49	896	548	1 451	797	503	1 309	763	454	1 224	748	471	1 224	775	495	1 274
50 – 59	542	360	906	527	390	919	542	334	880	505	379	885	591	362	955
60 +	350	244	598	367	259	636	355	272	631	374	245	620	395	305	700
Not reported	9	3	14	3	2	7	2	0	5	4	0	5	1	1	4
<b>Total</b>	<b>4 065</b>	<b>3 244</b>	<b>7 381</b>	<b>3 848</b>	<b>3 265</b>	<b>7 188</b>	<b>3 721</b>	<b>2 970</b>	<b>6 754</b>	<b>3 773</b>	<b>2 918</b>	<b>6 737</b>	<b>4 147</b>	<b>2 964</b>	<b>7 151</b>

<sup>1</sup> Totals include diagnoses in people whose sex was not reported.

Source: National Notifiable Diseases Surveillance System

**Table 2.1.5** Number and rate<sup>1</sup> of diagnosis of newly acquired hepatitis B infection, 2009 – 2013, by State/Territory and year

State/Territory	Year of diagnosis									
	2009		2010		2011		2012		2013	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	5	1.3	3	0.7	2	0.5	2	0.5	4	1.0
NSW	36	0.5	35	0.5	30	0.4	30	0.4	33	0.5
NT	4	1.5	4	1.5	4	1.5	5	1.8	6	2.3
QLD	55	1.3	60	1.4	45	1.0	54	1.2	45	1.0
SA	10	0.6	21	1.3	9	0.6	17	1.0	8	0.4
TAS	14	3.3	6	1.4	14	3.2	10	2.2	3	0.7
VIC	91	1.7	69	1.2	71	1.3	55	1.0	34	0.6
WA	38	1.7	32	1.4	18	0.7	25	1.0	39	1.5
<b>Total</b>	<b>253</b>	<b>1.2</b>	<b>230</b>	<b>1.0</b>	<b>193</b>	<b>0.9</b>	<b>198</b>	<b>0.9</b>	<b>172</b>	<b>0.7</b>

<sup>1</sup> Age standardised rate per 100 000 population. Population estimates by State/Territory and year from *Australian Demographic Statistics* (Australian Bureau of Statistics).

Source: National Notifiable Diseases Surveillance System

**Table 2.1.6** Number of diagnoses of newly acquired hepatitis B infection, 2009 – 2013, by age group, year and sex

Age group	Year of diagnosis														
	2009			2010			2011			2012			2013		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
0 – 4	1	0	1	1	5	6	1	0	1	1	1	2	1	2	3
5 – 14	0	0	1	2	1	4	0	0	0	0	1	1	0	0	0
15 – 19	3	1	7	6	3	10	3	3	6	4	1	6	4	3	8
20 – 24	12	11	21	12	8	21	9	9	21	10	6	17	10	1	12
25 – 29	28	12	47	22	16	39	18	11	28	19	10	30	19	3	21
30 – 39	54	32	83	41	19	56	45	21	67	31	18	48	38	14	51
40 – 49	39	13	48	34	12	46	26	11	35	35	15	48	30	11	44
50 – 59	16	10	24	20	8	30	20	5	24	20	5	25	17	3	17
60 +	14	7	21	13	7	18	10	1	11	19	1	20	12	3	15
<b>Total</b>	<b>167</b>	<b>86</b>	<b>253</b>	<b>151</b>	<b>79</b>	<b>230</b>	<b>132</b>	<b>61</b>	<b>193</b>	<b>139</b>	<b>58</b>	<b>198</b>	<b>131</b>	<b>40</b>	<b>172</b>

<sup>1</sup> Totals include people whose sex was not reported.

Source: National Notifiable Diseases Surveillance System

Table 2.1.7 Number of diagnoses of newly acquired hepatitis B infection<sup>1</sup>, 2009 – 2013, by exposure category, year and sex

Exposure category	Year of diagnosis														
	2009			2010			2011			2012			2013 <sup>2</sup>		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Injecting drug use	36	20	56	32	18	50	31	14	45	25	11	37	27	9	36
Sexual contact	29	9	38	7	10	17	19	7	26	21	11	32	18	3	21
<i>Men who have sex with men</i>	9	—	9	1	—	2	6	—	6	5	—	5	7	—	7
<i>Heterosexual contact</i>	14	5	19	4	7	11	8	3	11	7	3	10	7	3	10
<i>Not further specified</i>	6	4	10	2	3	4	5	4	9	9	8	17	4	0	4
Blood/tissue recipient	2	1	3	2	0	2	0	0	0	0	0	0	0	0	0
Skin penetration procedure	2	1	3	3	1	4	8	3	11	1	0	1	3	1	4
Healthcare exposure	2	3	5	4	1	5	6	6	12	5	5	10	3	1	4
Household contact	2	1	3	3	2	5	2	0	2	2	2	4	0	0	0
Other	6	4	10	8	8	16	9	5	14	18	5	23	8	3	12
Undetermined	88	47	135	92	39	131	57	26	83	67	24	91	72	23	95
<b>Total</b>	<b>167</b>	<b>86</b>	<b>253</b>	<b>151</b>	<b>79</b>	<b>230</b>	<b>132</b>	<b>61</b>	<b>193</b>	<b>139</b>	<b>58</b>	<b>198</b>	<b>131</b>	<b>40</b>	<b>172</b>

1 Includes diagnoses in SA, TAS and VIC in 2008 – 2012 and diagnoses in ACT, NSW and NT in 2009 – 2012.

2 Total includes diagnoses in people whose sex was not reported.

Source: National Notifiable Diseases Surveillance System

Table 2.1.8 Number and percentage of diagnoses of newly acquired hepatitis B infection, 2009 – 2013, and the Australian population, by region/country of birth and year

Region/ country of birth	Year of diagnosis												Australian population <sup>1</sup>
	2009		2010		2011		2012		2013		Number	Percent	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent			
<b>Total with a reported country of birth</b>	<b>102</b>	<b>40.3</b>	<b>139</b>	<b>60.4</b>	<b>120</b>	<b>62.2</b>	<b>103</b>	<b>52.0</b>	<b>107</b>	<b>62.2</b>	<b>107</b>	<b>62.2</b>	<b>21 507 719</b>
Australia	70	68.6	95	68.3	88	73.3	77	74.8	82	76.6	82	76.6	69.8
Overseas born	32	31.4	44	31.7	32	26.7	26	25.2	25	23.4	25	23.4	24.6
Other Oceania	5	4.9	1	0.7	6	5.0	1	1.0	2	1.9	2	1.9	2.8
United Kingdom and Ireland	11	10.8	3	2.2	2	1.7	2	1.9	2	1.9	2	1.9	5.4
Other Europe	2	2.0	8	5.8	3	2.5	8	7.8	5	4.7	5	4.7	4.5
Middle East/North Africa	4	3.9	6	4.3	6	5.0	4	3.9	3	2.8	3	2.8	1.4
Sub-Saharan Africa	1	1.0	7	5.0	2	1.7	1	1.0	1	0.9	1	0.9	1.3
Asia	9	8.8	17	12.2	13	10.8	8	7.8	10	9.3	10	9.3	8.1
North America	0	0.0	1	0.7	0	0.0	1	1.0	1	0.9	1	0.9	0.5
South/Central America and the Caribbean	0	0.0	1	0.7	0	0.0	1	1.0	1	0.9	1	0.9	0.5
Not reported	151	59.7	91	39.6	73	37.8	95	48.0	65	37.8	65	37.8	5.6
<b>Total</b>	<b>253</b>	<b>100</b>	<b>230</b>	<b>100</b>	<b>193</b>	<b>100</b>	<b>198</b>	<b>100</b>	<b>172</b>	<b>100</b>	<b>172</b>	<b>100</b>	

<sup>1</sup> Population estimates by country/region of birth from 2011 Census (Australian Bureau of Statistics).

Source: National Notifiable Diseases Surveillance System

Table 2.1.9 Number and rate<sup>1</sup> of diagnosis of hepatitis C infection, 2009 – 2013, by State/Territory and year

State/ Territory	Year of diagnosis									
	2009		2010		2011		2012		2013	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	163	43.1	223	58.5	189	49.0	147	37.2	184	45.9
NSW	4 053	57.2	3 980	55.6	3 370	46.7	3 277	45.1	3 546	48.2
NT	168	73.6	169	72.7	211	87.6	191	77.4	257	103.9
QLD	2 634	60.7	2 672	60.7	2 408	54.0	2 385	52.6	2 469	53.6
SA	563	35.6	534	33.4	474	29.4	487	29.8	476	29.1
TAS	281	59.7	267	55.8	229	48.3	262	56.0	229	48.5
VIC	2 503	45.9	2 576	46.4	2 330	41.5	2 239	39.2	2 275	39.2
WA	1 138	49.7	1 065	45.4	1 083	45.0	1 139	45.5	1 279	49.3
<b>Total</b>	<b>11 503</b>	<b>52.7</b>	<b>11 486</b>	<b>51.8</b>	<b>10 294</b>	<b>45.9</b>	<b>10 127</b>	<b>44.5</b>	<b>10 715</b>	<b>46.3</b>

<sup>1</sup> Age standardised rate per 100 000 population. Population estimates by State/Territory and year from *Australian Demographic Statistics* (Australian Bureau of Statistics).

Source: National Notifiable Diseases Surveillance System

Table 2.1.10 Number of diagnoses of hepatitis C infection, 2009 – 2013, by age group, year and sex

Age group	Year of diagnosis														
	2009			2010			2011			2012			2013		
	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>
0 – 4	4	13	17	8	11	19	4	6	10	5	6	11	12	7	19
5 – 14	14	18	33	16	8	26	10	7	18	7	13	21	7	7	14
15 – 19	89	124	214	81	113	196	85	113	199	112	96	208	137	101	239
20 – 24	502	432	937	496	381	889	486	338	829	589	302	893	619	334	956
25 – 29	865	625	1 499	865	595	1 495	773	495	1 272	789	468	1 265	823	423	1 249
30 – 39	2 155	1 117	3 297	2 045	1 239	3 328	1 899	986	2 907	1 823	987	2 826	1 895	1 067	2 971
40 – 49	1 974	929	2 914	1 892	935	2 836	1 724	780	2 506	1 578	789	2 372	1 707	759	2 471
50 – 59	1 380	613	1 999	1 412	668	2 087	1 299	624	1 924	1 237	612	1 851	1 328	667	1 996
60 +	294	275	570	340	237	579	352	252	609	397	270	667	486	295	783
Not reported	19	1	23	21	6	31	11	6	20	9	0	13	10	4	17
<b>Total</b>	<b>7 293</b>	<b>4 147</b>	<b>11 503</b>	<b>7 176</b>	<b>4 193</b>	<b>11 486</b>	<b>6 643</b>	<b>3 607</b>	<b>10 294</b>	<b>6 546</b>	<b>3 543</b>	<b>10 127</b>	<b>7 024</b>	<b>3 664</b>	<b>10 715</b>

<sup>1</sup> Totals include diagnoses in people whose sex was not reported.

Source: National Notifiable Diseases Surveillance System

Table 2.1.11 Number of diagnoses of newly acquired hepatitis C infection, 2009 – 2013, by State/Territory and year

State/ Territory	Year of diagnosis				
	2009	2010	2011	2012	2013
ACT	8	12	10	15	14
NSW	41	37	52	50	43
NT	5	0	3	0	1
QLD	–	–	–	–	–
SA	35	43	33	80	62
TAS	22	23	27	23	19
VIC	195	208	167	190	145
WA	93	77	120	128	123
<b>Total</b>	<b>399</b>	<b>400</b>	<b>412</b>	<b>486</b>	<b>407</b>

<sup>1</sup> Dashes (–) indicate that data were not available.

Source: National Notifiable Diseases Surveillance System

Table 2.1.12 Number of diagnoses of newly acquired hepatitis C infection, 2009 – 2013, by age group, year and sex

Age group	Year of diagnosis														
	2009			2010			2011			2012			2013		
	M	F	T	M	F	T <sup>1</sup>	M	F	T	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>
0 – 4	1	5	6	1	3	4	1	0	1	3	1	4	3	1	4
5 – 14	0	2	2	1	0	1	0	0	0	0	1	1	0	0	0
15 – 19	12	9	21	6	21	27	8	22	30	12	15	27	19	12	31
20 – 24	76	41	117	58	44	102	69	32	101	95	34	129	63	29	92
25 – 29	51	43	94	47	38	85	79	27	106	66	45	111	61	28	90
30 – 39	80	36	116	60	47	107	72	25	97	71	43	114	73	37	110
40 – 49	18	14	32	34	19	53	43	14	57	46	21	67	42	16	58
50 – 59	5	5	10	16	3	19	11	6	17	21	5	26	11	4	15
60 +	1	0	1	0	2	2	1	2	3	2	2	4	6	0	6
Not reported	0	0	0	0	0	0	0	0	0	0	0	3	0	0	1
<b>Total</b>	<b>244</b>	<b>155</b>	<b>399</b>	<b>223</b>	<b>177</b>	<b>400</b>	<b>284</b>	<b>128</b>	<b>412</b>	<b>316</b>	<b>167</b>	<b>486</b>	<b>278</b>	<b>127</b>	<b>407</b>

1 Totals include cases whose sex and age group was not reported and cases whose sex was not reported.

Source: National Notifiable Diseases Surveillance System

Table 2.1.13 Number of diagnoses of newly acquired hepatitis C infection, 2009 – 2013, by exposure category, year and sex

Exposure category	Year of diagnosis														
	2009			2010			2011			2012			2013		
	M	F	T	M	F	T	M	F	T	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>
Injecting drug use	167	94	261	159	106	265	174	62	236	172	99	274	205	93	300
Sexual contact	7	8	15	7	3	10	4	4	8	3	6	9	12	4	16
Blood/tissue recipient	0	0	0	1	1	2	0	0	0	0	1	1	2	0	2
Skin penetration procedure	4	4	8	5	6	11	13	3	16	4	4	8	4	2	6
Healthcare exposure	2	12	14	4	36	40	3	7	10	1	2	3	4	2	6
Household contact	0	1	1	2	1	3	1	1	2	1	1	2	2	1	3
Other	24	11	35	21	9	30	21	7	28	24	8	32	24	9	33
Undetermined	40	25	65	24	15	39	68	44	112	111	46	157	25	16	41
<b>Total</b>	<b>244</b>	<b>155</b>	<b>399</b>	<b>223</b>	<b>177</b>	<b>400</b>	<b>284</b>	<b>128</b>	<b>412</b>	<b>316</b>	<b>167</b>	<b>486</b>	<b>278</b>	<b>127</b>	<b>407</b>

1 Totals include diagnoses in people whose sex was not reported.

Source: National Notifiable Diseases Surveillance System

Table 2.1.14 Number and percentage of diagnoses of newly acquired hepatitis C infection, 2009 – 2013, and the Australian population, by region/country of birth and year

Region/country of birth	Year of diagnosis												Australian population <sup>1</sup>
	2009		2010		2011		2012		2013		Percent	Australian population <sup>1</sup>	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent			
<b>Total with a reported country of birth</b>	<b>197</b>	<b>49.4</b>	<b>206</b>	<b>51.5</b>	<b>221</b>	<b>53.6</b>	<b>266</b>	<b>54.7</b>	<b>342</b>	<b>84.0</b>	<b>84.0</b>	<b>21 507 719</b>	
Australia	166	84.3	177	85.9	205	92.8	234	88.0	308	90.1	90.1	69.8	
Overseas born	31	15.7	29	14.1	16	7.2	32	12.0	34	9.9	9.9	24.6	
<i>Other Oceania</i>	7	3.6	5	2.4	2	0.9	2	0.8	8	2.3	2.3	2.8	
<i>United Kingdom and Ireland</i>	6	3.0	8	3.9	3	1.4	9	3.4	6	1.8	1.8	5.4	
<i>Other Europe</i>	4	2.0	4	1.9	0	0.0	4	1.5	3	0.9	0.9	4.5	
<i>Middle East/North Africa</i>	2	1.0	2	1.0	1	0.5	3	1.1	4	1.2	1.2	1.4	
<i>Sub-Saharan Africa</i>	2	1.0	2	1.0	1	0.5	3	1.1	5	1.5	1.5	1.3	
<i>Asia</i>	6	3.0	5	2.4	7	3.2	8	3.0	6	1.8	1.8	8.1	
<i>North America</i>	3	1.5	3	1.5	2	0.9	2	0.8	2	0.6	0.6	0.5	
<i>South/Central America and the Caribbean</i>	1	0.5	0	0.0	0	0.0	1	0.4	0	0.0	0.0	0.5	
Not reported	202	50.6	194	48.5	191	46.4	220	45.3	65	16.0	16.0	5.6	
<b>Total</b>	<b>399</b>	<b>100</b>	<b>400</b>	<b>100</b>	<b>412</b>	<b>100</b>	<b>486</b>	<b>100</b>	<b>407</b>	<b>100</b>	<b>100</b>		

1 Population estimates by region/country of birth from 2011 Census by the Australian Bureau of Statistics.

Source: National Notifiable Diseases Surveillance System

Table 2.1.15 Number of diagnoses of hepatitis D infection, 2009 – 2013, by State/Territory and year

State/ Territory	Year of diagnosis				
	2009	2010	2011	2012	2013
ACT	0	0	0	0	0
NSW	9	9	13	5	9
NT	0	0	0	0	1
QLD	13	20	7	7	13
SA	0	1	1	7	4
TAS	0	0	0	0	0
VIC	13	6	16	10	22
WA	0	0	2	2	4
<b>Total</b>	<b>35</b>	<b>36</b>	<b>39</b>	<b>31</b>	<b>53</b>

Source: National Notifiable Diseases Surveillance System

Table 2.1.16 Number of diagnoses of hepatitis D infection, 2009 – 2013, by age group, year and sex

Age group	Year of diagnosis														
	2009			2010			2011			2012			2013		
	M	F	T	M	F	T <sup>1</sup>	M	F	T	M	F	T	M	F	T
0 – 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 – 14	0	0	0	1	0	1	0	0	0	0	1	1	0	0	0
15 – 19	4	1	5	1	0	1	1	0	1	1	0	1	0	2	2
20 – 24	2	1	3	4	1	5	0	2	2	1	2	3	2	0	2
25 – 29	5	4	9	2	0	2	1	2	3	3	0	3	5	2	7
30 – 39	3	1	4	1	5	6	7	3	10	5	1	6	9	7	16
40 – 49	7	0	7	11	1	12	5	6	11	6	1	7	8	3	11
50 – 59	3	1	4	8	1	9	7	0	7	4	4	8	8	4	12
60 +	0	2	2	0	0	0	2	3	5	1	1	2	2	1	3
Not reported	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>24</b>	<b>11</b>	<b>35</b>	<b>28</b>	<b>8</b>	<b>36</b>	<b>23</b>	<b>16</b>	<b>39</b>	<b>21</b>	<b>10</b>	<b>31</b>	<b>34</b>	<b>19</b>	<b>53</b>

Source: National Notifiable Diseases Surveillance System

## 2.2 National surveillance for viral hepatitis in Aboriginal and Torres Strait Islander people

Table 2.2.1 Number (percent) of diagnoses of hepatitis A infection, 2013, by State/Territory<sup>1</sup> and Aboriginal and Torres Strait Islander status

State/ Territory	Aboriginal and Torres Strait Islander status							
	Aboriginal and Torres Strait Islander		Non-Indigenous		Not reported		Total	
ACT	0	0.0	4	100.0	0	0.0	4	
NSW	2	3.2	60	96.8	0	0.0	62	
NT	0	0.0	0	0.0	0	0.0	0	
QLD	0	0.0	37	82.2	8	17.8	45	
SA	0	0.0	11	100.0	0	0.0	11	
TAS	0	0.0	0	0.0	0	0.0	0	
VIC	1	1.9	51	96.2	1	1.9	53	
WA	0	0.0	14	100.0	0	0.0	14	
<b>Total</b>	<b>3</b>	<b>(1.6)</b>	<b>177</b>	<b>(93.7)</b>	<b>9</b>	<b>(4.8)</b>	<b>189</b>	

1 Data not shown for State/Territory health jurisdictions in which Aboriginal and Torres Strait Islander status was not reported for more than 50% of diagnoses.

Source: National Notifiable Diseases Surveillance System

Table 2.2.2 Number and rate<sup>1</sup> of diagnosis of hepatitis B, 2009 – 2013, by State/Territory<sup>2</sup>, Aboriginal and Torres Strait Islander status and year

State/ Territory	Aboriginal and Torres Strait Islander status	Year of diagnosis									
		2009		2010		2011		2012		2013	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	Aboriginal and Torres Strait Islander	3	30.3	3	45.4	0	0.0	0	0.0	4	56.8
	Non-Indigenous <sup>3</sup>	104	28.2	93	24.5	95	24.3	106	26.6	107	26.7
NT	Aboriginal and Torres Strait Islander	82	189.0	76	165.5	79	171.5	57	112.1	74	142.0
	Non-Indigenous <sup>3</sup>	79	47.1	86	50.4	88	49.7	139	77.6	257	140.7
SA	Aboriginal and Torres Strait Islander	19	77.8	19	80.9	33	134.3	20	68.3	17	65.3
	Non-Indigenous <sup>3</sup>	432	27.9	410	26.3	398	25.6	412	26.0	277	17.5
TAS	Aboriginal and Torres Strait Islander	2	10.1	1	6.7	2	10.5	0	0.0	2	11.0
	Non-Indigenous <sup>3</sup>	82	18.6	54	12.2	49	11.1	71	16.3	56	12.5
WA	Aboriginal and Torres Strait Islander	36	66.5	41	82.3	52	85.8	47	58.8	26	38.3
	Non-Indigenous <sup>3</sup>	667	30.0	734	32.5	596	25.7	784	32.3	957	38.2
<b>Total</b>	<b>Aboriginal and Torres Strait Islander</b>	<b>142</b>	<b>100.2</b>	<b>140</b>	<b>99.8</b>	<b>166</b>	<b>110.4</b>	<b>124</b>	<b>68.9</b>	<b>123</b>	<b>72.2</b>
	<b>Non-Indigenous<sup>3</sup></b>	<b>1 364</b>	<b>28.6</b>	<b>1 377</b>	<b>28.5</b>	<b>1 226</b>	<b>25.0</b>	<b>1 512</b>	<b>30.1</b>	<b>1 654</b>	<b>32.3</b>

1 Age standardised rate per 100 000 population. Population estimates by State/Territory, year and Aboriginal and Torres Strait Islander status from *2011 Census of Population and Housing* (Australian Bureau of Statistics).

2 State/Territory health jurisdictions in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses in each year.

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

Source: National Notifiable Diseases Surveillance System

**Table 2.2.3** Number (percent) of diagnoses of hepatitis B infection, 2013, by State/Territory and Aboriginal and Torres Strait Islander status

State/ Territory	Aboriginal and Torres Strait Islander status						Total
	Aboriginal and Torres Strait Islander		Non-Indigenous		Not reported		
ACT	4	3.6	105	94.6	2	1.8	111
NSW	—	—	—	—	2 345	92.4	2 539
NT	74	22.4	239	72.2	18	5.4	331
QLD	—	—	—	—	706	74.2	951
SA	17	5.8	275	93.5	2	0.7	294
TAS	2	3.4	43	74.1	13	22.4	58
VIC	—	—	—	—	1 101	58.4	1 884
WA	26	(2.6)	892	(90.7)	65	6.6	983
<b>Total</b>	<b>206</b>	<b>(2.9)</b>	<b>2 693</b>	<b>37.7</b>	<b>4 252</b>	<b>59.5</b>	<b>7 151</b>

1 Data not shown for State/Territory health jurisdictions in which Aboriginal and Torres Strait Islander status was not reported for more than 50% of diagnoses.

Source: National Notifiable Diseases Surveillance System

**Table 2.2.4** Number and rate<sup>1</sup> of diagnosis of newly acquired hepatitis B, 2009 – 2013, by State/Territory<sup>2</sup>, Aboriginal and Torres Strait Islander status and year

State/ Territory	Aboriginal and Torres Strait Islander status	Year of diagnosis									
		2009		2010		2011		2012		2013	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	Aboriginal and Torres Strait Islander	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Non-Indigenous <sup>3</sup>	5	1.3	3	0.7	2	0.5	2	0.5	4	1.1
NSW	Aboriginal and Torres Strait Islander	4	2.4	2	1.1	3	1.5	1	1.0	2	1.1
	Non-Indigenous <sup>3</sup>	32	0.5	33	0.5	27	0.4	29	0.8	31	0.4
NT	Aboriginal and Torres Strait Islander	0	0.0	1	1.4	1	0.9	4	4.1	4	4.4
	Non-Indigenous <sup>3</sup>	4	2.1	3	1.6	3	1.5	1	0.6	2	1.1
QLD	Aboriginal and Torres Strait Islander	5	2.3	13	8.6	8	4.1	8	4.2	4	1.5
	Non-Indigenous <sup>3</sup>	50	1.2	47	1.1	37	0.9	46	1.1	41	0.9
SA	Aboriginal and Torres Strait Islander	0	0.0	0	0.0	0	0.0	2	5.6	0	0.0
	Non-Indigenous <sup>3</sup>	10	0.6	21	1.3	9	0.6	15	0.9	8	0.4
TAS	Aboriginal and Torres Strait Islander	2	10.1	0	0.0	1	5.4	0	0.0	0	0.0
	Non-Indigenous <sup>3</sup>	12	3.0	6	1.4	13	3.1	10	2.4	3	0.7
VIC	Aboriginal and Torres Strait Islander	3	7.8	4	10.0	1	2.5	3	7.5	0	0.0
	Non-Indigenous <sup>3</sup>	88	1.6	65	1.2	70	1.3	52	0.9	34	0.6
WA	Aboriginal and Torres Strait Islander	0	0.0	2	2.1	1	0.7	2	2.2	3	5.8
	Non-Indigenous <sup>3</sup>	38	1.8	30	1.3	17	0.7	23	1.0	36	1.4
<b>Total</b>	<b>Aboriginal and Torres Strait Islander</b>	<b>14</b>	<b>2.2</b>	<b>22</b>	<b>3.8</b>	<b>15</b>	<b>2.1</b>	<b>20</b>	<b>3.4</b>	<b>13</b>	<b>1.9</b>
	<b>Non-Indigenous<sup>3</sup></b>	<b>239</b>	<b>1.1</b>	<b>208</b>	<b>1.0</b>	<b>178</b>	<b>0.8</b>	<b>178</b>	<b>0.9</b>	<b>159</b>	<b>0.7</b>

1 Age standardised rate per 100 000 population. Population estimates by State/Territory, year and Aboriginal and Torres Strait Islander status from 2011 Census of Population and Housing (Australian Bureau of Statistics).

2 State/Territory health jurisdictions in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses in each year.

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

Source: National Notifiable Diseases Surveillance System

Table 2.2.5 Number (percent) of diagnoses of newly acquired hepatitis B, 2013, by State/Territory<sup>1</sup> and Aboriginal and Torres Strait Islander status

State/ Territory	Aboriginal and Torres Strait Islander status				Total		
	Aboriginal and Torres Strait Islander		Non-Indigenous			Not reported	
ACT	0	(0)	4	(100)	0	(0)	4
NSW	2	(6.1)	25	(75.8)	6	(18.2)	33
NT	4	(66.7)	2	(33.3)	0	(0)	6
QLD	4	(8.9)	21	(46.7)	20	(44.4)	45
SA	0	(0)	7	(87.5)	1	(12.5)	8
TAS	0	(0)	3	(100)	0	(0)	3
VIC	0	(0)	32	(94.1)	2	(5.9)	34
WA	3	(7.7)	36	(92.3)	0	(0)	39
<b>Total</b>	<b>13</b>	<b>(7.6)</b>	<b>130</b>	<b>(75.6)</b>	<b>29</b>	<b>(16.9)</b>	<b>172</b>

Source: National Notifiable Diseases Surveillance System

Table 2.2.6 Number and rate<sup>1</sup> of diagnosis of hepatitis C, 2009 – 2013, by State/Territory<sup>2</sup>, Aboriginal and Torres Strait Islander status and year

State/ Territory	Aboriginal and Torres Strait Islander status	Year of diagnosis									
		2009		2010		2011		2012		2013	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
NT	Aboriginal and Torres Strait Islander	27	45.7	24	39.6	43	73.7	25	36.8	23	41.0
	Non-Indigenous <sup>3</sup>	141	81.0	145	82.0	168	91.0	166	92.4	234	127.8
SA	Aboriginal and Torres Strait Islander	46	144.2	72	212.7	34	109.1	62	175.4	69	203.9
	Non-Indigenous <sup>3</sup>	517	33.2	462	29.4	440	27.8	425	26.4	407	25.2
TAS	Aboriginal and Torres Strait Islander	11	61.2	13	61.5	11	63.1	21	87.4	19	90.3
	Non-Indigenous <sup>3</sup>	270	59.9	254	55.4	218	48.0	241	53.9	210	46.8
WA	Aboriginal and Torres Strait Islander	140	162.2	130	153.3	152	167.2	187	205.8	201	211.1
	Non-Indigenous <sup>3</sup>	998	45.1	935	41.2	931	40.0	952	39.5	1 078	43.1
<b>Total</b>	<b>Aboriginal and Torres Strait Islander</b>	<b>224</b>	<b>109.6</b>	<b>239</b>	<b>115.5</b>	<b>240</b>	<b>116.1</b>	<b>295</b>	<b>132.7</b>	<b>312</b>	<b>141.9</b>
	<b>Non-Indigenous<sup>3</sup></b>	<b>1 926</b>	<b>43.6</b>	<b>1 796</b>	<b>40.0</b>	<b>1 757</b>	<b>38.5</b>	<b>1 784</b>	<b>38.3</b>	<b>1 929</b>	<b>40.6</b>

1 Age standardised rate per 100 000 population. Population estimates by State/Territory, year and Aboriginal and Torres Strait Islander status from 2011 Census of Population and Housing (Australian Bureau of Statistics).

2 State/Territory health jurisdictions in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses in each year.

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

Source: National Notifiable Diseases Surveillance System

**Table 2.2.7** Number (percent) of diagnoses of hepatitis C, 2013, by State/Territory<sup>1</sup> and Aboriginal and Torres Strait Islander status

State/ Territory	Aboriginal and Torres Strait Islander status		Non-Indigenous		Not reported		Total
	Aboriginal and Torres Strait Islander		Non-Indigenous		Not reported		
ACT	—	—	—	—	139	(75.5)	184
NSW	—	—	—	—	3 071	(86.6)	3 546
NT	23	(8.9)	218	(84.8)	16	(6.2)	257
QLD	—	—	—	—	1 324	(53.6)	2 469
SA	69	(14.5)	375	(78.8)	32	(6.7)	476
TAS	19	(8.3)	140	(61.1)	70	(30.6)	229
VIC	—	—	—	—	1 625	(71.4)	2 275
WA	201	(15.7)	1 032	(80.7)	46	(3.6)	1 279
<b>Total</b>	<b>796</b>	<b>(7.4)</b>	<b>3 596</b>	<b>(33.6)</b>	<b>6 323</b>	<b>(59.0)</b>	<b>10 715</b>

<sup>1</sup> Data not shown for State/Territory health jurisdictions in which Aboriginal and Torres Strait Islander status was not reported for more than 50% of diagnoses.

Source: National Notifiable Diseases Surveillance System

**Table 2.2.8** Number (percent) of diagnoses of hepatitis D, 2013, by State/Territory<sup>1</sup> and Aboriginal and Torres Strait Islander status

State/ Territory	Aboriginal and Torres Strait Islander status		Non-Indigenous		Not reported		Total
	Aboriginal and Torres Strait Islander		Non-Indigenous		Not reported		
ACT	0		0		0		0
NSW	—	—	—	—	3	(33.3)	9
NT	0	(0)	1	(100)	0	(0)	1
QLD	—	—	—	—	4	(30.8)	13
SA	0	(0)	4	(100)	0	(0)	4
TAS	0		0		0		0
VIC	0	(0)	20	(90.9)	2	(9.1)	22
WA	0	(0)	4	(100)	0	(0)	4
<b>Total</b>	<b>0</b>	<b>(0)</b>	<b>44</b>	<b>(83)</b>	<b>9</b>	<b>(17)</b>	<b>53</b>

<sup>1</sup> Data not shown for State/Territory health jurisdictions in which Aboriginal and Torres Strait Islander status was not reported for more than 50% of diagnoses.

Source: National Notifiable Diseases Surveillance System

### 2.3 Long term outcomes among people with chronic viral hepatitis

Table 2.3.1 Number (percent) of liver transplants, 1985 – 2013, by year and primary cause of liver disease, and hepatitis status for cases where the primary diagnosis was hepatocellular carcinoma

Diagnosis	Year													Total <sup>2</sup>
	1985 – 2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013			
<b>Hepatitis B</b>	115 (7.5)	8 (5.4)	8 (6.1)	3 (2.3)	3 (2.5)	3 (1.9)	7 (4.8)	6 (3.1)	9 (4.6)	2 (1.0)	8 (3.6)	172		
<b>Hepatitis C</b>	250 (16.3)	43 (29.3)	45 (34.1)	31 (23.8)	30 (25.2)	43 (27.7)	41 (28.1)	48 (25.0)	55 (28.4)	67 (33.2)	67 (30.2)	720		
<b>Hepatitis B/C/D</b>	15 (1.0)	0 (0.0)	2 (1.5)	2 (1.5)	2 (1.7)	5 (3.2)	1 (0.7)	3 (1.6)	3 (1.5)	1 (0.5)	5 (2.3)	39		
<b>Hepatocellular carcinoma</b>	50 (3.2)	11 (7.5)	10 (7.6)	10 (7.7)	19 (16.0)	21 (13.5)	24 (16.4)	26 (13.5)	24 (12.4)	23 (11.4)	30 (13.5)	248		
<i>Hepatitis B</i>	16 (1.0)	2 (1.4)	4 (3.0)	3 (2.3)	6 (5.0)	6 (3.9)	5 (3.4)	5 (2.6)	4 (2.1)	4 (2.0)	4 (1.8)	59		
<i>Hepatitis C</i>	22 (1.4)	6 (4.1)	3 (2.3)	5 (3.8)	11 (9.2)	9 (5.8)	8 (5.5)	13 (6.8)	14 (7.2)	12 (5.9)	18 (8.1)	121		
<i>Hepatitis B/C/D</i>	1 (0.1)	1 (0.7)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.6)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.5)	1 (0.5)	5		
<i>Hepatitis negative</i>	11 (0.7)	2 (1.4)	3 (2.3)	2 (1.5)	2 (1.7)	5 (3.2)	11 (7.5)	8 (4.2)	6 (3.1)	6 (3.0)	7 (3.2)	63		
Other <sup>1</sup>	1 107 (72.0)	85 (57.8)	67 (50.8)	84 (64.6)	65 (54.6)	83 (53.5)	73 (50.0)	109 (56.8)	103 (53.1)	109 (54.0)	112 (50.5)	1 997		
<b>Total<sup>2</sup></b>	<b>1 537 (100.0)</b>	<b>147 (100.0)</b>	<b>132 (100.0)</b>	<b>130 (100.0)</b>	<b>119 (100.0)</b>	<b>155 (100.0)</b>	<b>146 (100.0)</b>	<b>192 (100.0)</b>	<b>194 (100.0)</b>	<b>202 (100.0)</b>	<b>222 (100.0)</b>	<b>3 176</b>		

1 Includes other causes of chronic liver disease and fulminant hepatitis.

2 Data available to 31 December 2013.

Source: Australia and New Zealand Liver Transplant Registry

## 2.4 Global comparisons of hepatitis B virus prevalence

Table 2.4.1 Estimated hepatitis B virus prevalence in selected countries

Country	Hepatitis B prevalence rate (%)
Viet Nam	12.5
China (excluding Taiwan)	12.3
Taiwan	11.7
Afghanistan	10.5
Cambodia	10.3
Philippines	7.4
Fiji	5.8
Malaysia	5.6
Korea, Republic of (South)	5.3
India	3.2
Greece	3.1
Sri Lanka	2.4
Italy	2.4
Australia	1.0
United Kingdom	0.5
New Zealand	0.5

Source: VIDRL/ASHM Hepatitis B Epidemiology Mapping Project; Victorian Infectious Diseases Reference Laboratory & Australasian Society for HIV Medicine, 2013



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### 3 National surveillance for sexually transmissible infections

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### 3 National surveillance for sexually transmissible infections

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

Table 3.1.1 Number and rate<sup>1</sup> of diagnosis of chlamydia infection, 2009 – 2013, by State/Territory and year

State/ Territory	Year of diagnosis									
	2009		2010		2011		2012		2013	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	948	228.8	1 161	274.3	1 261	296.0	1 283	299.0	1 269	298.9
NSW	14 955	212.3	18 264	257.5	20 578	290.2	21 302	298.7	20 828	289.5
NT	2 445	927.0	2 662	995.2	2 629	992.0	2 722	1 014.8	3 008	1 104.2
QLD	16 693	375.9	19 213	426.0	18 646	410.2	18 819	408.0	19 497	417.4
SA	3 758	240.5	4 335	272.9	5 132	322.2	4 864	305.0	5 183	324.8
TAS	1 470	309.0	2 014	420.7	1 777	375.9	1 786	380.6	1 538	333.5
VIC	13 914	249.1	16 493	291.2	19 220	337.5	20 329	354.3	19 467	336.4
WA	8 830	376.8	10 178	425.9	11 675	477.2	11 798	465.3	11 747	448.6
<b>Total</b>	<b>63 013</b>	<b>284.9</b>	<b>74 320</b>	<b>331.9</b>	<b>80 918</b>	<b>359.4</b>	<b>82 903</b>	<b>364.3</b>	<b>82 537</b>	<b>358.7</b>

<sup>1</sup> Age standardised rate per 100 000 population. Population estimates by State/Territory and year from *Australian Demographic Statistics* (Australian Bureau of Statistics).

Source: National Notifiable Diseases Surveillance System

Table 3.1.2 Number of diagnoses of chlamydia, 2009 – 2013, by age group, year and sex

Age group (years)	Year of diagnosis														
	2009			2010			2011			2012			2013		
	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>
0 – 4	17	19	36	16	22	40	13	17	30	18	19	37	8	15	23
5 – 14	36	251	287	41	310	351	46	331	377	42	369	411	39	333	372
15 – 19	3 230	10 521	13 767	4 227	12 779	17 044	4 379	14 113	18 518	4 364	13 443	17 840	4 056	12 440	16 502
20 – 24	9 477	14 699	24 212	11 087	17 085	28 243	12 335	18 795	31 187	12 302	19 366	31 693	11 963	19 260	31 236
25 – 29	5 824	6 533	12 373	6 992	7 133	14 160	7 566	7 870	15 458	7 928	8 064	16 017	8 378	8 547	16 931
30 – 39	4 400	3 838	8 245	5 192	4 285	9 503	5 345	4 580	9 937	6 033	4 906	10 956	6 199	5 192	11 397
40 – 49	1 888	928	2 818	2 230	1 133	3 371	2 369	1 276	3 648	2 644	1 326	3 972	2 658	1 397	4 057
50 – 59	654	252	907	866	276	1 143	933	291	1 225	1 061	355	1 417	1 140	396	1 536
60 +	248	49	297	332	52	385	367	63	431	402	51	454	395	63	458
Not reported	25	19	71	25	41	80	42	62	107	33	67	106	8	16	25
<b>Total<sup>1</sup></b>	<b>25 799</b>	<b>37 109</b>	<b>63 013</b>	<b>31 008</b>	<b>43 116</b>	<b>74 320</b>	<b>33 395</b>	<b>47 398</b>	<b>80 918</b>	<b>34 827</b>	<b>47 966</b>	<b>82 903</b>	<b>34 844</b>	<b>47 659</b>	<b>82 537</b>

<sup>1</sup> Totals include diagnoses in people whose sex was not reported

Source: National Notifiable Diseases Surveillance System

Table 3.1.3 Number of diagnoses of donovanosis, 2009 – 2013, by State/Territory and year

State/ Territory	Year of diagnosis				
	2009	2010	2011	2012	2013
QLD	1	1	0	0	0
WA	0	0	0	1	0
<b>Total</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>

Source: National Notifiable Diseases Surveillance System

Table 3.1.4 Number of diagnoses of donovanosis, 2009 – 2013, by age group, year and sex

Age group (years)	Year of diagnosis														
	2009			2010			2011			2012			2013		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
0 – 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 – 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
20 – 24	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
25 – 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30 – 39	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
40 – 49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50 – 59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60+	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>

Source: National Notifiable Diseases Surveillance System

Table 3.1.5 Number and rate of diagnosis of gonorrhoea, 2009 – 2013, by State/Territory and year

State/ Territory	Year of diagnosis									
	2009		2010		2011		2012		2013	
	Number	Rate <sup>1</sup>	Number	Rate <sup>1</sup>	Number	Rate <sup>1</sup>	Number	Rate <sup>1</sup>	Number	Rate <sup>1</sup>
ACT	55	13.4	56	13.9	128	30.8	92	21.7	114	26.5
NSW	1 653	23.5	2 302	32.4	2 882	40.4	4 130	57.5	4 234	58.4
NT	1 551	589.1	1 933	723.9	1 952	738.1	1 822	681.9	1 957	722.8
QLD	1 787	40.3	2 385	53.0	2 952	64.9	2 691	58.3	2 732	58.7
SA	373	23.8	473	29.6	445	28.0	506	31.6	855	49.6
TAS	21	4.6	20	4.3	19	4.0	35	7.6	69	15.2
VIC	1 491	26.9	1 752	31.2	1 883	33.2	2 455	42.7	3 014	51.7
WA	1 348	57.4	1 403	58.7	1 839	74.7	2 111	83.7	1 972	75.7
<b>Total</b>	<b>8 279</b>	<b>37.5</b>	<b>10 324</b>	<b>46.2</b>	<b>12 100</b>	<b>53.7</b>	<b>13 842</b>	<b>60.8</b>	<b>14 947</b>	<b>64.6</b>

<sup>1</sup> Age standardised rate per 100 000 population. Population estimates by State/Territory and year from *Australian Demographic Statistics* (Australian Bureau of Statistics).

Source: National Notifiable Diseases Surveillance System

Table 3.1.6 Number of diagnoses of gonorrhoea, 2009 – 2013, by age group, year and sex

Age group (years)	Year of diagnosis														
	2009			2010			2011			2012			2013		
	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>
0 – 4	6	5	11	2	4	6	4	7	11	4	5	9	3	3	6
5 – 14	27	108	136	35	149	185	43	188	231	45	207	252	41	184	225
15 – 19	793	834	1 633	935	1 059	1 995	1 030	1 285	2 315	1 081	1 272	2 353	1 090	1 145	2 239
20 – 24	1 286	806	2 095	1 623	930	2 560	1 816	1 024	2 844	2 135	1 135	3 271	2 259	1 159	3 423
25 – 29	1 053	410	1 464	1 379	479	1 862	1 569	637	2 208	1 956	627	2 584	2 195	766	2 966
30 – 39	1 252	390	1 645	1 577	442	2 021	1 823	542	2 369	2 297	611	2 912	2 595	701	3 302
40 – 49	640	119	759	937	147	1 086	1 140	186	1 326	1 371	260	1 631	1 508	316	1 825
50 – 59	286	44	330	362	49	411	492	69	563	496	103	599	555	98	655
60 +	169	20	189	156	21	177	173	24	199	184	26	210	201	31	234
Not reported	1	1	17	4	3	21	5	5	34	7	9	21	7	2	72
<b>Total</b>	<b>5 513</b>	<b>2 737</b>	<b>8 279</b>	<b>7 010</b>	<b>3 283</b>	<b>10 324</b>	<b>8 095</b>	<b>3 967</b>	<b>12 100</b>	<b>9 576</b>	<b>4 255</b>	<b>13 842</b>	<b>10 454</b>	<b>4 405</b>	<b>14 947</b>

<sup>1</sup> Totals include diagnoses in people whose sex was not reported

Source: National Notifiable Diseases Surveillance System

Table 3.1.7 Number and rate<sup>1</sup> of diagnosis of infectious syphilis, 2009 – 2013, by State/Territory and year

State/ Territory	Year of diagnosis									
	2009		2010		2011		2012		2013	
	Number	Rate <sup>1</sup>	Number	Rate <sup>1</sup>	Number	Rate <sup>1</sup>	Number	Rate <sup>1</sup>	Number	Rate <sup>1</sup>
ACT	11	3.0	14	3.8	9	2.5	15	3.9	10	2.5
NSW	531	7.5	423	5.9	424	5.9	525	7.3	598	8.2
NT	38	15.2	43	16.7	30	11.5	14	5.2	22	9.1
QLD	192	4.4	228	5.1	341	7.6	388	8.5	325	7.0
SA	56	3.5	26	1.6	56	2.9	60	2.9	56	2.8
TAS	10	2.1	6	1.2	6	1.3	14	3.0	19	4.1
VIC	387	7.0	298	5.3	331	5.8	477	8.3	652	11.2
WA	89	3.9	80	3.4	125	5.2	76	3.1	83	3.2
<b>Total</b>	<b>1 314</b>	<b>6.0</b>	<b>1 118</b>	<b>5.0</b>	<b>1 322</b>	<b>5.8</b>	<b>1 569</b>	<b>6.9</b>	<b>1 765</b>	<b>7.6</b>

<sup>1</sup> Age standardised rate per 100 000 population. Population estimates by State/Territory and year from *Australian Demographic Statistics* (Australian Bureau of Statistics).

Source: National Notifiable Diseases Surveillance System

Table 3.1.8 Number of diagnoses of infectious syphilis, 2009 – 2013, by age group, year and sex

Age group (years)	Year of diagnosis														
	2009			2010			2011			2012			2013		
	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>
0 – 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 – 14	0	1	1	0	0	0	4	5	9	1	4	5	0	8	8
15 – 19	26	12	38	23	12	35	37	45	82	33	27	60	31	27	58
20 – 24	110	22	132	106	27	133	117	37	154	141	39	181	155	29	184
25 – 29	159	24	183	147	15	162	162	27	189	194	23	218	217	16	233
30 – 39	338	34	372	279	35	316	296	28	324	370	31	402	454	30	485
40 – 49	377	11	388	269	19	288	340	17	357	367	17	384	431	23	454
50 – 59	131	9	140	117	8	125	127	7	134	215	6	221	218	12	230
60 +	52	4	56	52	2	54	57	4	61	81	5	86	100	2	102
Not reported	0	0	4	0	0	5	0	0	12	1	11	12	0	0	11
<b>Total</b>	<b>1 193</b>	<b>83</b>	<b>1 314</b>	<b>724</b>	<b>118</b>	<b>1 118</b>	<b>1 140</b>	<b>170</b>	<b>1 322</b>	<b>1 403</b>	<b>163</b>	<b>1 569</b>	<b>1 606</b>	<b>147</b>	<b>1 765</b>

<sup>1</sup> Totals include diagnoses in people whose sex was not reported

Source: National Notifiable Diseases Surveillance System

Table 3.1.9 Number of diagnoses of infectious syphilis, 2009 – 2013, by sexual exposure, sex worker status, facility of diagnosis, year and sex

Characteristic	Year of diagnosis														
	2009			2010			2011			2012			2013		
	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>
<b>Sexual exposure</b>															
Heterosexual contact	94	54	148	94	73	167	137	106	243	127	100	228	162	100	263
Men who have sex with men	523	-	523	436	-	436	550	-	550	717	-	717	962	-	962
Other/undetermined <sup>2</sup>	36	9	49	46	12	64	56	22	90	72	31	115	65	21	97
Not reported <sup>2</sup>	540	54	594	417	33	451	397	42	439	487	21	509	416	26	442
<b>Sex work in the past 12 months</b>															
Current sex work	0	1	1	3	5	8	0	3	3	1	5	6	9	2	11
No sex work	67	16	83	57	12	69	104	24	128	113	12	126	307	25	333
Undetermined <sup>2</sup>	526	42	572	484	67	557	455	83	550	477	92	581	355	66	431
Not reported <sup>2</sup>	600	58	658	449	34	484	581	60	641	812	43	856	934	54	989
<b>Place of diagnosis</b>															
Public hospital	25	9	34	54	22	76	59	36	95	56	32	89	70	36	107
Sexual health clinic	69	5	74	175	18	193	203	25	228	203	23	226	305	12	317
Family planning clinic	0	0	0	1	0	1	1	0	1	3	1	4	1	0	1
General practice	46	5	51	171	6	177	182	7	189	98	8	107	171	21	193
Other	42	16	58	68	11	79	64	15	80	79	9	90	156	8	165
Undetermined <sup>2</sup>	438	24	466	341	34	381	426	50	487	474	53	535	136	18	162
Not reported <sup>2</sup>	573	58	631	183	27	211	205	37	242	490	26	518	766	52	819
<b>Total</b>	<b>1 193</b>	<b>117</b>	<b>1 314</b>	<b>993</b>	<b>118</b>	<b>1 118</b>	<b>1 140</b>	<b>170</b>	<b>1 322</b>	<b>1 403</b>	<b>152</b>	<b>1 569</b>	<b>1 605</b>	<b>147</b>	<b>1 764</b>

1 Totals include diagnoses in people whose sex was not reported.

2 A characteristic was reported as "undetermined" when the information was sought in a state/territory health jurisdiction but not reported, and as "not reported" when the information was not sought.

Source: National Notifiable Diseases Surveillance System

## 3.2 National surveillance for sexually transmissible infections in Aboriginal and Torres Strait Islander people

Table 3.2.1 Number and rate<sup>1</sup> of diagnosis of chlamydia, 2009 – 2013, by State/Territory<sup>2</sup>, Aboriginal and Torres Strait Islander status and year

State/ Territory	Aboriginal and Torres Strait Islander status	Year of diagnosis									
		2009		2010		2011		2012		2013	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
NT	Aboriginal and Torres Strait Islander	1 356	1 565.8	1 475	1 709.9	1 555	1 764.1	1 554	1 767.6	1 696	1 955.9
		1 090	625.3	1 187	665.7	1 074	614.7	1 168	658.9	1 312	723.4
QLD	Aboriginal and Torres Strait Islander	2 316	1 001.5	3 065	1 264.1	3 203	1 281.6	3 066	1 207.1	2 940	1 131.0
		14 377	341.2	16 148	378.0	15 443	359.1	15 753	361.9	16 557	375.5
SA	Aboriginal and Torres Strait Islander	190	425.6	286	632.4	302	638.0	332	644.4	345	682.6
		3 568	235.1	4 049	262.5	4 830	312.8	4 532	293.7	4 838	313.3
TAS	Aboriginal and Torres Strait Islander	30	86.4	34	108.5	45	128.8	39	121.2	49	139.4
		1 440	323.9	1 980	442.7	1 732	393.4	1 747	401.4	1 489	348.0
WA	Aboriginal and Torres Strait Islander	1 234	1 083.9	1 573	1 360.8	1 643	1 369.8	1 621	1 337.6		1 270.1
		7 596	339.9	8 605	377.5	10 032	429.8	10 177	420.3	10 148	405.2
<b>Total</b>	<b>Aboriginal and Torres Strait Islander</b>	<b>5 126</b>	<b>1 018.0</b>	<b>6 433</b>	<b>1 241.6</b>	<b>6 748</b>	<b>1 262.3</b>	<b>6 612</b>	<b>1 220.0</b>	<b>6 629</b>	<b>1 206.8</b>
		<b>28 071</b>	<b>327.0</b>	<b>31 969</b>	<b>366.8</b>	<b>33 111</b>	<b>376.5</b>	<b>33 377</b>	<b>374.0</b>	<b>34 344</b>	<b>379.0</b>

1 Age standardised rate per 100 000 population. Population estimates by State/Territory, year and Aboriginal and Torres Strait Islander status from *2011 Census of Population and Housing* (Australian Bureau of Statistics).

2 State/Territory health jurisdictions in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses in each year.

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

Source: National Notifiable Diseases Surveillance System

Table 3.2.2 Number of diagnoses of chlamydia<sup>1</sup>, 2009 – 2013, by age group, Aboriginal and Torres Strait Islander status and year

Age group (years)	Aboriginal and Torres Strait Islander status	Year of diagnosis				
		2009	2010	2011	2012	2013
0 – 4	Aboriginal and Torres Strait Islander	2	3	2	1	5
	Non-Indigenous <sup>2</sup>	0	3	2	2	1
5 – 14	Aboriginal and Torres Strait Islander	132	167	171	195	195
	Non-Indigenous <sup>2</sup>	87	96	74	104	78
15 – 19	Aboriginal and Torres Strait Islander	2 004	2 575	2 665	2 518	2 412
	Non-Indigenous <sup>2</sup>	6 305	7 553	7 845	7 350	6 975
20 – 24	Aboriginal and Torres Strait Islander	1 588	1 949	2 083	2 063	2 046
	Non-Indigenous <sup>2</sup>	11 318	12 689	13 274	13 333	13 532
25 – 29	Aboriginal and Torres Strait Islander	710	873	987	892	939
	Non-Indigenous <sup>2</sup>	5 558	6 066	6 404	6 550	7 064
30 – 39	Aboriginal and Torres Strait Islander	525	663	619	686	755
	Non-Indigenous <sup>2</sup>	3 321	3 798	3 704	4 058	4 541
40 – 49	Aboriginal and Torres Strait Islander	127	155	179	193	214
	Non-Indigenous <sup>2</sup>	1 015	1 191	1 211	1 319	1 431
50 – 59	Aboriginal and Torres Strait Islander	29	33	37	54	58
	Non-Indigenous <sup>2</sup>	325	407	430	479	546
60 +	Aboriginal and Torres Strait Islander	9	15	5	10	5
	Non-Indigenous <sup>2</sup>	114	147	155	170	176
<b>Total<sup>3</sup></b>	<b>Aboriginal and Torres Strait Islander</b>	<b>5 126</b>	<b>6 433</b>	<b>6 748</b>	<b>6 612</b>	<b>6 629</b>
	<b>Non-Indigenous<sup>2</sup></b>	<b>28 071</b>	<b>31 969</b>	<b>33 111</b>	<b>33 377</b>	<b>34 344</b>

1 Includes State/Territory health jurisdictions in which Aboriginal and Torres Strait Islander status was reported for more than 50% of chlamydia diagnoses in each year.

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

3 Includes diagnoses in people whose age was not reported.

Source: National Notifiable Diseases Surveillance System

Table 3.2.3 Number of diagnoses of chlamydia<sup>1</sup>, 2013, by Aboriginal and Torres Strait Islander status<sup>2</sup>, sex and age group

Aboriginal and Torres Strait Islander status	Sex	Age group (years)									
		0 – 4	5 – 14	15 – 19	20 – 24	25 – 29	30 – 39	40 – 49	50 – 59	60 +	Total
Aboriginal and Torres Strait Islander	Male	1	23	733	742	361	333	101	31	4	2 329
	Female	4	172	1 679	1 304	578	422	113	27	1	4 300
	<b>Total<sup>3</sup></b>	<b>5</b>	<b>195</b>	<b>2 412</b>	<b>2 046</b>	<b>939</b>	<b>755</b>	<b>214</b>	<b>58</b>	<b>5</b>	<b>6 629</b>
non-Indigenous <sup>2</sup>	Male	1	8	1 648	5 161	3 513	2 390	874	399	154	14 148
	Female	0	70	5 327	8 371	3 551	2 151	557	147	22	20 196
	<b>Total<sup>3</sup></b>	<b>1</b>	<b>78</b>	<b>6 975</b>	<b>13 532</b>	<b>7 064</b>	<b>4 541</b>	<b>1 431</b>	<b>546</b>	<b>176</b>	<b>34 344</b>
<b>Total</b>	Male	2	31	2 381	5 903	3 874	2 723	975	430	158	16 477
	Female	4	242	7 006	9 675	4 129	2 573	670	174	23	24 496
	<b>Total<sup>3</sup></b>	<b>6</b>	<b>273</b>	<b>9 387</b>	<b>15 578</b>	<b>8 003</b>	<b>5 296</b>	<b>1 645</b>	<b>604</b>	<b>181</b>	<b>40 973</b>

1 In State/Territory health jurisdictions in which Aboriginal and Torres Strait Islander status was reported for more than 50% of chlamydia diagnoses in each year.

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

3 Includes diagnoses in people whose sex was not reported.

Source: National Notifiable Diseases Surveillance System

**Table 3.2.4** Number (percent) of diagnoses of chlamydia, 2013, by State/Territory<sup>1</sup> and Aboriginal and Torres Strait Islander status

State/ Territory	Aboriginal and Torres Strait Islander status			Total
	Aboriginal and Torres Strait Islander	non-Indigenous	not reported	
ACT	–		1 202	1 269
NSW	–		20 253	20 828
NT	1 696	1 089	223	3 008
QLD	2 940	8 357	8 200	19 497
SA	345	4 542	296	5 183
TAS	49	933	556	1 538
VIC			19 152	19 467
WA	1 599	9 130	1 018	11 747
<b>Total</b>	<b>6 801</b>	<b>24 836</b>	<b>50 900</b>	<b>82 537</b>

<sup>1</sup> Data not shown for State/Territory health jurisdictions in which Aboriginal and Torres Strait Islander status was not reported for more than 50% of chlamydia diagnoses.

Source: National Notifiable Diseases Surveillance System

**Table 3.2.5** Rate of diagnosis of chlamydia<sup>1</sup>, 2009 – 2013, by area of residence, Aboriginal and Torres Strait Islander status and year

Area of residence	Aboriginal and Torres Strait Islander status	Year of diagnosis				
		2009	2010	2011	2012	2013
Major cities	Aboriginal and Torres Strait Islander	592	762	823	874	840
	Non-Indigenous <sup>2</sup>	328	361	369	361	367
Inner regional	Aboriginal and Torres Strait Islander	396	467	582	633	531
	Non-Indigenous <sup>2</sup>	299	356	339	336	332
Outer regional	Aboriginal and Torres Strait Islander	1 593	2 007	2 223	2 142	2 015
	Non-Indigenous <sup>2</sup>	363	397	406	405	403
Remote	Aboriginal and Torres Strait Islander	1 641	2 274	2 282	2 273	2 311
	Non-Indigenous <sup>2</sup>	379	438	411	465	408
Very remote	Aboriginal and Torres Strait Islander	2 191	2 465	2 276	2 096	2 226
	Non-Indigenous <sup>2</sup>	413	450	511	549	533
<b>Total</b>	<b>Aboriginal and Torres Strait Islander</b>	<b>1 308</b>	<b>1 608</b>	<b>1 656</b>	<b>1 591</b>	<b>1 565</b>
	<b>Non-Indigenous<sup>2</sup></b>	<b>333</b>	<b>371</b>	<b>376</b>	<b>371</b>	<b>373</b>

<sup>1</sup> Rate per 100 000 population. Population estimates from *2011 Census of Population and Housing* (Australian Bureau of Statistics).

<sup>2</sup> Includes diagnoses in people whose Aboriginal and Torres Strait Islander status was not reported.

Source: National Notifiable Diseases Surveillance System

**Table 3.2.6** Number and rate of diagnosis of gonorrhoea<sup>1</sup>, 2009 – 2013, by State/Territory, Aboriginal and Torres Strait Islander status<sup>2</sup> and year

State/ Territory	Aboriginal and Torres Strait Islander status	Year of diagnosis									
		2009		2010		2011		2012		2013	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	Aboriginal and Torres Strait Islander	3	45.3	0	0.0	3	39.4	1	8.8	1	8.3
	Non-Indigenous <sup>3</sup>	52	12.9	56	14.1	125	30.7	91	21.9	113	26.9
NT	Aboriginal and Torres Strait Islander	1 412	1 651.4	1 770	2 052.3	1 798	2 050.3	1 603	1 857.2	1 731	2 033.0
	Non-Indigenous <sup>3</sup>	139	80.7	163	93.0	154	91.9	219	123.9	226	124.6
QLD	Aboriginal and Torres Strait Islander	669	293.8	976	404.0	1 328	538.0	1 110	440.7	901	367.2
	Non-Indigenous <sup>3</sup>	1 118	26.6	1 409	33.1	1 624	37.7	1 581	36.1	1 831	41.5
SA	Aboriginal and Torres Strait Islander	164	395.6	234	552.0	214	479.9	201	437.8	299	634.5
	Non-Indigenous <sup>3</sup>	209	13.5	239	15.0	231	14.8	305	19.5	556	31.6
TAS	Aboriginal and Torres Strait Islander	0	0.0	1	3.3	0	0.0	0	0.0	1	2.3
	Non-Indigenous <sup>3</sup>	21	4.8	19	4.3	19	4.2	35	8.1	68	16.0
VIC	Aboriginal and Torres Strait Islander	11	21.9	13	26.3	12	22.9	25	50.0	21	36.2
	Non-Indigenous <sup>3</sup>	1 480	26.9	1 739	31.2	1 871	33.2	2 430	42.7	2 993	51.8
WA	Aboriginal and Torres Strait Islander	914	860.4	839	769.4	1 153	1 023.1	1 143	968.3	1 098	927.8
	Non-Indigenous <sup>3</sup>	434	19.2	564	24.5	686	28.5	968	39.9	874	34.7
<b>Total</b>	<b>Aboriginal and Torres Strait Islander</b>	<b>3 173</b>	<b>588.7</b>	<b>3 833</b>	<b>687.2</b>	<b>4 508</b>	<b>778.2</b>	<b>4 083</b>	<b>690.3</b>	<b>4 052</b>	<b>694.1</b>
	<b>Non-Indigenous<sup>3</sup></b>	<b>3 453</b>	<b>23.9</b>	<b>4 189</b>	<b>29.9</b>	<b>4 710</b>	<b>34.6</b>	<b>5 629</b>	<b>52.1</b>	<b>6 661</b>	<b>47.9</b>

1 Age standardised rate per 100 000 population. Population estimates by State/Territory, Aboriginal and Torres Strait Islander status and year from *Estimates and Projections, Aboriginal and Torres Strait Islander Australians, 2001 – 2026* (Australian Bureau of Statistics).

2 In State/Territory health jurisdictions in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses in each year.

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

Source: National Notifiable Diseases Surveillance System

**Table 3.2.7** Number of diagnoses of gonorrhoea<sup>1</sup>, 2009 – 2013, by age group, Aboriginal and Torres Strait Islander status and year

Age group (years)	Aboriginal and Torres Strait Islander status	Year of diagnosis				
		2009	2010	2011	2012	2013
0 – 4	Aboriginal and Torres Strait Islander	4	1	7	4	3
	Non-Indigenous <sup>2</sup>	5	3	3	4	0
5 – 14	Aboriginal and Torres Strait Islander	119	154	206	213	201
	Non-Indigenous <sup>2</sup>	15	26	22	29	19
15 – 19	Aboriginal and Torres Strait Islander	1 064	1 320	1 624	1 440	1 288
	Non-Indigenous <sup>2</sup>	451	513	462	614	652
20 – 24	Aboriginal and Torres Strait Islander	893	1 034	1 132	1 065	997
	Non-Indigenous <sup>2</sup>	862	1 021	1 121	1 404	1 572
25 – 29	Aboriginal and Torres Strait Islander	490	599	748	609	645
	Non-Indigenous <sup>2</sup>	657	791	909	1 167	1 379
30 – 39	Aboriginal and Torres Strait Islander	469	558	608	547	646
	Non-Indigenous <sup>2</sup>	770	881	1 025	1 238	1 507
40 – 49	Aboriginal and Torres Strait Islander	109	140	152	159	225
	Non-Indigenous <sup>2</sup>	395	579	694	728	949
50 – 59	Aboriginal and Torres Strait Islander	17	23	30	42	30
	Non-Indigenous <sup>2</sup>	210	246	322	302	380
60 +	Aboriginal and Torres Strait Islander	8	4	1	4	17
	Non-Indigenous <sup>2</sup>	70	107	117	120	132
<b>Total<sup>3</sup></b>	<b>Aboriginal and Torres Strait Islander</b>	<b>3 173</b>	<b>3 833</b>	<b>4 508</b>	<b>3 966</b>	<b>4 052</b>
	<b>Non-Indigenous<sup>2</sup></b>	<b>3 453</b>	<b>4 189</b>	<b>4 710</b>	<b>5 629</b>	<b>6 661</b>

1 Includes State/Territory health jurisdictions in which Aboriginal and Torres Strait Islander status was reported for more than 50% of chlamydia diagnoses in each year.

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

3 Includes diagnoses in people whose age was not reported.

Source: National Notifiable Diseases Surveillance System

**Table 3.2.8** Number of diagnoses of gonorrhoea<sup>1</sup>, 2013, by Aboriginal and Torres Strait Islander status<sup>2</sup>, sex and age group

		Age group (years)										
Aboriginal and Torres Strait Islander status	Sex	0 – 4	5 – 14	15 – 19	20 – 24	25 – 29	30 – 39	40 – 49	50 – 59	60 +	Total <sup>4</sup>	
Aboriginal and Torres Strait Islander	Male	0	19	488	510	331	340	118	20	15	1 841	
	Female	3	113	742	537	342	339	121	10	4	2 211	
	<b>Total<sup>3</sup></b>	<b>3</b>	<b>132</b>	<b>1 230</b>	<b>1 047</b>	<b>673</b>	<b>679</b>	<b>239</b>	<b>30</b>	<b>19</b>	<b>4 052</b>	
Non-Indigenous <sup>2</sup>	Male	0	2	310	1 095	1 117	1 314	848	338	120	5 150	
	Female	0	8	223	449	289	253	132	61	16	1 433	
	<b>Total<sup>3</sup></b>	<b>0</b>	<b>10</b>	<b>534</b>	<b>1 548</b>	<b>1 409</b>	<b>1 571</b>	<b>981</b>	<b>399</b>	<b>138</b>	<b>6 661</b>	
<b>Total</b>	Male	0	21	798	1 605	1 448	1 654	966	358	135	6 991	
	Female	3	121	965	986	631	592	253	71	20	3 644	
	<b>Total<sup>3</sup></b>	<b>3</b>	<b>142</b>	<b>1 764</b>	<b>2 595</b>	<b>2 082</b>	<b>2 250</b>	<b>1 220</b>	<b>429</b>	<b>157</b>	<b>10 713</b>	

1 In State/Territory health jurisdictions in which Aboriginal and Torres Strait Islander status was reported for more than 50% of chlamydia diagnoses in each year.

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

3 Includes diagnoses in people whose sex was not reported.

4 Includes diagnoses in people whose age was not reported.

Source: National Notifiable Diseases Surveillance System

**Table 3.2.9** Number (percent) of diagnoses of gonorrhoea, 2013, by State/Territory<sup>1</sup> and Aboriginal and Torres Strait Islander status

State/ Territory	Aboriginal and Torres Strait Islander status				Total
	Aboriginal and Torres Strait Islander	Non-Indigenous	Not reported		
ACT	1	113	0		114
NSW	131	2 240	1 863		4 234
NT	1 731	188	38		1 957
QLD	901	794	1 037		2 732
SA	299	478	78		855
TAS	1	65	3		69
VIC	21	1 817	1 176		3 014
WA	1 098	872	2		1 972
<b>Total</b>	<b>4 183</b>	<b>6 567</b>	<b>4 197</b>		<b>14 947</b>

<sup>1</sup> Data not shown for State/Territory health jurisdictions in which Aboriginal and Torres Strait Islander status was not reported for more than 50% of chlamydia diagnoses.

Source: National Notifiable Diseases Surveillance System

**Table 3.2.10** Rate of diagnosis of gonorrhoea<sup>1</sup>, 2009 – 2013, by area of residence, Aboriginal and Torres Strait Islander status and year

Area of residence	Aboriginal and Torres Strait Islander status	Year of diagnosis				
		2009	2010	2011	2012	2013
Major cities	Aboriginal and Torres Strait Islander	86	91	138	173	198
	Non-Indigenous <sup>2</sup>	26	31	34	40	45
Inner regional	Aboriginal and Torres Strait Islander	39	53	85	123	61
	Non-Indigenous <sup>2</sup>	11	12	14	16	19
Outer regional	Aboriginal and Torres Strait Islander	626	865	1 114	943	840
	Non-Indigenous <sup>2</sup>	24	28	32	31	31
Remote	Aboriginal and Torres Strait Islander	1 141	1 510	1 684	1 522	1 558
	Non-Indigenous <sup>2</sup>	24	24	27	36	29
Very remote	Aboriginal and Torres Strait Islander	1 997	2 168	2 384	2 098	2 128
	Non-Indigenous <sup>2</sup>	54	91	88	114	80
<b>Total</b>	<b>Aboriginal and Torres Strait Islander</b>	<b>716</b>	<b>848</b>	<b>978</b>	<b>869</b>	<b>845</b>
	<b>Non-Indigenous<sup>2</sup></b>	<b>25</b>	<b>29</b>	<b>32</b>	<b>38</b>	<b>43</b>

<sup>1</sup> Rate per 100 000 population. Population estimates from 2011 Census of Population and Housing (Australian Bureau of Statistics).

<sup>2</sup> Includes diagnoses in people whose Aboriginal and Torres Strait Islander status was not reported.

Source: National Notifiable Diseases Surveillance System

**Table 3.2.II** Number and rate<sup>1</sup> of diagnosis of infectious syphilis, 2009 – 2013, by year, State/Territory<sup>2</sup> and Aboriginal and Torres Strait Islander status

State/ Territory	Aboriginal and Torres Strait Islander status	Year of diagnosis									
		2009		2010		2011		2012		2013	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	Aboriginal and Torres Strait Islander	1	9.2	0	0.0	0	0.0	1	17.2	0	0.0
	Non-Indigenous <sup>3</sup>	10	2.7	14	3.8	9	2.5	14	3.7	10	2.5
NSW	Aboriginal and Torres Strait Islander	12	6.7	10	5.8	6	3.8	8	8.8	15	9.0
	Non-Indigenous <sup>3</sup>	519	7.5	413	5.9	418	6.0	517	14.5	583	8.2
NT	Aboriginal and Torres Strait Islander	37	61.8	40	62.8	28	34.0	13	16.7	12	12.8
	Non-Indigenous <sup>3</sup>	1	0.6	3	1.5	2	1.3	1	0.7	10	6.1
QLD	Aboriginal and Torres Strait Islander	30	16.1	69	32.5	121	49.7	120	50.6	93	36.4
	Non-Indigenous <sup>3</sup>	162	3.9	159	3.7	220	5.1	268	6.1	231	5.2
SA	Aboriginal and Torres Strait Islander	8	28.9	4	11.1	14	57.5	12	36.6	7	19.5
	Non-Indigenous <sup>3</sup>	48	3.1	22	1.4	42	2.1	48	2.3	49	2.4
TAS	Aboriginal and Torres Strait Islander	0	0.0	0	0.0	1	5.1	0	0.0	1	5.1
	Non-Indigenous <sup>3</sup>	10	2.2	6	1.2	5	1.2	14	3.1	18	4.1
VIC	Aboriginal and Torres Strait Islander	1	2.5	1	2.8	5	12.9	6	13.0	6	14.1
	Non-Indigenous <sup>3</sup>	386	7.0	297	5.3	326	5.8	471	8.3	646	11.2
WA	Aboriginal and Torres Strait Islander	33	32.0	19	20.5	29	31.9	13	17.3	8	8.5
	Non-Indigenous <sup>3</sup>	56	2.5	61	2.7	96	4.1	63	2.6	75	3.0
<b>Total</b>	<b>Aboriginal and Torres Strait Islander</b>	<b>122</b>	<b>19.7</b>	<b>143</b>	<b>21.4</b>	<b>204</b>	<b>27.4</b>	<b>173</b>	<b>26.9</b>	<b>142</b>	<b>17.7</b>
	<b>Non-Indigenous<sup>3</sup></b>	<b>1 192</b>	<b>5.6</b>	<b>975</b>	<b>4.5</b>	<b>1 118</b>	<b>5.1</b>	<b>1 396</b>	<b>7.4</b>	<b>1 622</b>	<b>7.2</b>

1 Age standardised rate per 100 000 population. Population estimates by State/Territory, Aboriginal and Torres Strait Islander status and year from *Estimates and Projections, Aboriginal and Torres Strait Islander Australians, 2001 – 2026* (Australian Bureau of Statistics).

2 State/Territory health jurisdictions in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses in each year.

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

Source: National Notifiable Diseases Surveillance System

**Table 3.2.12** Number of diagnoses of infectious syphilis<sup>1</sup>, 2009 – 2013, by age group, Aboriginal and Torres Strait Islander status and year

Aboriginal and Torres Strait Islander status		Year of diagnosis				
		2009	2010	2011	2012	2013
Age group (years)						
0 – 4	Aboriginal and Torres Strait Islander	0	0	0	0	0
	Non-Indigenous <sup>2</sup>	0	0	0	0	0
5 – 14	Aboriginal and Torres Strait Islander	1	0	6	4	8
	Non-Indigenous <sup>2</sup>	0	0	3	1	0
15 – 19	Aboriginal and Torres Strait Islander	18	21	68	39	36
	Non-Indigenous <sup>2</sup>	20	14	14	21	22
20 – 24	Aboriginal and Torres Strait Islander	19	35	36	50	39
	Non-Indigenous <sup>2</sup>	113	98	118	131	144
25 – 29	Aboriginal and Torres Strait Islander	21	21	29	22	12
	Non-Indigenous <sup>2</sup>	162	141	160	196	221
30 – 39	Aboriginal and Torres Strait Islander	40	39	34	34	21
	Non-Indigenous <sup>2</sup>	332	277	290	368	464
40 – 49	Aboriginal and Torres Strait Islander	14	18	20	15	23
	Non-Indigenous <sup>2</sup>	374	270	337	369	431
50 – 59	Aboriginal and Torres Strait Islander	8	9	9	8	2
	Non-Indigenous <sup>2</sup>	132	116	125	213	228
60 +	Aboriginal and Torres Strait Islander	1	0	2	1	1
	Non-Indigenous <sup>2</sup>	55	54	59	85	101
<b>Total<sup>3</sup></b>	<b>Aboriginal and Torres Strait Islander</b>	<b>122</b>	<b>143</b>	<b>204</b>	<b>173</b>	<b>142</b>
	<b>Non-Indigenous<sup>2</sup></b>	<b>1 192</b>	<b>975</b>	<b>1 118</b>	<b>1 396</b>	<b>1 622</b>

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

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

3 Includes diagnoses in people whose age was not reported.

Source: National Notifiable Diseases Surveillance System

**Table 3.2.13** Number of diagnoses of infectious syphilis<sup>1</sup>, 2013, by Aboriginal and Torres Strait Islander status, sex and age group

Aboriginal and Torres Strait Islander status		Sex	Age group (years)								Total
			0 – 4	5 – 14	15 – 19	20 – 24	25 – 29	30 – 39	40 – 49	50 – 59	
Aboriginal and Torres Strait Islander	Male	0	0	12	19	9	14	18	1	1	74
	Female	0	8	24	20	3	7	5	1	0	68
	<b>Total<sup>3</sup></b>	<b>0</b>	<b>8</b>	<b>36</b>	<b>39</b>	<b>12</b>	<b>21</b>	<b>23</b>	<b>2</b>	<b>1</b>	<b>142</b>
Non-Indigenous <sup>2</sup>	Male	0	0	19	135	208	440	413	217	99	1 531
	Female	0	0	3	9	13	23	18	11	2	79
	<b>Total<sup>3</sup></b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>144</b>	<b>221</b>	<b>464</b>	<b>431</b>	<b>228</b>	<b>101</b>	<b>1 622</b>
<b>Total</b>	Male	0	0	31	154	217	454	431	218	100	1 605
	Female	0	8	27	29	16	30	23	12	2	147
	<b>Total<sup>3</sup></b>	<b>0</b>	<b>8</b>	<b>58</b>	<b>183</b>	<b>233</b>	<b>485</b>	<b>454</b>	<b>230</b>	<b>102</b>	<b>1 764</b>

1 Includes State/Territory health jurisdictions in which Aboriginal and Torres Strait Islander status was reported for more than 50% of diagnoses in each year in 2009 – 2013.

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

3 Includes diagnoses in people whose age was not reported.

Source: National Notifiable Diseases Surveillance System

**Table 3.2.14** Number (percent) of diagnoses of infectious syphilis, 2013, by State/Territory and Aboriginal and Torres Strait Islander status

State/Territory	Aboriginal and Torres Strait Islander status			Total
	Aboriginal and Torres Strait Islander	Non-Indigenous	Not reported	
ACT	0	10	0	10
NSW	15	538	45	598
NT	12	10	0	22
QLD	93	214	17	324
SA	7	38	11	56
TAS	1	18	0	19
VIC	6	554	92	652
WA	8	75	0	83
<b>Total</b>	<b>142</b>	<b>1 457</b>	<b>165</b>	<b>1 764</b>

Source: National Notifiable Diseases Surveillance System

**Table 3.2.15** Rate of diagnosis of infectious syphilis<sup>1</sup>, 2009 – 2013, by area of residence, Aboriginal and Torres Strait Islander status and year

Area of residence	Aboriginal and Torres Strait Islander status	Year of diagnosis				
		2009	2010	2011	2012	2013
Major cities	Aboriginal and Torres Strait Islander	7	4	12	12	7
	Non-Indigenous <sup>2</sup>	7	5	6	7	8
Inner regional	Aboriginal and Torres Strait Islander	4	2	6	5	7
	Non-Indigenous <sup>2</sup>	2	1	2	3	3
Outer regional	Aboriginal and Torres Strait Islander	22	28	25	32	24
	Non-Indigenous <sup>2</sup>	2	3	2	2	2
Remote	Aboriginal and Torres Strait Islander	28	43	14	15	31
	Non-Indigenous <sup>2</sup>	0	1	1	1	2
Very remote	Aboriginal and Torres Strait Islander	61	71	122	81	62
	Non-Indigenous <sup>2</sup>	6	5	4	2	2
<b>Total</b>	<b>Aboriginal and Torres Strait Islander</b>	<b>19</b>	<b>22</b>	<b>31</b>	<b>25</b>	<b>20</b>
	<b>Non-Indigenous<sup>2</sup></b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>7</b>

<sup>1</sup> Rate per 100 000 population. Population estimates from *2011 Census of Population and Housing* (Australian Bureau of Statistics).

<sup>2</sup> Includes diagnoses in people whose Aboriginal and Torres Strait Islander status was not reported.

Source: National Notifiable Diseases Surveillance System

### 3.3 Gonococcal isolates

Table 3.3.1 Number of gonococcal isolates referred to the Australian Gonococcal Surveillance Programme in 2013 by State/Territory, sex and site and antibiotic resistance

Sex and Site	State/Territory								Total <sup>1</sup>
	ACT	NSW <sup>1</sup>	NT	QLD	SA	TAS	VIC	WA	
<b>Males</b>									
Genital	23	790	208	376	120	24	695	276	2 512
Rectal	12	292	2	67	22	12	383	48	838
Pharynx	6	224	2	36	14	4	253	27	566
Disseminated gonococcal infection	0	4	7	5	0	0	0	6	22
Other/Not specified	0	17	2	6	2	0	62	5	94
<b>Total</b>	<b>41</b>	<b>1 327</b>	<b>221</b>	<b>490</b>	<b>158</b>	<b>40</b>	<b>1 393</b>	<b>362</b>	<b>4 032</b>
<b>Females</b>									
Genital	3	169	114	166	42	4	129	117	744
Rectal	0	2	0	3	5	0	1	2	13
Pharynx	0	44	0	2	4	1	9	2	62
Disseminated gonococcal infection	0	5	7	5	0	0	0	3	20
Other/Not specified	0	6	1	4	3	0	7	2	23
<b>Total</b>	<b>3</b>	<b>226</b>	<b>122</b>	<b>180</b>	<b>54</b>	<b>5</b>	<b>146</b>	<b>126</b>	<b>862</b>
<b>Antibiotic Resistance (%)</b>									
Ceftriaxone <sup>2</sup>	0.0	11.8	1.2	4.9	1.9	24.4	11.8	2.7	8.8
Ciprofloxacin	20.5	35.6	8.2	14.9	12.3	48.9	44.4	25.2	34.1
Azithromycin	2.3	0.9	0.3	5.7	2.8	0.0	2.3	1.8	2.1
Penicillin	15.9	38.1	6.4	31.2	18.4	37.8	44.1	27.3	34.7
<b>Total<sup>1</sup></b>	<b>44</b>	<b>1 555</b>	<b>343</b>	<b>670</b>	<b>212</b>	<b>45</b>	<b>1 539</b>	<b>488</b>	<b>4 896</b>

1 Total includes 2 people whose sex was not reported.

2 Decreased susceptibility.

Source: Australian Gonococcal Surveillance Programme

Table 3.3.2 Number of gonococcal isolates in New South Wales referred to the Australian Gonococcal Surveillance Programme, 2009 – 2013, by sex, site and year

Sex and Site	Year of diagnosis				
	2009	2010	2011	2012	2013 <sup>1</sup>
<b>Males</b>					
Urethra	523	644	689	877	808
Rectal	193	328	248	282	312
Pharynx	101	184	201	279	240
Other/Not specified	8	39	7	11	22
<b>Total</b>	<b>825</b>	<b>1 195</b>	<b>1 145</b>	<b>1 449</b>	<b>1 382</b>
<b>Females</b>					
Cervix	100	113	135	187	172
Rectal	4	2	8	3	2
Pharynx	15	11	41	66	46
Other/Not specified	5	7	3	7	11
<b>Total</b>	<b>124</b>	<b>133</b>	<b>187</b>	<b>263</b>	<b>234</b>
<b>Total<sup>1,2</sup></b>	<b>949</b>	<b>1 328</b>	<b>1 322</b>	<b>1 712</b>	<b>1 618</b>

1 Totals include isolates for which the site of specimen collection was not reported.

2 Totals include isolates for which the sex of the person was not reported.

Source: Australian Gonococcal Surveillance Programme

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4 HIV, viral hepatitis and sexually transmissible infections in selected populations

## 4.1 HIV seroprevalence among people seen at sexual health clinics

Table 4.1.1 Number of people seen at selected metropolitan sexual health clinics in Australia, 2009 – 2013, number tested for HIV antibody, number (percent) newly diagnosed with HIV infection and number (percent) newly diagnosed with HIV infection following a previous negative test by sex, clinic and year

Year		Sexual health clinic								Total
		Sydney Sexual Health Centre, NSW	RPA Sexual Health Clinic, NSW <sup>1</sup>	Brisbane Sexual Health Clinic, QLD <sup>2</sup>	Gold Coast Sexual Health Service, QLD	Clinic 275 Adelaide, SA	Melbourne Sexual Health Centre, VIC	Fremantle Sexual Health Service, WA <sup>3</sup>		
2009	Men seen	4 925	—	4 058	1 750	4 138	9 162	—	24 033	
	Tested	2 551	—	1 469	537	3 546	5 546	—	13 649	
	Newly diagnosed (%)	36 (1.4)	—	12 (0.8)	5 (0.9)	5 (0.1)	56 (1.0)	—	114 (0.8)	
	Previously negative (%)	28 (1.4)	—	11 (1.2)	3 (1.4)	4 (0.2)	50 (1.2)	—	96 (1.0)	
2010	Men seen	5 382	1 420	3 800	2 102	4 436	10 423	—	27 563	
	Tested	2 750	886	1 397	932	3 845	6 620	—	16 430	
	Newly diagnosed (%)	25 (1.0)	10 (1.1)	5 (0.4)	1 (0.1)	8 (0.2)	45 (0.5)	—	94 (0.6)	
	Previously negative (%)	21 (0.0)	2 (0.6)	4 (0.4)	1 (0.03)	6 (0.3)	40 (0.8)	—	74 (0.7)	
2011	Men seen	6 029	1 485	3 107	2 112	4 777	12 346	—	29 856	
	Tested	2 587	890	940	1 083	4 078	6 990	—	16 568	
	Newly diagnosed (%)	43 (1.7)	22 (2.5)	3 (0.3)	7 (0.6)	11 (0.3)	48 (0.7)	—	134 (0.8)	
	Previously negative (%)	35 (1.7)	5 (1.4)	3 (0.4)	4 (1.2)	8 (0.3)	41 (0.8)	—	96 (0.7)	
2012	Men seen	6 823	1 567	3 506	2 393	4 878	15 601	—	34 768	
	Tested	2 487	985	1 120	996	4 149	8 586	—	18 323	
	Newly diagnosed (%)	42 (1.7)	21 (2.1)	3 (0.3)	12 (1.2)	11 (0.3)	45 (0.5)	—	134 (0.7)	
	Previously negative (%)	35 (1.7)	8 (1.8)	2 (0.3)	4 (1.2)	11 (0.4)	35 (0.5)	—	95 (0.7)	
2013	Men seen	7 764	—	—	2 973	4 862	15 675	1 196	32 470	
	Tested	5 044	—	—	1 029	4 255	6 806	562	17 696	
	Newly diagnosed (%)	25 (0.5)	—	—	5 (0.5)	14 (0.3)	69 (1.0)	0 (0.0)	113 (0.6)	
	Previously negative (%)	13 (0.4)	—	—	1 (0.3)	11 (0.4)	63 (1.3)	0 (0.0)	88 (0.8)	

Sexual health clinic

Year	Sexual health clinic										Total
	Sydney Sexual Health Centre, NSW	RPA Sexual Health Clinic, NSW <sup>1</sup>	Brisbane Sexual Health Clinic, QLD <sup>2</sup>	Gold Coast Sexual Health Service, QLD	Clinic 275 Adelaide, SA	Melbourne Sexual Health Centre, VIC	Fremantle Sexual Health Service, WA <sup>3</sup>				
<b>2009</b>	Women seen	3 052	—	2 548	1 223	2 281	7 183	—	16 287		
	Tested	1 297	—	712	313	1 893	2 553	—	6 768		
	Newly diagnosed (%)	1 (0.1)	—	1 (0.1)	0 (0.0)	0 (0.0)	2 (0.1)	—	4 (0.06)		
	Previously negative (%)	1 (0.1)	—	1 (0.2)	0 (0.0)	0 (0.0)	2 (0.01)	—	4 (0.08)		
<b>2010</b>	Women seen	3 084	608	2 203	1 549	2 383	8 617	—	18 444		
	Tested	1 353	349	552	605	2 012	4 253	—	9 124		
	Newly diagnosed (%)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.2)	1 (0.05)	0 (0.0)	—	2 (0.02)		
	Previously negative (%)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	—	0 (0.0)		
<b>2011</b>	Women seen	3 486	658	1 810	1 443	2 579	8 556	—	18 532		
	Tested	1 336	374	394	668	2 096	3 885	—	8 753		
	Newly diagnosed (%)	1 (0.1)	0 (0.0)	0 (0.0)	3 (0.6)	0 (0.0)	2 (0.1)	—	6 (0.1)		
	Previously negative (%)	1 (0.1)	0 (0.0)	0 (0.0)	1 (0.6)	0 (0.0)	2 (0.1)	—	4 (0.1)		
<b>2012</b>	Women seen	3 855	634	2 012	1 684	2 622	8 762	—	19 569		
	Tested	1 165	349	486	590	2 140	4 126	—	8 856		
	Newly diagnosed (%)	1 (0.1)	2 (0.6)	0 (0.0)	0 (0.0)	1 (0.05)	0 (0.0)	—	4 (0.05)		
	Previously negative (%)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.08)	0 (0.0)	—	1 (0.02)		
<b>2013</b>	Women seen	4 038	—	—	1 975	2 512	8 648	690	17 863		
	Tested	1 943	—	—	471	2 127	3 460	279	8 280		
	Newly diagnosed (%)	0 (0.0)	—	—	0 (0.0)	1 (0.05)	0 (0.0)	0 (0.0)	1 (0.01)		
	Previously negative (%)	0 (0.0)	—	—	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)		

1 RPA Sexual Health Centre, NSW, opened in 2009.

2 Brisbane Sexual Health Clinic, QLD, closed during 2013.

3 Fremantle Sexual Health Service, Fremantle, WA, joined the network in 2013.

Source: Collaborative group on sentinel surveillance in sexual health clinics

**Table 4.1.2** Number of people seen at selected metropolitan sexual health clinics in Australia, 2009 – 2013, number tested for HIV antibody, number (percent) newly diagnosed with HIV infection and number (percent) newly diagnosed following a previous negative test by year, sex and exposure category

Year	HIV exposure category	Men who have sex with men <sup>1</sup> , age < 25 years							Total
		Men who have sex with men <sup>1</sup>	Men who have sex with men <sup>1</sup> , age < 25 years	Injecting drug use	Heterosexual contact overseas	Heterosexual contact in Australia	Other men	Total	
<b>2009</b>	Men seen	9 305	2 122	461	3 694	9 706	867	24 033	
	Tested	6 727	1 144	284	2 101	4 438	99	13 649	
	Newly diagnosed (%)	108 (1.6)	15 (1.3)	0 (0.0)	2 (0.1)	4 (0.1)	0 (0.0)	114 (0.8)	
	Previously negative (%)	91 (1.6)	12 (1.1)	0 (0.0)	2 (0.2)	3 (0.1)	0 (0.0)	96 (1.0)	
<b>2010</b>	Men seen	11 441	2 508	454	4 204	10 170	1 294	27 563	
	Tested	8 482	1 968	278	2 571	4 953	146	16 430	
	Newly diagnosed (%)	90 (1.1)	15 (0.8)	0 (0.0)	0 (0.0)	3 (0.06)	1 (0.7)	94 (0.6)	
	Previously negative (%)	72 (1.0)	5 (0.4)	0 (0.0)	0 (0.0)	2 (0.08)	0 (0.0)	74 (0.7)	
<b>2011</b>	Men seen	12 945	2 984	473	4 588	10 068	1 782	29 856	
	Tested	8 651	1 444	267	2 639	4 874	137	16 568	
	Newly diagnosed (%)	129 (1.5)	12 (0.8)	0 (0.0)	1 (0.04)	8 (0.8)	1 (0.2)	134 (0.8)	
	Previously negative (%)	95 (1.3)	5 (0.4)	0 (0.0)	0 (0.0)	1 (0.08)	0 (0.0)	96 (0.9)	
<b>2012</b>	Men seen	15 179	3 518	414	5 959	11 245	1 971	34 768	
	Tested	9 705	2 286	253	3 297	4 971	97	18 323	
	Newly diagnosed (%)	129 (1.3)	25 (1.1)	0 (0.0)	2 (0.06)	3 (0.06)	0 (0.0)	134 (0.7)	
	Previously negative (%)	91 (1.1)	21 (1.3)	0 (0.0)	2 (0.1)	2 (0.08)	0 (0.0)	95 (0.8)	
<b>2013</b>	Men seen	15 028	3 344	327	6 317	9 969	829	32 470	
	Tested	9 285	1 641	178	3 518	4 619	96	17 696	
	Newly diagnosed (%)	108 (1.2)	19 (1.2)	0 (0.0)	0 (0.0)	5 (0.1)	0 (0.0)	113 (0.6)	
	Previously negative (%)	87 (1.2)	12 (1.3)	0 (0.0)	0 (0.0)	1 (0.02)	0 (0.0)	88 (0.8)	

HIV exposure category

Year	Sex worker <sup>2</sup>	Injecting drug use	Heterosexual contact overseas	Heterosexual contact in Australia	Other women	Total
<b>2009</b>	Women seen	338	2 571	8 168	965	16 287
	Tested	193	954	2 903	259	6 768
	Newly diagnosed (%)	0 (0.0)	0 (0.0)	3 (0.1)	0 (0.0)	4 (0.06)
	Previously negative (%)	1 (0.04)	0 (0.0)	3 (0.17)	0 (0.0)	4 (0.08)
<b>2010</b>	Women seen	292	2 873	8 782	1 084	18 444
	Tested	192	1 511	3 949	247	9 124
	Newly diagnosed (%)	0 (0.0)	1 (0.07)	1 (0.03)	0 (0.0)	2 (0.02)
	Previously negative (%)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
<b>2011</b>	Women seen	356	3 101	8 934	1 422	18 532
	Tested	208	1 577	3 942	227	8 753
	Newly diagnosed (%)	0 (0.0)	3 (0.2)	1 (0.03)	0 (0.0)	6 (0.1)
	Previously negative (%)	2 (0.1)	1 (0.1)	1 (0.05)	0 (0.0)	4 (0.1)
<b>2012</b>	Women seen	286	3 903	9 589	1 605	19 569
	Tested	154	1 870	3 852	281	8 776
	Newly diagnosed (%)	0 (0.0)	1 (0.05)	2 (0.05)	0 (0.0)	4 (0.05)
	Previously negative (%)	0 (0.0)	0 (0.0)	1 (0.05)	0 (0.0)	1 (0.02)
<b>2013</b>	Women seen	162	4 640	8 595	699	17 863
	Tested	105	2 202	3 635	187	8 280
	Newly diagnosed (%)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.5)	1 (0.01)
	Previously negative (%)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

1 Includes men with a history of injecting drug use.

2 Includes women with a history of injecting drug use.

Source: Collaborative group on sentinel surveillance in sexual health clinics

**Table 4.1.3** Number of people seen at selected metropolitan sexual health clinics in Australia, 2009 – 2013, number tested for HIV antibody, number (percent) newly diagnosed with HIV infection and number (percent) newly diagnosed following a previous negative test by year, sex and age group

Year		Age group (years)							Total
		13 – 19	20 – 29	30 – 39	40 – 49	50 – 59	60+		
<b>2009</b>	Men seen	981	11 315	6 315	3 254	1 465	703	24 033	
	Tested	515	6 574	3 635	1 777	783	365	13 649	
	Newly diagnosed (%)	3 (0.6)	45 (0.7)	39 (1.1)	17 (1.0)	9 (1.1)	1 (0.3)	114 (0.8)	
	Previously negative (%)	2 (1.1)	39 (0.9)	32 (1.1)	13 (0.9)	9 (1.5)	1 (0.4)	96 (1.0)	
<b>2010</b>	Men seen	1 153	12 761	7 078	3 974	1 715	882	27 563	
	Tested	690	7 723	4 247	2 305	992	473	16 430	
	Newly diagnosed (%)	0 (0.0)	34 (0.4)	30 (0.7)	21 (0.9)	7 (0.7)	2 (0.7)	94 (0.6)	
	Previously negative (%)	0 (0.0)	25 (0.5)	24 (0.7)	17 (1.0)	6 (0.9)	2 (0.6)	74 (0.7)	
<b>2011</b>	Men seen	1 283	13 997	7 869	3 990	1 799	918	29 856	
	Tested	722	7 833	4 453	2 091	966	503	16 568	
	Newly diagnosed (%)	1 (0.2)	57 (0.7)	39 (0.9)	28 (1.3)	8 (0.8)	1 (0.2)	134 (0.8)	
	Previously negative (%)	0 (0.0)	41 (0.9)	31 (0.9)	19 (1.2)	4 (0.6)	1 (0.3)	96 (0.9)	
<b>2012</b>	Men seen	1 516	16 434	9 057	4 641	2 020	1 099	34 768	
	Tested	720	8 633	4 923	2 385	1 029	633	18 323	
	Newly diagnosed (%)	2 (0.3)	55 (0.6)	49 (1.0)	19 (0.8)	9 (0.9)	0 (0.0)	134 (0.7)	
	Previously negative (%)	2 (0.7)	42 (0.8)	34 (0.9)	10 (0.5)	7 (0.9)	0 (0.0)	95 (0.8)	
<b>2013</b>	Men seen	1 389	15 570	8 483	4 079	1 919	1 030	32 470	
	Tested	706	8 591	4 620	2 164	1 031	584	17 696	
	Newly diagnosed (%)	1 (0.1)	47 (0.5)	28 (0.6)	20 (0.9)	12 (1.2)	5 (0.9)	113 (0.6)	
	Previously negative (%)	1 (0.4)	33 (0.6)	24 (0.7)	17 (1.0)	10 (1.5)	3 (0.8)	88 (0.8)	

Year	Age group (years)	Age group (years)							Total
		13 – 19	20 – 29	30 – 39	40 – 49	50 – 59	60+		
2009	Women seen	1 490	8 744	3 990	1 562	409	92	16 287	
	Tested	515	3 390	1 910	772	149	32	6 768	
	Newly diagnosed (%)	0 (0.0)	3 (0.09)	0 (0.0)	1 (0.1)	0 (0.0)	0 (0.0)	4 (0.06)	
	Previously negative (%)	0 (0.0)	3 (0.1)	0 (0.0)	1 (0.1)	0 (0.0)	0 (0.0)	4 (0.08)	
2010	Women seen	1 557	9 795	4 739	1 735	491	127	18 444	
	Tested	675	4 661	2 540	934	248	66	9 124	
	Newly diagnosed (%)	0 (0.0)	1 (0.02)	1 (0.04)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.02)	
	Previously negative (%)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
2011	Women seen	1 663	10 129	4 622	1 553	445	120	18 532	
	Tested	659	4 581	2 386	859	230	38	8 753	
	Newly diagnosed (%)	0 (0.0)	3 (0.1)	2 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	6 (0.1)	
	Previously negative (%)	0 (0.0)	2 (0.1)	1 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	4 (0.1)	
2012	Women seen	1 876	10 873	4 556	1 631	517	116	19 569	
	Tested	574	4 697	2 343	947	263	32	8 856	
	Newly diagnosed (%)	0 (0.0)	2 (0.04)	1 (0.04)	1 (0.1)	0 (0.0)	0 (0.0)	4 (0.05)	
	Previously negative (%)	0 (0.0)	0 (0.0)	1 (0.4)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.02)	
2013	Women seen	1 623	10 300	3 964	1 426	440	110	17 863	
	Tested	637	4 687	1 940	759	201	56	8 280	
	Newly diagnosed (%)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.1)	0 (0.0)	0 (0.0)	1 (0.01)	
	Previously negative (%)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	

Source: Collaborative group on sentinel surveillance in sexual health clinics

## 4.2 HIV and hepatitis C seroprevalence among people who inject drugs

Table 4.2.1 Number of participating needle and syringe programs (NSP), 2009 – 2013, number of people who inject drugs who were tested for HIV or hepatitis C antibody (percent of clients seen) and number (percent) with HIV or hepatitis C antibody by year, State/Territory and sex

2009

State/ Territory	Number of NSP	Number of clients tested (% of clients seen) <sup>1</sup>			Number (%) with HIV antibody			Number (%) with hepatitis C antibody <sup>3</sup>		
		Male	Female	Total <sup>2</sup>	Male	Female	Total <sup>2</sup>	Male	Female	Total <sup>2</sup>
ACT	1	36	22	58 (67)	0 (0.0)	0 (0.0)	0 (0.0)	21 (58)	13 (59)	34 (59)
NSW	20	488	320	816 (39)	12 (2.5)	0 (0.0)	13 (1.6)	272 (56)	193(60)	468 (58)
NT	3	51	25	76 (29)	0 (0.0)	0 (0.0)	0 (0.0)	20 (40)	9 (36)	29 (39)
QLD	8	581	209	795 (59)	10 (1.7)	0 (0.0)	10 (1.3)	244 (42)	94 (45)	339 (43)
SA	7	155	91	246 (53)	2 (1.3)	1 (1.1)	3 (1.2)	65 (42)	36 (40)	101 (41)
TAS	4	73	47	121 (16)	0 (0.0)	0 (0.0)	0 (0.0)	38 (52)	24 (53)	63 (53)
VIC <sup>4</sup>	6	215	116	333 (—)	3 (1.4)	0 (0.0)	3 (0.9)	120 (57)	60 (52)	182 (55)
WA	2	126	85	212 (29)	1 (0.8)	1 (1.2)	2 (1.0)	60 (48)	42 (49)	102 (48)
<b>Total</b>	<b>51</b>	<b>1 725</b>	<b>915</b>	<b>2 657 (45)</b>	<b>28 (1.6)</b>	<b>2 (0.2)</b>	<b>31 (1.2)</b>	<b>840 (49)</b>	<b>471 (52)</b>	<b>1 318 (50)</b>

2010

State/ Territory	Number of NSP	Number of clients tested (% of clients seen) <sup>1</sup>			Number (%) with HIV antibody			Number (%) with hepatitis C antibody <sup>3</sup>		
		Male	Female	Total <sup>2</sup>	Male	Female	Total <sup>2</sup>	Male	Female	Total <sup>2</sup>
ACT	1	72	25	97 (82)	0 (0.0)	0 (0.0)	0 (0.0)	48 (69)	15 (60)	63 (66)
NSW	22	422	243	671 (38)	8 (1.9)	0 (0.0)	8 (1.2)	228 (54)	135 (56)	365 (54)
NT	3	55	23	78 (28)	0 (0.0)	0 (0.0)	0 (0.0)	29 (53)	8 (35)	37 (47)
QLD	8	408	123	536 (38)	11 (2.7)	0 (0.0)	11 (2.1)	180 (45)	58 (48)	241 (46)
SA	7	129	84	214 (41)	0 (0.0)	1 (1.2)	1 (0.5)	54 (43)	38 (45)	93 (44)
TAS	4	68	38	106 (58)	0 (0.0)	0 (0.0)	0 (0.0)	30 (44)	18 (47)	48 (45)
VIC	5	305	131	438 (56)	2 (0.7)	0 (0.0)	2 (0.5)	204 (67)	72 (55)	278 (64)
WA	3	121	92	213 (29)	0 (0.0)	1 (1.1)	1 (0.5)	65 (55)	54 (59)	119 (56)
<b>Total</b>	<b>53</b>	<b>1 580</b>	<b>759</b>	<b>2 353 (38)</b>	<b>21 (1.3)</b>	<b>2 (0.3)</b>	<b>23 (1.0)</b>	<b>838 (53)</b>	<b>398 (53)</b>	<b>1 244 (53)</b>

2011

State/ Territory	Number of NSP	Number of clients tested (% of clients seen) <sup>1</sup>			Number (%) with HIV antibody			Number (%) with hepatitis C antibody <sup>3</sup>		
		Male	Female	Total <sup>2</sup>	Male	Female	Total <sup>2</sup>	Male	Female	Total <sup>2</sup>
ACT	1	64	31	95 (56)	0 (0.0)	0 (0.0)	0 (0.0)	44 (71)	12 (39)	56 (60)
NSW	21	455	224	682 (36)	5 (1.1)	1 (0.5)	7 (1.0)	220 (49)	129 (59)	350 (52)
NT	3	46	21	68 (33)	1 (2.2)	0 (0.0)	1 (1.5)	22 (55)	10 (48)	32 (52)
QLD	8	376	148	528 (40)	8 (2.1)	0 (0.0)	8 (1.5)	158 (43)	63 (43)	221 (43)
SA	7	129	76	207 (51)	2 (1.6)	3 (4.0)	5 (2.4)	67 (52)	31 (41)	98 (48)
TAS	4	43	25	68 (28)	0 (0.0)	0 (0.0)	0 (0.0)	17 (40)	14 (56)	31 (46)
VIC	6	335	162	499 (55)	4 (1.2)	0 (0.0)	4 (0.8)	229 (69)	93 (59)	324 (66)
WA	3	112	77	190 (77)	1 (0.9)	3 (3.9)	4 (2.1)	69 (63)	34 (47)	104 (57)
<b>Total</b>	<b>53</b>	<b>1 560</b>	<b>764</b>	<b>2 337 (41)</b>	<b>21 (1.4)</b>	<b>7 (0.9)</b>	<b>29 (1.2)</b>	<b>826 (54)</b>	<b>386 (52)</b>	<b>1 216 (53)</b>

## 2012

State/ Territory	Number of NSP	Number of clients tested (% of clients seen) <sup>1</sup>			Number (%) with HIV antibody			Number (%) with hepatitis C antibody <sup>3</sup>		
		Male	Female	Total <sup>2</sup>	Male	Female	Total <sup>2</sup>	Male	Female	Total <sup>2</sup>
ACT	1	53	25	78 (65)	0 (0.0)	0 (0.0)	0 (0.0)	34 (64)	16 (64)	50 (64)
NSW	20	465	223	697 (47)	7 (1.5)	0 (0.0)	8 (1.2)	213 (47)	121 (55)	338 (50)
NT	3	30	15	46 (21)	1 (3.3)	0 (0.0)	1 (2.2)	11 (37)	5 (33)	16 (35)
QLD	8	415	153	570 (45)	7 (1.7)	2 (1.3)	9 (1.6)	183 (45)	83 (54)	267 (47)
SA	7	123	73	197 (42)	2 (1.6)	4 (5.5)	6 (3.1)	51 (42)	28 (39)	79 (41)
TAS	4	36	38	74 (28)	0 (0.0)	0 (0.0)	0 (0.0)	17 (47)	17 (46)	34 (47)
VIC	6	304	128	433 (52)	1 (0.3)	0 (0.0)	1 (0.2)	214 (71)	83 (65)	297 (69)
WA	3	120	63	184 (79)	0 (0.0)	3 (4.8)	3 (1.6)	71 (59)	31 (48)	103 (56)
<b>Total</b>	<b>52</b>	<b>1 546</b>	<b>718</b>	<b>2 279 (46)</b>	<b>18 (1.2)</b>	<b>9 (1.3)</b>	<b>28 (1.2)</b>	<b>794 (52)</b>	<b>384 (54)</b>	<b>1 184 (53)</b>

## 2013

State/ Territory	Number of NSP	Number of clients tested (% of clients seen) <sup>1</sup>			Number (%) with HIV antibody			Number (%) with hepatitis C antibody <sup>3</sup>		
		Male	Female	Total <sup>2</sup>	Male	Female	Total <sup>2</sup>	Male	Female	Total <sup>2</sup>
ACT	1	67	32	100 (80)	0 (0.0)	0 (0.0)	0 (0.0)	49 (73)	18 (56)	67 (67)
NSW	19	456	204	665 (38)	20 (4.4)	0 (0.0)	21 (3.2)	232 (51)	120 (59)	354 (54)
NT	3	47	19	66 (33)	2 (4.3)	0 (0.0)	2 (3.0)	21 (46)	12 (63)	33 (51)
QLD	8	372	160	533 (45)	7 (1.9)	0 (0.0)	7 (1.3)	167 (45)	79 (49)	247 (46)
SA	7	154	74	229 (56)	4 (2.6)	3 (4.1)	7 (3.1)	78 (51)	32 (43)	111 (49)
TAS	3	41	28	69 (33)	0 (0.0)	0 (0.0)	0 (0.0)	19 (46)	18 (64)	37 (54)
VIC	6	300	139	446 (61)	5 (1.7)	1 (0.7)	6 (1.4)	199 (67)	94 (68)	296 (67)
WA	3	126	71	199 (77)	3 (2.4)	2 (2.8)	5 (2.5)	66 (54)	23 (32)	90 (46)
<b>Total</b>	<b>50</b>	<b>1 563</b>	<b>727</b>	<b>2 307 (44)</b>	<b>41 (2.6)</b>	<b>6 (0.8)</b>	<b>48 (2.1)</b>	<b>831 (53)</b>	<b>396 (55)</b>	<b>1 235 (54)</b>

1 At first attendance during the survey week.

2 Totals include people whose sex was reported as transgender and people whose sex was not reported.

3 Number tested for hepatitis C antibody excludes cases with insufficient blood for testing.

4 The number of NSP clients seen was not reported.

Source: Collaboration of Australian Needle and Syringe Programs

**Table 4.2.2** Number of people who inject drugs seen at needle and syringe programs who were tested for HIV or hepatitis C antibody, 2009 – 2013, and percent with HIV or hepatitis C antibody by year, age group, time since first injection, type of drug last injected among those reporting less than three years since first injection, and sex

2009									
	Number tested			Percent with HIV antibody			Percent with hepatitis C antibody		
	Male	Female	Total <sup>1</sup>	Male	Female	Total <sup>1</sup>	Male	Female	Total <sup>1</sup>
<i>Age group</i>									
Less than 20 years	39	30	70	0	0	0	8	17	11
20 to 24 years	118	88	207	0.9	0	0.5	24	43	32
25 to 34 years	577	349	930	1.2	0	0.8	43	53	47
35 to 44 years	624	310	939	2.1	0	1.5	55	55	55
45+ years	367	137	510	1.9	0.7	1.6	62	53	59
Not reported	0	1	1	0	0	0	0	0	0
<i>Time since first injection</i>									
Less than 5 years	145	113	260	1.4	0	0.8	17	25	20
5 to 9 years	195	145	342	1.6	0	0.9	30	43	36
10 to 14 years	346	234	583	1.7	0	1	46	56	50
15 to 19 years	378	171	551	2.1	0	1.7	51	60	54
20+ years	622	226	855	1.5	0.5	1.2	64	62	63
Not reported	39	26	66	0	3.9	1.5	33	38	36
<b>Total</b>	<b>1 725</b>	<b>915</b>	<b>2 657</b>	<b>1.6</b>	<b>0.2</b>	<b>1.2</b>	<b>49</b>	<b>52</b>	<b>50</b>
<i>Last drug injected among those reporting less than 3 years since first injection</i>									
Amphetamines	33	18	51	3	0	2	0	22	8
Heroin	12	21	33	0	0	0	25	30	28
Other opiates	14	24	39	0	0	0	7	17	13
All other drugs	30	2	32	3.3	0	3.1	7	50	9
Not reported	1	2	3	0	0	0	0	0	0
<b>Total</b>	<b>90</b>	<b>67</b>	<b>158</b>	<b>2.2</b>	<b>0</b>	<b>1.3</b>	<b>7</b>	<b>23</b>	<b>13</b>
2010									
	Number tested			Percent with HIV antibody			Percent with hepatitis C antibody		
	Male	Female	Total <sup>1</sup>	Male	Female	Total <sup>1</sup>	Male	Female	Total <sup>1</sup>
<i>Age group</i>									
Less than 20 years	19	15	34	0	0	0	11	40	24
20 to 24 years	86	75	163	1.2	0	0.6	18	36	26
25 to 34 years	502	263	766	0.6	0	0.4	46	50	47
35 to 44 years	571	248	825	1.4	0.4	1.1	58	55	57
45+ years	401	157	563	2.2	0.6	1.8	66	64	66
Not reported	1	1	2	0	0	0	0	0	0
<i>Time since first injection</i>									
Less than 5 years	132	71	204	1.5	0	1	14	27	19
5 to 9 years	158	122	281	0	0	0	35	43	38
10 to 14 years	298	170	472	2	0	1.3	47	52	49
15 to 19 years	323	154	480	2.2	0	1.5	57	55	56
20+ years	633	228	865	1	0.9	0.9	68	66	67
Not reported	36	14	51	0	0	0	50	36	47
<b>Total</b>	<b>1 580</b>	<b>759</b>	<b>2 353</b>	<b>1.3</b>	<b>0.3</b>	<b>1</b>	<b>53</b>	<b>53</b>	<b>53</b>
<i>Last drug injected among those reporting less than 3 years since first injection</i>									
Amphetamines	17	15	33	5.9	0	3	6	13	9
Heroin	18	11	29	5.6	0	3.5	22	45	31
Other opiates	19	7	26	0	0	0	21	0	15
All other drugs	33	4	37	0	0	0	7	75	8
Not reported	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>87</b>	<b>37</b>	<b>125</b>	<b>2.3</b>	<b>0</b>	<b>1.6</b>	<b>10</b>	<b>27</b>	<b>15</b>

2011

	Number tested			Percent with HIV antibody			Percent with hepatitis C antibody		
	Male	Female	Total <sup>1</sup>	Male	Female	Total <sup>1</sup>	Male	Female	Total <sup>1</sup>
<i>Age group</i>									
Less than 20 years	22	12	34	0	0	0	5	17	9
20 to 24 years	96	44	142	1	4.6	2.1	18	32	22
25 to 34 years	457	287	748	0.2	0.4	0.3	46	49	47
35 to 44 years	569	250	824	1.6	0.4	1.3	59	57	58
45+ years	410	169	580	2.4	1.8	2.2	68	57	64
Not reported	6	2	9	0	0	0	50	0	44
<i>Time since first injection</i>									
Less than 5 years	174	85	261	2.3	0	1.5	17	31	21
5 to 9 years	135	95	230	1.5	2.1	1.7	39	39	39
10 to 14 years	252	145	400	0.4	0.7	0.5	51	50	51
15 to 19 years	296	173	474	1.7	0	1.3	56	57	55
20+ years	656	251	909	1.4	1.6	1.4	69	61	67
Not reported	47	15	63	0	0	0	38	43	40
<b>Total</b>	<b>1 560</b>	<b>764</b>	<b>2 337</b>	<b>1.4</b>	<b>0.9</b>	<b>1.2</b>	<b>54</b>	<b>52</b>	<b>53</b>
<i>Last drug injected among those reporting less than 3 years since first injection</i>									
Amphetamines	18	11	29	5.6	0	3.5	11	27	17
Heroin	10	18	28	0	0	0	20	35	30
Other opiates	11	12	24	9.1	0	4.2	27	25	25
All other drugs	74	7	81	0	0	0	7	14	7
Not reported	1	0	1	0	0	0	0	0	0
<b>Total</b>	<b>114</b>	<b>48</b>	<b>163</b>	<b>1.8</b>	<b>0</b>	<b>1.2</b>	<b>11</b>	<b>28</b>	<b>15</b>

2012

	Number tested			Percent with HIV antibody			Percent with hepatitis C antibody		
	Male	Female	Total <sup>1</sup>	Male	Female	Total <sup>1</sup>	Male	Female	Total <sup>1</sup>
<i>Age group</i>									
Less than 20 years	22	6	28	0	0	0	5	0	4
20 to 24 years	108	32	141	0	0	0	10	38	16
25 to 34 years	412	241	657	0.5	1.2	0.8	44	55	48
35 to 44 years	585	266	856	0.9	0.4	0.8	58	53	57
45+ years	418	172	595	2.6	2.9	2.7	65	58	62
Not reported	1	1	2	0	0	0	100	100	100
<i>Time since first injection</i>									
Less than 5 years	200	55	257	1.5	0	1.2	13	31	17
5 to 9 years	123	88	212	0	2.3	0.9	36	41	38
10 to 14 years	206	152	361	1	0.7	0.8	47	54	50
15 to 19 years	278	143	425	0.7	0	0.7	56	60	57
20+ years	695	262	961	1.6	2.3	1.8	66	59	64
Not reported	44	18	63	0	0	0	51	56	52
<b>Total</b>	<b>1 546</b>	<b>718</b>	<b>2 279</b>	<b>1.2</b>	<b>1.3</b>	<b>1.2</b>	<b>52</b>	<b>54</b>	<b>53</b>
<i>Last drug injected among those reporting less than 3 years since first injection</i>									
Amphetamines	10	17	27	10	0	3.7	20	41	33
Heroin	15	10	26	0	0	0	21	20	24
Other opiates	8	6	14	0	0	0	50	33	43
All other drugs	92	3	95	0	0	0	3	0	3
Not reported	1	0	1	0	0	0	0	0	0
<b>Total</b>	<b>126</b>	<b>36</b>	<b>163</b>	<b>0.8</b>	<b>0</b>	<b>0.6</b>	<b>10</b>	<b>31</b>	<b>15</b>

2013

	Number tested			Percent with HIV antibody			Percent with hepatitis C antibody		
	Male	Female	Total <sup>1</sup>	Male	Female	Total <sup>1</sup>	Male	Female	Total <sup>1</sup>
<i>Age group</i>									
Less than 20 years	14	16	30	0	0	0	7	13	10
20 to 24 years	96	44	140	2.1	0	1.4	11	30	17
25 to 34 years	394	215	616	1.5	0.9	1.5	40	49	43
35 to 44 years	569	256	828	2.6	0	1.8	61	58	60
45+ years	483	195	684	3.7	2.1	3.2	66	65	66
Not reported	7	1	9	0	0	0	43	100	44
<i>Time since first injection</i>									
Less than 5 years	177	70	249	3.4	0	2.4	7	30	14
5 to 9 years	131	92	224	4.6	0	2.7	27	46	35
10 to 14 years	200	124	326	4	1.6	3.1	45	54	48
15 to 19 years	277	144	426	1.4	0	1.2	58	53	56
20+ years	713	275	993	2.2	1.5	2	69	66	68
Not reported	65	22	89	1.5	0	1.1	69	36	61
<b>Total</b>	<b>1 563</b>	<b>727</b>	<b>2 307</b>	<b>2.6</b>	<b>0.8</b>	<b>2.1</b>	<b>53</b>	<b>55</b>	<b>54</b>
<i>Last drug injected among those reporting less than 3 years since first injection</i>									
Amphetamines	21	22	43	14.3	0	7	10	23	16
Heroin	5	8	13	0	0	0	20	38	31
Other opiates	10	5	15	10	0	6.7	10	20	13
All other drugs	81	3	86	1.2	0	1.2	1	0	2
Not reported	3	0	3	0	0	0	0	0	0
<b>Total</b>	<b>120</b>	<b>38</b>	<b>160</b>	<b>4.2</b>	<b>0</b>	<b>3.1</b>	<b>4</b>	<b>24</b>	<b>9</b>

<sup>1</sup> Totals include people whose sex was reported as transgender and people whose sex was not reported.

Source: Collaboration of Australian Needle and Syringe Programs

**Table 4.2.3** Number of people who inject drugs seen at needle and syringe programs who were tested for HIV or hepatitis C antibody, 2009 – 2013, and percent with HIV or hepatitis C antibody by year, sexual identity, sex work last month, region of birth, main language spoken at home by parents and sex

2009									
	Number tested			Percent with HIV antibody			Percent with hepatitis C antibody		
	Male	Female	Total <sup>1</sup>	Male	Female	Total <sup>1</sup>	Male	Female	Total <sup>1</sup>
<i>Sexual identity</i>									
Heterosexual	1 517	684	2 207	0.5	0.3	0.4	50	49	50
Bisexual	80	146	229	2.5	0	1.3	46	66	58
Homosexual	48	37	87	39.1	0	21.2	27	41	32
Not reported	80	48	134	1.3	0	0.8	51	50	50
<i>Sex work last month</i>									
No	1 621	790	2 425	1.6	0.3	1.2	49	50	49
Yes	36	90	129	5.7	0	1.6	44	68	61
Not reported	68	35	103	0	0	0	53	40	49
<i>Country/region of birth</i>									
Australia	1 480	806	2 299	1.8	0.3	1.3	50	51	50
Overseas born	224	104	332	0.5	0	0.3	46	55	48
<i>Other Oceania</i>	54	30	84	0	0	0	43	57	48
<i>Asia</i>	24	7	32	4.2	0	3.1	42	43	41
<i>United Kingdom and Ireland</i>	82	37	120	0	0	0	51	57	53
<i>Other</i>	64	30	96	0	0	0	42	53	46
Not reported	21	5	26	0	0	0	48	60	50
<i>Main language spoken at home by parents</i>									
English	1 628	869	2 513	1.7	0.2	1.2	49	52	50
Other language	72	38	111	1.4	0	0.9	54	45	50
Not reported	25	8	33	0	1	0	44	63	48
<b>Total</b>	<b>1 725</b>	<b>915</b>	<b>2 657</b>	<b>1.6</b>	<b>0.2</b>	<b>1.2</b>	<b>49</b>	<b>52</b>	<b>50</b>

2010									
	Number tested			Percent with HIV antibody			Percent with hepatitis C antibody		
	Male	Female	Total <sup>1</sup>	Male	Female	Total <sup>1</sup>	Male	Female	Total <sup>1</sup>
<i>Sexual identity</i>									
Heterosexual	1 390	558	1 954	0.3	0.4	0.3	55	53	54
Bisexual	61	124	188	4.9	0	1.6	55	56	56
Homosexual	49	36	86	29.2	0	16.5	22	28	24
Not reported	80	41	125	0	0	0	49	63	54
<i>Sex work last month</i>									
No	1 428	619	2 058	1.3	0.3	1	53	52	53
Yes	42	84	127	4.8	0	1.6	26	54	45
Not reported	110	56	168	0.9	0	0.6	65	55	61
<i>Country/region of birth</i>									
Australia	1 367	673	2 051	1.4	0.3	1	53	51	53
Overseas born	187	78	266	1.1	0	0.8	55	62	56
<i>Other Oceania</i>	47	28	76	2.1	0	1.3	52	68	57
<i>Asia</i>	23	6	29	0	0	0	57	83	62
<i>United Kingdom and Ireland</i>	64	29	93	0	0	0	64	48	59
<i>Other</i>	53	15	68	1.9	0	1.5	47	67	52
Not reported	26	8	36	0	0	0	46	75	53
<i>Main language spoken at home by parents</i>									
English	1 486	736	2 235	1.4	0.3	1	53	52	53
Other language	75	15	90	0	0	0	49	57	51
Not reported	19	8	28	0	1	0	72	88	78
<b>Total</b>	<b>1 580</b>	<b>759</b>	<b>2 353</b>	<b>1.3</b>	<b>0.3</b>	<b>1</b>	<b>53</b>	<b>53</b>	<b>53</b>

2011

	Number tested			Percent with HIV antibody			Percent with hepatitis C antibody		
	Male	Female	Total <sup>1</sup>	Male	Female	Total <sup>1</sup>	Male	Female	Total <sup>1</sup>
<i>Sexual identity</i>									
Heterosexual	1 393	547	1 943	0.4	0.9	0.6	55	51	54
Bisexual	57	141	203	5.3	1.4	3	44	51	48
Homosexual	51	38	91	23.5	0	13.2	39	41	40
Not reported	59	38	100	0	0	0	58	68	62
<i>Sex work last month</i>									
No	1 452	666	2 125	1.3	0.9	1.2	54	51	53
Yes	29	75	108	0	1.3	1.9	64	56	58
Not reported	79	23	104	2.5	0	1.9	56	61	57
<i>Country/region of birth</i>									
Australia	1 322	665	1 999	1.5	1.1	1.4	53	52	52
Overseas born	220	95	316	0.5	0	0.3	55	47	53
<i>Other Oceania</i>	46	34	80	0	0	0	50	58	53
<i>Asia</i>	24	7	31	4.2	0	3.2	67	14	55
<i>United Kingdom and Ireland</i>	73	34	108	0	0	0	58	50	55
<i>Other</i>	77	20	97	0	0	0	55	45	53
Not reported	18	4	22	0	0	0	76	50	71
<i>Main language spoken at home by parents</i>									
English	1 444	731	2 187	1.4	1	1.3	53	52	52
Other language	100	28	129	1	0	0.8	68	41	62
Not reported	16	5	21	0	1	0	81	40	71
<b>Total</b>	<b>1 560</b>	<b>764</b>	<b>2 337</b>	<b>1.4</b>	<b>0.9</b>	<b>1.2</b>	<b>54</b>	<b>52</b>	<b>53</b>

2012

	Number tested			Percent with HIV antibody			Percent with hepatitis C antibody		
	Male	Female	Total <sup>1</sup>	Male	Female	Total <sup>1</sup>	Male	Female	Total <sup>1</sup>
<i>Sexual identity</i>									
Heterosexual	1 350	506	1 859	0.3	1.6	0.7	53	54	53
Bisexual	69	127	200	2.9	0	1.5	47	56	52
Homosexual	42	31	77	21.4	0	11.7	29	45	36
Not reported	85	54	143	3.5	1.9	2.8	55	54	55
<i>Sex work last month</i>									
No	1 451	629	2 090	1.2	1.3	1.2	52	53	52
Yes	37	72	114	2.7	1.4	2.6	50	60	57
Not reported	58	17	75	0	0	0	53	71	57
<i>Country/region of birth</i>									
Australia	1 328	630	1 972	0.9	1.4	1.1	51	53	52
Overseas born	202	85	288	3	0	2.1	57	63	58
<i>Other Oceania</i>	49	32	81	4.1	0	2.5	44	65	52
<i>Asia</i>	22	3	26	0	0	0	86	100	84
<i>United Kingdom and Ireland</i>	73	26	99	1.4	0	1	57	65	59
<i>Other</i>	58	24	82	5.2	0	3.7	56	54	55
Not reported	16	3	19	0	0	0	50	67	53
<i>Main language spoken at home by parents</i>									
English	1 446	685	2 143	1	1.3	1.2	52	54	52
Other language	96	27	126	3.1	0	2.4	58	52	56
Not reported	4	6	10	0	0	0	25	83	60
<b>Total</b>	<b>1 546</b>	<b>718</b>	<b>2 279</b>	<b>1.2</b>	<b>1.3</b>	<b>1.2</b>	<b>52</b>	<b>54</b>	<b>53</b>

2013

	Number tested			Percent with HIV antibody			Percent with hepatitis C antibody		
	Male	Female	Total <sup>1</sup>	Male	Female	Total <sup>1</sup>	Male	Female	Total <sup>1</sup>
<i>Sexual identity</i>									
Heterosexual	1 322	519	1 848	0.7	1.2	0.8	54	55	55
Bisexual	59	114	175	10.2	0	4	50	54	52
Homosexual	73	26	105	32.9	0	22.9	26	46	32
Not reported	109	68	179	1.8	0	1.1	61	59	60
<i>Sex work last month</i>									
No	1 415	624	2 052	2.5	1	2	53	53	53
Yes	36	56	94	11.1	0	5.3	49	64	58
Not reported	112	47	161	1.8	0	1.2	65	57	62
<i>Country/region of birth</i>									
Australia	1 329	642	1 983	2.4	0.9	1.9	54	55	54
Overseas born	226	83	313	4	0	3.2	53	52	52
<i>Other Oceania</i>	50	20	71	4	0	4.2	48	60	51
<i>Asia</i>	30	5	35	10	0	8.6	72	80	74
<i>United Kingdom and Ireland</i>	70	31	102	1.4	0	1	53	52	52
<i>Other</i>	76	27	105	4	0	2.9	49	41	46
Not reported	8	2	11	0	0	0	50	100	55
<i>Main language spoken at home by parents</i>									
English	1 441	689	2 145	2.6	0.9	2.1	53	54	54
Other language	114	38	153	3.5	0	2.6	58	61	58
Not reported	8	0	9	0	0	0	50	0	44
<b>Total</b>	<b>1 563</b>	<b>727</b>	<b>2 307</b>	<b>2.6</b>	<b>0.8</b>	<b>2.1</b>	<b>53</b>	<b>55</b>	<b>54</b>

<sup>1</sup> Totals include people whose sex was reported as transgender and people whose sex was not reported.

Source: Collaboration of Australian Needle and Syringe Programs

### 4.3 Incidence of hepatitis C infection among people who inject drugs

Table 4.3.1 Incidence of hepatitis C infection among people who inject drugs seen at the Kirkeon Road Centre, Sydney, 2009 – 2013

Year/ Age group	Person years at risk	Number newly diagnosed	Incidence per 100 person years
<b>2009</b>			
Less than 20 years	2.3	1	42.7
20 – 29 years	22.8	2	8.8
30+ years	49.1	1	2.0
<b>Total</b>	<b>74.2</b>	<b>4</b>	<b>5.4</b>
<b>2010</b>			
Less than 20 years	0.8	0	0.0
20 – 29 years	22.1	4	18.1
30+ years	49.4	2	4.1
<b>Total</b>	<b>72.3</b>	<b>6</b>	<b>8.3</b>
<b>2011</b>			
Less than 20 years	0.7	2	270.6
20 – 29 years	16.3	4	24.6
30+ years	44.5	2	4.5
<b>Total</b>	<b>61.5</b>	<b>8</b>	<b>13.0</b>
<b>2012</b>			
Less than 20 years	0.6	1	171.7
20 – 29 years	13.3	1	7.5
30+ years	37.2	0	0.0
<b>Total</b>	<b>51.1</b>	<b>2</b>	<b>3.9</b>
<b>2013</b>			
Less than 20 years	0.8	0	0.0
20 – 29 years	9.7	3	30.8
30+ years	20.4	1	4.9
<b>Total</b>	<b>30.9</b>	<b>4</b>	<b>13.0</b>

Source: Kirkeon Road Centre

**Table 4.3.2** Incidence of hepatitis C virus infection among people who inject drugs enrolled in the Hepatitis C Incidence and Transmission Study – community (HITS-c), Sydney, 2009 – 2013

Year/ Age group	Person years at risk	Number newly diagnosed	Incidence per 100 person years
<b>2009</b>			
Less than 20 years	4.2	1	23.5
20 – 29 years	35.1	4	11.4
30+ years	19.7	1	5.1
<b>Total</b>	<b>59.0</b>	<b>6</b>	<b>10.2</b>
<b>2010</b>			
Less than 20 years	3.7	0	0
20 – 29 years	47.0	5	10.6
30+ years	37.5	1	2.7
<b>Total</b>	<b>88.2</b>	<b>6</b>	<b>6.8</b>
<b>2011</b>			
Less than 20 years	1.9	1	53.2
20 – 29 years	58.3	3	5.1
30+ years	47.8	4	8.4
<b>Total</b>	<b>108.0</b>	<b>8</b>	<b>7.4</b>
<b>2012</b>			
Less than 20 years	0.7	0	0
20 – 29 years	52.3	4	7.7
30+ years	54.3	4	7.4
<b>Total</b>	<b>107.2</b>	<b>8</b>	<b>7.5</b>
<b>2013</b>			
Less than 20 years	0.8	0	0
20 – 29 years	43.5	1	2.3
30+ years	57.9	3	5.2
<b>Total</b>	<b>102.2</b>	<b>4</b>	<b>3.9</b>

Source: The Kirby Institute

#### 4.4 HIV, hepatitis B surface antigen and hepatitis C antibody in blood donors

**Table 4.4.1** Number of donations tested for HIV antibody at blood services, number of donations positive for HIV antibody<sup>1</sup>, 1985 – 2013, by State/Territory and years of donation

State/ Territory	1985 <sup>2</sup> – 2003			2004 – 2005			2006 – 2007			2008 – 2009		
	Tests	Positive	Prevalence	Tests	Positive	Prevalence	Tests	Positive	Prevalence	Tests	Positive	Prevalence
NSW/ACT <sup>3</sup>	5 688 510	44	0.8	685 767	3	0.4	767 349	2	0.3	812 296	2	0.2
NT	162 694	1	0.6	20 939	0	0.0	20 292	0	0.0	24 104	0	0.0
QLD	3 344 057	32	1.0	473 053	2	0.4	482 500	2	0.4	527 114	6	1.1
SA	1 730 442	6	0.3	204 178	1	0.5	244 895	2	0.8	272 639	0	0.0
TAS	434 279	1	0.2	52 805	0	0.0	62 294	0	0.0	78 267	0	0.0
VIC	4 665 416	17	0.4	522 699	1	0.2	536 212	1	0.2	600 306	5	0.8
WA	1 598 133	13	0.8	232 349	0	0.0	231 209	1	0.4	255 295	0	0.0
<b>Total</b>	<b>17 623 531</b>	<b>114</b>	<b>0.6</b>	<b>2 191 790</b>	<b>7</b>	<b>0.3</b>	<b>2 344 751</b>	<b>8</b>	<b>0.3</b>	<b>2 570 021</b>	<b>13</b>	<b>0.5</b>

State/ Territory	2010 – 2011			2012 – 2013			All years		
	Tests	Positive	Prevalence	Tests	Positive	Prevalence	Tests	Positive	Prevalence
NSW/ACT <sup>3</sup>	870 127	3	0.3	827 730	4	0.5	9 651 779	58	0.6
NT	22 823	1	4.4	20 956	0	0.0	271 808	2	0.7
QLD	546 748	7	1.3	526 703	0	0.0	5 900 175	49	0.8
SA	267 234	0	0.0	255 567	0	0.0	2 974 955	9	0.3
TAS	92 954	0	0.0	102 213	0	0.0	822 812	1	0.1
VIC	624 088	2	0.3	630 276	0	0.0	7 578 997	26	0.3
WA	263 844	1	0.4	259 766	0	0.0	2 840 596	15	0.5
<b>Total</b>	<b>2 687 818</b>	<b>14</b>	<b>0.5</b>	<b>2 623 211</b>	<b>4</b>	<b>0.2</b>	<b>30 041 122</b>	<b>160</b>	<b>0.5</b>

<sup>1</sup> Prevalence per 100 000 donations.

<sup>2</sup> From 1 May 1985.

<sup>3</sup> HIV antibody testing of blood donors in the ACT carried out in NSW from 1 July 1998.

Source: Australian Red Cross Blood Service

**Table 4.4.2** Number of blood donors in Australia with HIV antibody, 1985 – 2013, by HIV exposure category and sex, and number of new HIV infections in blood donors with a previous donation negative for HIV antibody by years of donation

HIV exposure category	1985 – 2003		2004 – 2005		2006 – 2007		2008 – 2009		2010 – 2011		2012 – 2013		All years		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Total
Men who have sex with men <sup>1</sup>	22	0	3	0	0	0	6	0	2	0	4	0	37	0	37
Injecting drug use	4	0	1	0	1	0	0	0	0	0	0	0	6	0	6
Heterosexual contact	24	26	1	1	3	2	3	3	7	3	2	0	40	35	75
Person from a high prevalence country	0	1	0	0	0	0	0	0	0	0	1	0	1	1	2
Receipt of blood/tissue	1	1	0	0	0	0	0	0	0	0	0	0	1	1	2
Other	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
Undetermined	27	3	1	0	2	0	1	0	1	1	0	0	32	4	36
<b>Total</b>	<b>78</b>	<b>36</b>	<b>6</b>	<b>1</b>	<b>6</b>	<b>2</b>	<b>10</b>	<b>3</b>	<b>10</b>	<b>4</b>	<b>7</b>	<b>0</b>	<b>117</b>	<b>46</b>	<b>163</b>
<b>New HIV infection<sup>2</sup></b>	<b>35</b>	<b>17</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>47</b>	<b>23</b>	<b>70</b>

1 Includes one male who also reported a history of injecting drug use.

2 Year of HIV infection was estimated as the midpoint between the date of last HIV negative donation and the date of HIV positive donation.

Source: Australian Red Cross Blood Service

**Table 4.4.3** Number of donations tested for hepatitis B surface antigen at blood services, number of donations positive for hepatitis B surface antigen and prevalence of hepatitis B surface antigen<sup>1</sup>, by State/Territory and year of donation

State/ Territory	2009			2010			2011		
	Tests	Positive	Prevalence	Tests	Positive	Prevalence	Tests	Positive	Prevalence
NSW/ACT	424 627	46	10.8	428 144	44	10.3	441 983	46	10.4
NT	12 123	2	16.5	11 269	1	8.9	11 554	3	26.0
QLD	270 890	13	4.8	271 934	22	8.1	274 814	16	5.8
SA	138 255	9	6.5	132 871	6	4.5	134 363	6	4.5
TAS	41 010	0	0.0	44 706	1	2.2	48 248	1	2.1
VIC	310 968	35	11.3	304 717	38	12.5	319 371	31	9.7
WA	130 714	20	15.3	131 795	11	8.3	132 049	15	11.4
<b>Total</b>	<b>1 328 587</b>	<b>125</b>	<b>9.4</b>	<b>1 325 436</b>	<b>123</b>	<b>9.3</b>	<b>1 362 382</b>	<b>118</b>	<b>8.7</b>

State/ Territory	2012			2013		
	Tests	Positive	Prevalence	Tests	Positive	Prevalence
NSW/ACT	419 000	40	9.5	408 730	31	7.6
NT	10 610	1	9.4	10 346	1	9.7
QLD	262 480	20	7.6	264 223	18	6.8
SA	129 620	7	5.4	125 947	5	4.0
TAS	50 202	3	6.0	52 011	1	1.9
VIC	312 886	24	7.7	317 390	30	9.5
WA	127 653	18	14.1	132 113	13	9.8
<b>Total</b>	<b>1 312 451</b>	<b>113</b>	<b>8.6</b>	<b>1 310 760</b>	<b>99</b>	<b>7.6</b>

<sup>1</sup> Prevalence per 100 000 donations.

Source: Australian Red Cross Blood Service

**Table 4.4.4** Number of donations tested for hepatitis C antibody at blood services, number of donations positive for hepatitis C antibody and prevalence of hepatitis C antibody<sup>1</sup>, by State/Territory and year of donation

State/ Territory	2009			2010			2011		
	Tests	Positive	Prevalence	Tests	Positive	Prevalence	Tests	Positive	Prevalence
NSW/ACT	424 627	52	12.2	428 144	40	9.3	441 983	33	7.5
NT	12 123	1	8.2	11 269	1	8.9	11 554	1	8.7
QLD	270 890	22	8.1	271 934	16	5.9	274 814	16	5.8
SA	138 255	14	10.1	132 871	7	5.3	134 363	5	3.7
TAS	41 010	5	12.2	44 706	1	2.2	48 248	1	2.1
VIC	310 968	24	7.7	304 717	16	5.3	319 371	14	4.4
WA	130 714	10	7.7	131 795	4	3.0	132 049	11	8.3
<b>Total</b>	<b>1 328 587</b>	<b>128</b>	<b>9.6</b>	<b>1 325 436</b>	<b>85</b>	<b>6.4</b>	<b>1 362 382</b>	<b>81</b>	<b>5.9</b>

State/ Territory	2012			2013		
	Tests	Positive	Prevalence	Tests	Positive	Prevalence
NSW/ACT	419 000	31	7.4	408 730	23	5.6
NT	10 610	1	9.4	10 346	1	9.7
QLD	262 480	26	9.9	264 223	19	7.2
SA	129 620	5	3.9	125 947	6	4.8
TAS	50 202	2	4.0	52 011	2	3.8
VIC	312 886	19	6.1	317 390	16	5.0
WA	127 653	7	5.5	132 113	3	2.3
<b>Total</b>	<b>1 312 451</b>	<b>91</b>	<b>6.9</b>	<b>1 310 760</b>	<b>70</b>	<b>5.3</b>

<sup>1</sup> Prevalence per 100 000 donations.

Source: Australian Red Cross Blood Service

## 4.5 Genital Warts Surveillance Network

**Table 4.5.1** Number of Australian born women seen for the first time at sexual health services participating in the Genital Warts Surveillance Network, 2004 – 2013, and number (percent) diagnosed with genital warts by year and age group

		Warts diagnosis <sup>1</sup>					
		Australian born women aged <21 years		Australian born women aged 21 – 30 years		Australian born women aged >30 years	
<b>2004</b>	Seen	847	2 030	1 443			
	No. with warts (%)	95 (11.2)	231 (11.4)	62 (4.3)			
<b>2005</b>	Seen	773	1 650	1 171			
	No. with warts (%)	103 (13.3)	220 (13.3)	60 (5.1)			
<b>2006</b>	Seen	810	1 656	1 079			
	No. with warts (%)	103 (12.7)	225 (13.6)	65 (6.0)			
<b>2007</b>	Seen	783	1 642	1 044			
	No. with warts (%)	113 (14.4)	213 (13.0)	71 (6.8)			
<b>2008</b>	Seen	876	1 437	991			
	No. with warts (%)	68 (7.8)	121 (8.4)	46 (4.6)			
<b>2009</b>	Seen	974	1 506	940			
	No. with warts (%)	43 (4.4)	118 (7.8)	59 (6.3)			
<b>2010</b>	Seen	1 062	1 539	963			
	No. with warts (%)	22 (2.1)	73 (4.7)	62 (6.4)			
<b>2011</b>	Seen	1 075	1 496	961			
	No. with warts (%)	10 (.9)	46 (3.1)	45 (4.7)			
<b>2012</b>	Seen	1 127	1 715	1 114			
	No. with warts (%)	12 (1.1)	53 (3.1)	53 (4.8)			
<b>2013</b>	Seen	1 128	1 741	1 160			
	No. with warts (%)	6 (.5)	35 (2.0)	54 (4.7)			

<sup>1</sup> Data from 6 services in NSW, NT, QLD, VIC, WA

Source: Genital Warts Surveillance Network

**Table 4.5.2** Number of Australian born men seen for the first time at sexual health services participating in the Genital Wart Surveillance Network, 2004 – 2013, number (percent) diagnosed with genital warts, by age group and year

	Warts diagnosis <sup>1</sup>				
	Australian born heterosexual men aged <21 years	Australian born heterosexual men aged 21 – 30 years	Australian born heterosexual men aged > 30 years	Australian born homosexual men	Australian born bisexual men
<b>2004</b>					
Seen	273	1 590	1 760	1 026	230
No. with warts (%)	29 (10.6)	295 (18.6)	273 (15.5)	80 (7.8)	21 (9.1)
<b>2005</b>					
Seen	236	1 487	1 488	812	219
No. with warts (%)	19 (8.1)	291 (19.6)	216 (14.5)	67 (8.3)	20 (9.1)
<b>2006</b>					
Seen	274	1 460	1 427	844	204
No. with warts (%)	40 (14.6)	271 (18.6)	175 (12.3)	56 (6.6)	17 (8.3)
<b>2007</b>					
Seen	292	1 437	1 372	829	223
No. with warts (%)	41 (14.0)	278 (19.4)	171 (12.5)	61 (7.4)	9 (4.0)
<b>2008</b>					
Seen	389	1 559	1 387	897	204
No. with warts (%)	31 (8.0)	274 (17.6)	149 (10.7)	62 (6.9)	15 (7.4)
<b>2009</b>					
Seen	561	1 690	1 342	960	167
No. with warts (%)	31 (5.5)	264 (15.6)	148 (11.0)	59 (6.2)	7 (4.2)
<b>2010</b>					
Seen	678	1 820	1 404	1 047	219
No. with warts (%)	16 (2.4)	219 (12.0)	146 (10.4)	82 (7.8)	10 (4.6)
<b>2011</b>					
Seen	627	1 749	1 354	1 039	220
No. with warts (%)	13 (2.1)	159 (9.1)	136 (10.0)	62 (6.0)	12 (5.5)
<b>2012</b>					
Seen	588	1 884	1 503	1 169	232
No. with warts (%)	5 (.9)	153 (8.1)	148 (9.9)	63 (5.4)	13 (5.6)
<b>2013</b>					
Seen	606	1 820	1 489	1 316	265
No. with warts (%)	6 (1.0)	115 (6.3)	147 (9.9)	61 (4.6)	9 (3.4)

1 Data from 8 services from NSW, NT, QLD, TAS, VIC, WA

Source: Genital Warts Surveillance Network



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## 5 Risk behaviour

## 5.1 Sexual, injecting and HIV antibody testing behaviour among men who have sex with men

Table 5.1.1 Number of men who have sex with men participating in the Gay Community Periodic Surveys, 2009 – 2013, prevalence of anal intercourse by partner type, city and year of survey, and prevalence of injecting drug use and HIV antibody testing by city and year of survey

	Sydney <sup>1,2</sup>			Queensland <sup>1</sup>			Melbourne <sup>1</sup>								
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
<b>Sample size</b>	2 240	2 707	3 176	2 828	2 531	1 257	1 641	1 660	1 317	1 095	2 061	2 425	1 919	2 034	2 323
Unprotected anal intercourse with regular partners <sup>1</sup>	32.6	34	27.6	29.5	28.3	33.9	30.1	28.5	39.1	33.4	32.5	35.0	34.8	28.6	29.6
Unprotected anal intercourse with casual partners <sup>1</sup>	27.6	25.6	22.4	23.8	23.4	24.2	24.5	23.4	30.0	26.2	24.8	27.1	26.3	23.3	22.9
Injecting drug use <sup>1,3</sup>	7.8	6.9	5.2	5.9	6.2	6.1	5.3	5.9	3.0	4.0	6.7	4.5	4.9	9.5	3.9
<b>Sample size</b>	1 973	2 421	2 825	2 515	2 264	1 183	1 518	1 535	1 222	959	1 916	2 211	1 757	1 877	2 166
HIV antibody testing <sup>4</sup>	70.4	59.3	62.3	58.2	58.4	59.9	58	58.5	63.4	60.6	67.8	62.4	61.5	68.2	64.1

	Adelaide			Canberra			Perth			
	2009	2010	2011	2012	2013	2009	2011	2013	2010	2012
<b>Sample size</b>	896	1 031	697	790	790	289	269	173	912	815
Unprotected anal intercourse with regular partners <sup>1</sup>	27.5	30.9	29.5	27.3	27.3	38.9	42.2	41.7	34.8	35.9
Unprotected anal intercourse with casual partners <sup>1</sup>	22.5	16.4	22.1	25.2	25.2	34.7	17.7	23.5	31.4	26.5
Injecting drug use <sup>5</sup>	—	—	—	—	—	—	—	—	—	—
<b>Sample size</b>	858	965	654	755	755	281	259	161	882	787
HIV antibody testing <sup>4</sup>	66.3	50.5	51.9	59.4	59.4	67.1	67.3	62.5	62.9	48.7

1 Age-standardised and venue-adjusted prevalence

2 The Gay Community Periodic Survey in Sydney includes February survey data only.

3 Injecting drug use in the previous 6 months

4 HIV antibody testing in the previous 12 months excluding men with diagnosed HIV infection

5 Age standardised and venue adjusted prevalence was not calculated due to the relatively small number of men in Adelaide, Canberra and Perth reporting injecting drug use.

Source: Centre for Social Research in Health; The Kirby Institute; State AIDS Councils; State-based People living with HIV/AIDS organisations

## 5.2 Sexual and injecting behaviour among people who inject drugs

**Table 5.2.1** Number of people who inject drugs seen at needle and syringe programs who were tested for HIV or hepatitis C antibody, 2009 – 2013, percent reporting HIV and hepatitis C tests within the past twelve months, number reporting injecting drug use (IDU) in the past month, and percent reporting use of a needle and syringe after someone else in the past month by year, time since first injection, last drug injected and sex

2009

	Number tested			% reporting recent HIV test			% reporting recent hepatitis C test			Number reporting IDU last month			% using after someone else		
	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>
<i>Time since first injection</i>															
Less than 5 years	145	113	260	43	53	48	44	60	52	122	103	227	10	17	13
5 to 9 years	195	145	342	53	53	53	58	57	58	172	124	298	12	17	14
10 to 14 years	346	234	583	53	57	55	58	65	61	310	208	521	15	16	15
15 to 19 years	378	171	551	52	50	51	58	63	59	346	154	502	12	16	14
20+ years	622	226	855	46	51	47	54	60	56	563	202	771	15	10	14
Not reported	39	26	66	46	46	46	54	62	56	28	14	43	18	12	15
<i>Last drug injected</i>															
Amphetamine	402	243	649	44	52	47	50	58	53	344	201	549	11	13	12
Heroin	591	311	907	52	58	54	59	65	61	531	284	820	16	16	16
Other opiates	544	265	814	49	50	49	57	59	58	506	244	754	14	12	13
All other drugs	148	74	225	51	49	51	52	66	57	127	63	193	11	22	15
Not reported	40	22	62	53	45	50	60	59	60	33	13	46	23	18	21
<b>Total</b>	<b>1 725</b>	<b>915</b>	<b>2 657</b>	<b>49</b>	<b>53</b>	<b>51</b>	<b>55</b>	<b>61</b>	<b>58</b>	<b>1 541</b>	<b>805</b>	<b>2 362</b>	<b>14</b>	<b>15</b>	<b>14</b>

2010

	Number tested			% reporting recent HIV test			% reporting recent hepatitis C test			Number reporting IDU last month			% using after someone else		
	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>
<i>Time since first injection</i>															
Less than 5 years	132	71	204	42	45	43	43	55	48	106	63	170	10	12	11
5 to 9 years	158	122	281	41	58	48	45	60	51	140	111	252	12	17	14
10 to 14 years	298	170	472	45	56	49	51	61	55	267	152	421	11	18	13
15 to 19 years	323	154	480	49	55	51	56	59	57	292	130	424	14	7	12
20+ years	633	228	865	46	45	46	54	51	54	573	193	769	12	13	12
Not reported	36	14	51	50	29	45	50	29	43	25	11	37	14	9	13
<i>Last drug injected</i>															
Amphetamine	397	210	613	41	50	44	47	55	50	326	175	505	11	12	11
Heroin	522	272	797	51	52	51	57	57	57	471	242	715	13	16	14
Other opiates	478	207	687	43	49	45	51	52	52	456	184	641	11	11	11
All other drugs	175	66	244	49	61	52	52	73	57	145	56	204	12	16	13
Not reported	8	4	12	25	25	25	25	25	25	5	3	8	20	0	13
<b>Total</b>	<b>1 580</b>	<b>759</b>	<b>2 353</b>	<b>46</b>	<b>51</b>	<b>48</b>	<b>52</b>	<b>56</b>	<b>54</b>	<b>1 403</b>	<b>660</b>	<b>2 073</b>	<b>12</b>	<b>13</b>	<b>12</b>

## 2011

	Number tested			% reporting recent HIV test			% reporting recent hepatitis C test			Number reporting IDU last month			% using after someone else		
	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>
<i>Time since first injection</i>															
Less than 5 years	174	85	261	35	52	41	40	56	46	142	74	218	10	25	15
5 to 9 years	135	95	230	48	58	52	56	65	60	118	86	204	13	17	15
10 to 14 years	252	145	400	50	51	51	53	61	56	227	133	362	16	19	17
15 to 19 years	296	173	474	52	51	51	53	55	53	264	148	416	17	20	18
20+ years	656	251	909	49	49	49	52	58	54	586	223	810	14	7	12
Not reported	47	15	63	40	53	43	49	40	46	34	11	46	18	0	16
<i>Last drug injected</i>															
Amphetamine	382	247	632	47	50	49	49	55	51	320	215	537	14	16	15
Heroin	513	267	783	50	53	51	57	57	57	463	239	705	15	14	15
Other opiates	448	202	655	50	53	51	53	62	56	430	181	615	14	14	14
All other drugs	214	46	262	38	39	38	41	61	44	156	39	196	15	23	17
Not reported	3	2	5	33	50	40	33	100	60	2	1	3	0	0	0
<b>Total</b>	<b>1 560</b>	<b>764</b>	<b>2 337</b>	<b>48</b>	<b>51</b>	<b>49</b>	<b>51</b>	<b>58</b>	<b>54</b>	<b>1 371</b>	<b>675</b>	<b>2 056</b>	<b>15</b>	<b>15</b>	<b>15</b>

## 2012

	Number tested			% reporting recent HIV test			% reporting recent hepatitis C test			Number reporting IDU last month			% using after someone else		
	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>
<i>Time since first injection</i>															
Less than 5 years	200	55	257	38	62	43	43	65	48	149	50	201	7	10	8
5 to 9 years	123	88	212	49	55	51	50	64	56	114	78	193	16	13	15
10 to 14 years	206	152	361	49	53	50	53	62	57	188	134	325	21	22	22
15 to 19 years	278	143	425	54	51	53	60	55	58	252	131	386	18	19	18
20+ years	695	262	961	46	45	46	54	51	53	644	229	876	15	12	14
Not reported	44	18	63	48	50	48	57	44	52	33	14	48	28	20	25
<i>Last drug injected</i>															
Amphetamine	355	216	577	46	46	46	50	56	52	327	188	521	17	15	16
Heroin	507	262	773	52	54	53	61	59	61	466	234	704	20	14	18
Other opiates	416	187	605	47	47	47	54	54	54	393	171	565	12	18	14
All other drugs	257	49	309	38	61	42	43	59	46	190	41	233	12	17	13
Not reported	11	4	15	36	50	40	27	50	33	4	2	6	14	0	10
<b>Total</b>	<b>1 546</b>	<b>718</b>	<b>2 279</b>	<b>47</b>	<b>50</b>	<b>48</b>	<b>53</b>	<b>57</b>	<b>55</b>	<b>1 380</b>	<b>636</b>	<b>2 029</b>	<b>16</b>	<b>16</b>	<b>16</b>

2013

	Number tested			% reporting recent HIV test			% reporting recent hepatitis C test			Number reporting IDU last month			% using after someone else		
	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>
<i>Time since first injection</i>															
Less than 5 years	177	70	249	42	57	46	38	61	45	144	58	204	7	20	10
5 to 9 years	131	92	224	49	55	52	53	53	54	107	81	188	15	23	18
10 to 14 years	200	124	326	54	60	56	57	57	57	182	116	300	15	17	16
15 to 19 years	277	144	426	54	56	54	57	55	56	251	132	388	21	17	20
20+ years	713	275	993	47	46	47	49	48	49	637	244	885	14	10	13
Not reported	65	22	89	46	41	44	51	55	51	54	13	67	36	0	28
<i>Last drug injected</i>															
Amphetamine	413	249	668	54	52	53	55	54	54	357	221	582	15	15	15
Heroin	449	230	683	50	51	50	55	52	54	411	205	620	17	16	17
Other opiates	423	177	601	46	53	48	49	53	50	387	164	552	13	12	13
All other drugs	269	68	342	44	60	48	41	54	44	218	54	276	16	23	18
Not reported	9	3	13	44	67	46	33	33	31	2	0	2	40	0	25
<b>Total</b>	<b>1 563</b>	<b>727</b>	<b>2 307</b>	<b>49</b>	<b>53</b>	<b>50</b>	<b>51</b>	<b>53</b>	<b>51</b>	<b>1 375</b>	<b>644</b>	<b>2 032</b>	<b>16</b>	<b>15</b>	<b>15</b>

<sup>1</sup> Totals include people whose sex was reported as transgender and people whose sex was not reported.

Source: Collaboration of Australian Needle and Syringe Programs

**Table 5.2.2** Number of people who inject drugs seen at needle and syringe programs who were tested for HIV or hepatitis C antibody, 2009 – 2013, percent reporting HIV and hepatitis C tests within the last twelve months, number reporting sexual intercourse in the past month, and percent reporting condom use at last intercourse by year, age group, sexual identity and sex

2009

	Number tested			% reporting recent HIV test			% reporting recent hepatitis C test			Number reporting sexual intercourse			% using condoms at last intercourse <sup>2</sup>		
	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>
<i>Age group</i>															
Less than 20 years	39	30	70	33	67	49	31	63	46	27	29	57	74	41	58
20 to 24 years	118	88	207	48	52	50	54	65	59	77	64	142	44	36	41
25 to 34 years	577	349	930	56	58	57	59	67	62	350	253	606	34	28	32
35 to 44 years	624	310	939	46	49	47	56	57	56	325	196	521	30	26	28
45+ years	367	137	510	45	46	45	51	55	52	151	65	219	21	22	21
Not reported	0	1	1	0	0	0	0	0	0	0	1	1	0	1	100
<i>Sexual identity</i>															
Heterosexual	1 517	684	2 207	48	51	49	55	59	56	812	428	1 243	31	24	29
Bisexual	80	146	229	54	63	60	56	71	65	49	115	165	41	46	45
Homosexual	48	37	87	71	54	64	65	70	68	28	25	54	64	16	43
Not reported	80	48	134	51	46	51	51	63	57	41	40	84	29	30	30
<b>Total</b>	<b>1 725</b>	<b>915</b>	<b>2 657</b>	<b>49</b>	<b>53</b>	<b>51</b>	<b>55</b>	<b>61</b>	<b>58</b>	<b>930</b>	<b>608</b>	<b>1 546</b>	<b>32</b>	<b>28</b>	<b>31</b>

2010

	Number tested			% reporting recent HIV test			% reporting recent hepatitis C test			Number reporting sexual intercourse			% using condoms at last intercourse <sup>2</sup>		
	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>
<i>Age group</i>															
Less than 20 years	19	15	34	32	53	41	36	53	44	13	14	27	54	57	56
20 to 24 years	86	75	163	42	61	51	37	67	51	66	58	125	61	31	47
25 to 34 years	502	263	766	49	57	52	55	59	56	315	194	510	35	34	35
35 to 44 years	571	248	825	48	50	48	56	56	56	295	161	460	29	30	29
45+ years	401	157	563	40	39	40	47	48	48	163	59	223	18	19	18
Not reported	1	1	2	100	0	50	0	0	0	0	1	1	0	0	0
<i>Sexual identity</i>															
Heterosexual	1 390	558	1 954	45	49	46	51	55	52	751	355	1 110	30	28	30
Bisexual	61	124	188	54	63	61	59	65	63	30	88	118	43	40	41
Homosexual	49	36	86	63	50	58	69	58	65	31	24	56	39	33	38
Not reported	80	41	125	46	46	46	50	49	50	40	20	62	53	35	47
<b>Total</b>	<b>1 580</b>	<b>759</b>	<b>2 353</b>	<b>46</b>	<b>51</b>	<b>48</b>	<b>52</b>	<b>56</b>	<b>54</b>	<b>852</b>	<b>487</b>	<b>1 346</b>	<b>32</b>	<b>31</b>	<b>32</b>

## 2011

	Number tested			% reporting recent HIV test			% reporting recent hepatitis C test			Number reporting sexual intercourse			% using condoms at last intercourse <sup>2</sup>		
	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>
<i>Age group</i>															
Less than 20 years	22	12	34	36	75	50	36	75	50	17	5	22	65	60	64
20 to 24 years	96	44	142	43	57	48	43	64	50	72	31	105	56	32	49
25 to 34 years	457	287	748	50	56	52	54	63	57	270	204	476	36	30	34
35 to 44 years	569	250	824	45	50	47	49	56	51	278	158	438	26	26	26
45+ years	410	169	580	51	42	48	55	51	54	163	65	228	29	29	29
Not reported	6	2	9	17	0	11	33	0	22	2	2	4	50	50	50
<i>Sexual identity</i>															
Heterosexual	1 393	547	1 943	47	49	48	51	56	53	728	332	1 062	33	26	31
Bisexual	57	141	203	58	58	58	60	60	59	29	93	125	41	37	39
Homosexual	51	38	91	59	58	58	53	71	60	23	20	44	48	20	36
Not reported	59	38	100	46	47	46	46	68	54	22	20	42	45	45	45
<b>Total</b>	<b>1 560</b>	<b>764</b>	<b>2 337</b>	<b>48</b>	<b>51</b>	<b>49</b>	<b>51</b>	<b>58</b>	<b>54</b>	<b>802</b>	<b>465</b>	<b>1 273</b>	<b>34</b>	<b>29</b>	<b>32</b>

## 2012

	Number tested			% reporting recent HIV test			% reporting recent hepatitis C test			Number reporting sexual intercourse			% using condoms at last intercourse <sup>2</sup>		
	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>
<i>Age group</i>															
Less than 20 years	22	6	28	45	67	50	50	50	50	16	5	21	63	40	57
20 to 24 years	108	32	141	46	75	52	52	75	57	79	27	106	43	52	45
25 to 34 years	412	241	657	51	54	52	58	63	60	262	180	446	37	34	36
35 to 44 years	585	266	856	47	50	48	52	53	52	306	165	474	27	28	28
45+ years	418	172	595	45	42	44	52	49	52	143	70	215	24	27	26
Not reported	1	1	2	100	0	50	100	100	100	0	1	1	0	0	0
<i>Sexual identity</i>															
Heterosexual	1 350	506	1 859	46	48	47	53	55	54	694	314	1 010	29	28	29
Bisexual	69	127	200	59	56	58	62	60	61	40	94	136	48	47	48
Homosexual	42	31	77	48	61	55	48	68	58	21	11	34	52	0	35
Not reported	85	54	143	52	54	51	59	56	57	51	29	83	47	38	43
<b>Total</b>	<b>1 546</b>	<b>718</b>	<b>2 279</b>	<b>47</b>	<b>50</b>	<b>48</b>	<b>53</b>	<b>57</b>	<b>55</b>	<b>806</b>	<b>448</b>	<b>1 263</b>	<b>32</b>	<b>32</b>	<b>32</b>

## 2013

	Number tested			% reporting recent HIV test			% reporting recent hepatitis C test			Number reporting sexual intercourse			% using condoms at last intercourse <sup>2</sup>		
	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>	M	F	T <sup>1</sup>
<i>Age group</i>															
Less than 20 years	14	16	30	36	56	47	21	63	43	12	13	25	58	31	44
20 to 24 years	96	44	140	44	66	51	44	57	48	71	36	107	63	42	56
25 to 34 years	394	215	616	53	60	56	54	58	56	267	161	433	40	24	34
35 to 44 years	569	256	828	51	54	52	52	54	53	288	169	458	35	21	30
45+ years	483	195	684	45	38	43	49	44	47	169	76	247	25	26	26
Not reported	7	1	9	43	100	44	29	100	33	5	1	6	40	0	33
<i>Sexual identity</i>															
Heterosexual	1 322	519	1 848	48	50	49	50	53	51	690	330	1 022	36	22	31
Bisexual	59	114	175	49	63	58	51	57	55	26	78	106	38	32	34
Homosexual	73	26	105	68	35	59	70	42	62	46	13	63	59	38	56
Not reported	109	68	179	43	63	51	43	53	47	50	35	85	42	29	36
<b>Total</b>	<b>1 563</b>	<b>727</b>	<b>2 307</b>	<b>49</b>	<b>53</b>	<b>50</b>	<b>51</b>	<b>53</b>	<b>51</b>	<b>812</b>	<b>456</b>	<b>1 276</b>	<b>38</b>	<b>25</b>	<b>33</b>

1 Totals include people whose sex was reported as transgender and people whose sex was not reported.

2 Includes only those who reported sexual intercourse in the last month.

Source: Collaboration of Australian Needle and Syringe Programs



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## 6 Estimates of the number of people living with HIV infection and viral hepatitis

### 6.1 Estimates of the number of people living with HIV infection

**Table 6.1.1** Estimated number (plausible range) of people living with HIV infection in Australia in 2013, by State/Territory and sex

State/Territory	Male	Range	Female	Range	Total	Range
ACT	250	200 – 300	45	40 – 50	300	250 – 350
NSW	11 800	10 800 – 13 600	1 200	1 100 – 1 400	13 000	11 900 – 15 000
NT	150	150 – 190	50	45 – 60	200	200 – 250
QLD	3 400	3 100 – 3 900	500	450 – 600	3 900	3 600 – 4 500
SA	1 000	900 – 1 150	170	150 – 200	1 150	1 050 – 1 350
TAS	150	100 – 200	30	25 – 35	175	150 – 200
VIC	5 700	5 200 – 6 500	600	550 – 700	6 300	5 700 – 7 200
WA	1 400	1 300 – 1 600	400	350 – 450	1 800	1 600 – 2 000
<b>Total</b>	<b>23 800</b>	<b>21 800 – 27 400</b>	<b>3 000</b>	<b>2 700 – 3 500</b>	<b>26 800</b>	<b>24 500 – 30 900</b>

Source: State/Territory health authorities; The Kirby Institute

### 6.2 Estimated number of people living with hepatitis B virus infection in 2013

**Table 6.2.1** Estimated number of people living with hepatitis B virus infection in 2013

Characteristic	Number	Plausible range
Hepatitis B virus prevalence in 2013	210 000	172 000 – 249 000
<b>During 2013</b>		
Deaths attributable to chronic hepatitis B	389	300 – 635

Note: Using an alternative methodology, the number of people living with hepatitis B virus infection in Australia in 2011 was estimated at 218 000 (plausible range 192 000 – 284 000). Accessible from: <http://onlinelibrary.wiley.com/doi/10.1111/1753-6405.12049/abstract>

Source: Hepatitis B Mapping Project, Victorian Infectious Diseases Reference Laboratory & Australasian Society for HIV Medicine, 2014

### 6.3 Estimates of incidence and number of people living with hepatitis C virus infection

**Table 6.3.1** Estimated incidence and number of people living with hepatitis C virus infection in 2003 – 2013 by stage of liver disease, Australia

	2003	Range	2008	Range	2013	Range
Total HCV antibody positive	280 000	220 000 – 295 000	305 000	240 000 – 320 000	310 000	240 000 – 325 000
Total HCV viremic cases	210 000	165 000 – 220 000	225 000	180 000 – 240 000	230 000	180 000 – 245 000
Estimated number of incident cases per year	10 300	9 600 – 11 000	6 300	5 900 – 6 800	5 400	5 000 – 5 800
<b>Estimated number living with:</b>						
Chronic hepatitis C infection with stage F0-F1 liver disease	170 000	135 000 – 180 000	170 000	130 000 – 180 000	155 000	115 000 – 165 000
Chronic hepatitis C infection with stage F2 liver disease	19 800	14 900 – 23 000	28 000	21 000 – 33 000	36 000	26 000 – 41 000
Chronic hepatitis C infection with stage F3 liver disease	11 300	7 800 – 15 600	18 400	12 100 – 26 000	28 000	17 700 – 39 000
Living with hepatitis C related cirrhosis F4	4 500	3 000 – 6 400	7 100	4 500 – 10 500	11 400	7 100 – 17 000
Decompensated cirrhosis/HCC/liver transplant eligible	1 020	680 – 1 470	1 590	1 040 – 2 400	2 600	1 660 – 3 900
Estimated number of incident cases of HCC	180	120 – 250	290	190 – 410	450	290 – 640
Estimated number of incident cases of decompensated cirrhosis	210	130 – 300	320	200 – 490	520	310 – 800
Estimated number of incident cases of liver-related death	250	170 – 340	390	260 – 540	630	400 – 880

Source: Center for Disease Analysis, Kirby Institute

**Table 6.3.2** Estimated incidence and number of people living with hepatitis C virus infection in 2003 – 2013 by stage of liver disease, Australian Capital Territory

	2003	Range	2008	Range	2013	Range
Total HCV antibody positive	4 400	3 500 – 4 700	4 800	3 800 – 5 100	4 900	3 800 – 5 200
Total HCV viremic cases	3 300	2 600 – 3 500	3 600	2 800 – 3 800	3 600	2 800 – 3 800
Estimated number of incident cases per year	160	150 – 170	100	90 – 110	90	80 – 90
<b>Estimated number living with:</b>						
F0-F1	2 700	2 100 – 2 900	2 700	2 100 – 2 900	2 400	1 810 – 2 600
F2	310	240 – 360	450	330 – 520	560	410 – 650
F3	180	120 – 250	290	190 – 410	440	280 – 610
F4	70	50 – 100	110	70 – 170	180	110 – 270
Decompensated cirrhosis/HCC/liver transplant eligible	20	10 – 20	30	20 – 40	40	30 – 60
Estimated number of incident cases of HCC	<10		<10		<10	
Estimated number of incident cases of decompensated cirrhosis	<10		<10		<10	
Estimated number of incident cases of liver-related death	<10		<10		10	0 – 20

Source: Source: Center for Disease Analysis, Kirby Institute

**Table 6.3.3** Estimated incidence and number of people living with hepatitis C virus infection in 2003 – 2013 by stage of liver disease, New South Wales

	2003	Range	2008	Range	2013	Range
Total HCV antibody positive	99 000	79 000 – 105 000	110 000	85 000 – 115 000	110 000	86 000 – 115 000
Total HCV viremic cases	74 000	59 000 – 79 000	80 000	63 000 – 85 000	82 000	64 000 – 86 000
Estimated number of incident cases per year	3 700	3 400 – 3 900	2 300	2 100 – 2 400	1 930	1 800 – 2 100
<b>Estimated number living with:</b>						
F0-F1	61 000	48 000 – 64 000	61 000	47 000 – 64 000	55 000	41 000 – 59 000
F2	7 100	5 300 – 8 200	10 100	7 400 – 11 700	12 700	9 200 – 14 500
F3	4 000	2 800 – 5 600	6 500	4 300 – 9 100	9 900	6 300 – 13 700
F4	1 600	1 050 – 2 300	2 500	1 600 – 3 700	4 100	2 500 – 6 100
Decompensated cirrhosis/HCC/ liver transplant eligible	360	240 – 520	570	370 – 840	920	590 – 1 390
Estimated number of incident cases of HCC	60	40 – 90	100	70 – 150	160	100 – 230
Estimated number of incident cases of decompensated cirrhosis	70	50 – 110	110	70 – 170	190	110 – 280
Estimated number of incident cases of liver-related death	90	60 – 120	140	90 – 190	220	140 – 310

Source: Source: Center for Disease Analysis, Kirby Institute

**Table 6.3.4** Estimated incidence and number of people living with hepatitis C virus infection in 2003 – 2013 by stage of liver disease, Northern Territory

	2003	Range	2008	Range	2013	Range
Total HCV antibody positive	4 400	3 500 – 4 700	4 900	3 800 – 5 100	5 000	3 900 – 5 200
Total HCV viremic cases	3 300	2 600 – 3 500	3 600	2 900 – 3 800	3 700	2 900 – 3 900
Estimated number of incident cases per year	160	150 – 180	100	90 – 110	90	80 – 90
<b>Estimated number living with:</b>						
F0-F1	2 700	2 100 – 2 900	2 700	2 100 – 2 900	2 500	1 830 – 2 700
F2	320	240 – 370	450	330 – 530	570	420 – 660
F3	180	120 – 250	290	190 – 410	440	280 – 620
F4	70	50 – 100	110	70 – 170	180	110 – 270
Decompensated cirrhosis/HCC/ liver transplant eligible	20	10 – 20	30	20 – 40	40	30 – 60
Estimated number of incident cases of HCC	<10		<10		<10	
Estimated number of incident cases of decompensated cirrhosis	<10		<10		<10	
Estimated number of incident cases of liver-related death	<10		<10		10	0 – 20

Source: Source: Center for Disease Analysis, Kirby Institute

**Table 6.3.5 Estimated incidence and number of people living with hepatitis C virus infection in 2003 – 2013 by stage of liver disease, Queensland**

	2003	Range	2008	Range	2013	Range
Total HCV antibody positive	58 000	46 000 – 61 000	63 000	50 000 – 67 000	64 000	50 000 – 68 000
Total HCV viremic cases	43 000	34 000 – 46 000	47 000	37 000 – 50 000	48 000	37 000 – 51 000
Estimated number of incident cases per year	2 100	1 990 – 2 300	1 310	1 220 – 1 400	1 120	1 040 – 1 190
<b>Estimated number living with:</b>						
F0-F1	35 000	28 000 – 37 000	36 000	27 000 – 38 000	32 000	24 000 – 34 000
F2	4 100	3 100 – 4 800	5 900	4 400 – 6 900	7 400	5 400 – 8 500
F3	2 300	1 620 – 3 200	3 800	2 500 – 5 300	5 800	3 700 – 8 000
F4	930	610 – 1 320	1 470	930 – 2 200	2 400	1 480 – 3 500
Decompensated cirrhosis/HCC/ liver transplant eligible	210	140 – 300	330	220 – 490	540	340 – 810
Estimated number of incident cases of HCC	40	30 – 50	60	40 – 90	90	60 – 130
Estimated number of incident cases of decompensated cirrhosis	40	30 – 60	70	40 – 100	110	60 – 170
Estimated number of incident cases of liver-related death	50	40 – 70	80	50 – 110	130	80 – 180

Source: Source: Center for Disease Analysis, Kirby Institute

**Table 6.3.6 Estimated incidence and number of people living with hepatitis C virus infection in 2003 – 2013 by stage of liver disease, South Australia**

	2003	Range	2008	Range	2013	Range
Total HCV antibody positive	14 400	11 400 – 15 300	15 600	12 300 – 16 500	15 900	12 400 – 16 800
Total HCV viremic cases	10 700	8 500 – 11 400	11 600	9 200 – 12 300	11 800	9 200 – 12 500
Estimated number of incident cases per year	530	500 – 570	330	300 – 350	280	260 – 300
<b>Estimated number living with:</b>						
F0-F1	8 800	6 900 – 9 300	8 800	6 700 – 9 300	7 900	5 900 – 8 500
F2	1 020	770 – 1 190	1 450	1 070 – 1 690	1 830	1 340 – 2 100
F3	580	400 – 810	940	620 – 1 320	1 420	910 – 1 980
F4	230	150 – 330	360	230 – 540	590	370 – 880
Decompensated cirrhosis/HCC/ liver transplant eligible	50	40 – 80	80	50 – 120	130	90 – 200
Estimated number of incident cases of HCC	<10		20	10 – 20	20	20 – 30
Estimated number of incident cases of decompensated cirrhosis	10	0 – 20	20	10 – 30	30	20 – 40
Estimated number of incident cases of liver-related death	10	0 – 20	20	10 – 30	30	20 – 50

Source: Source: Center for Disease Analysis, Kirby Institute

**Table 6.3.7** Estimated incidence and number of people living with hepatitis C virus infection in 2003 – 2013 by stage of liver disease, Tasmania

	2003	Range	2008	Range	2013	Range
Total HCV antibody positive	6 200	4 900 – 6 600	6 700	5 300 – 7 100	6 900	5 400 – 7 300
Total HCV viremic cases	4 600	3 700 – 4 900	5 000	4 000 – 5 300	5 100	4 000 – 5 400
Estimated number of incident cases per year	230	210 – 250	140	130 – 150	120	110 – 130
<b>Estimated number living with:</b>						
F0-F1	3 800	3 000 – 4 000	3 800	2 900 – 4 000	3 400	2 600 – 3 700
F2	440	330 – 510	630	460 – 730	790	580 – 910
F3	250	170 – 350	410	270 – 570	620	400 – 860
F4	100	70 – 140	160	100 – 230	250	160 – 380
Decompensated cirrhosis/HCC/ liver transplant eligible	20	20 – 30	40	20 – 50	60	40 – 90
Estimated number of incident cases of HCC	<10		<10		10	0 – 20
Estimated number of incident cases of decompensated cirrhosis	<10		<10		10	0 – 20
Estimated number of incident cases of liver-related death	<10		<10		10	0 – 20

Source: Source: Center for Disease Analysis, Kirby Institute

**Table 6.3.8** Estimated incidence and number of people living with hepatitis C virus infection in 2003 – 2013 by stage of liver disease, Victoria

	2003	Range	2008	Range	2013	Range
Total HCV antibody positive	67 000	54 000 – 72 000	73 000	58 000 – 78 000	75 000	58 000 – 79 000
Total HCV viremic cases	50 000	40 000 – 53 000	55 000	43 000 – 58 000	55 000	43 000 – 59 000
Estimated number of incident cases per year	2 500	2 300 – 2 700	1 530	1 430 – 1 640	1 310	1 220 – 1 400
<b>Estimated number living with:</b>						
F0-F1	41 000	32 000 – 44 000	41 000	32 000 – 44 000	37 000	28 000 – 40 000
F2	4 800	3 600 – 5 600	6 800	5 100 – 8 000	8 600	6 300 – 9 900
F3	2 700	1 900 – 3 800	4 400	2 900 – 6 200	6 700	4 300 – 9 300
F4	1 090	720 – 1 540	1 710	1 090 – 2 500	2 800	1 720 – 4 100
Decompensated cirrhosis/HCC/ liver transplant eligible	250	170 – 360	390	250 – 570	630	400 – 940
Estimated number of incident cases of HCC	40	30 – 60	70	50 – 100	110	70 – 160
Estimated number of incident cases of decompensated cirrhosis	50	30 – 70	80	50 – 120	130	80 – 190
Estimated number of incident cases of liver-related death	60	40 – 80	100	60 – 130	150	100 – 210

Source: Source: Center for Disease Analysis, Kirby Institute

**Table 6.3.9** Estimated incidence and number of people living with hepatitis C virus infection in 2003 – 2013 by stage of liver disease, Western Australia

	2003	Range	2008	Range	2013	Range
Total HCV antibody positive	25 000	19 600 – 26 000	27 000	21 000 – 29 000	27 000	21 000 – 29 000
Total HCV viremic cases	18 400	14 600 – 19 500	20 000	15 900 – 21 000	20 000	16 000 – 22 000
Estimated number of incident cases per year	910	850 – 980	560	520 – 600	480	450 – 510
<b>Estimated number living with:</b>						
F0-F1	15 200	11 900 – 16 000	15 200	11 700 – 16 100	13 600	10 200 – 14 700
F2	1 760	1 320 – 2 000	2 500	1 860 – 2 900	3 200	2 300 – 3 600
F3	1 000	690 – 1 380	1 630	1 070 – 2 300	2 500	1 580 – 3 400
F4	400	260 – 560	630	400 – 930	1 010	630 – 1 510
Decompensated cirrhosis/HCC/ liver transplant eligible	90	60 – 130	140	90 – 210	230	150 – 350
Estimated number of incident cases of HCC	20	10 – 20	30	20 – 40	40	30 – 60
Estimated number of incident cases of decompensated cirrhosis	20	10 – 30	30	20 – 40	50	30 – 70
Estimated number of incident cases of liver-related death	20	20 – 30	40	20 – 50	60	40 – 80

Source: Source: Center for Disease Analysis, Kirby Institute



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## 7 Uptake of treatment for HIV infection and viral hepatitis

### 7.1 Uptake of antiretroviral treatment for HIV infection

Table 7.1.1 Antiretroviral treatment among people enrolled in the Australian HIV Observational Database in 2013

Characteristic	Current antiretroviral treatment <sup>1</sup>						Total
	None	Mono and Double therapy	3+ NRTI±PI (not NNRTI, not II)	3+ NRTI +NNRTI (not PI, not II)	3+ NNRTI+PI, ±NRTI (not II)	3+ II, ±NRTI, ±NNRTI, ±PI	
<b>Total number</b>	<b>134</b>	<b>85</b>	<b>529</b>	<b>1 013</b>	<b>66</b>	<b>501</b>	<b>2 328</b>
<b>Sex</b>							
Male (%)	119 (89)	82 (96)	464 (88)	930 (92)	62 (94)	473 (94)	2 130
Female (%)	15 (11)	3 (4)	65 (12)	83 (8)	4 (6)	28 (6)	198
<b>Age at enrolment (years)</b>							
Less than 30 (%)	25 (19)	4 (5)	58 (11)	106 (10)	5 (8)	39 (8)	237
30 – 39 (%)	62 (46)	22 (26)	188 (36)	343 (34)	17 (26)	135 (27)	767
40 – 49 (%)	23 (17)	35 (41)	182 (34)	336 (33)	29 (44)	196 (39)	801
50+ (%)	24 (18)	24 (28)	101 (19)	228 (23)	15 (23)	131 (26)	523
<b>Exposure category</b>							
Men who have sex with men (%)	100 (75)	71 (84)	392 (74)	738 (73)	52 (79)	406 (81)	1 759
Other/not reported (%)	34 (25)	14 (16)	137 (26)	275 (27)	14 (21)	95 (19)	569
<b>Viral load at enrolment (copies/ml)</b>							
Less than 400 (%)	53 (43)	52 (66)	324 (64)	663 (70)	36 (55)	296 (63)	1 424
400 – 10 000 (%)	27 (22)	15 (19)	91 (18)	111 (12)	19 (29)	71 (15)	334
10 000+ (%)	42 (34)	12 (15)	89 (18)	169 (18)	10 (15)	102 (22)	424
Not reported	12	6	25	70	1	32	146
<b>CD4+ count at enrolment (cells/µl)</b>							
Less than 200 (%)	6 (5)	6 (7)	46 (9)	68 (7)	8 (12)	66 (14)	200
200 – 500 (%)	33 (27)	43 (52)	228 (45)	405 (42)	30 (46)	203 (43)	942
500+ (%)	85 (69)	33 (40)	232 (46)	489 (51)	27 (42)	207 (43)	1 073
Not reported	10	3	23	51	1	25	113
<b>AIDS prior to enrolment</b>							
No (%)	124 (93)	65 (76)	461 (87)	866 (85)	50 (76)	377 (75)	1 943
Yes (%)	10 (7)	20 (24)	68 (13)	147 (15)	16 (24)	124 (25)	385
<b>Hepatitis C antibody positive</b>							
No	101 (75)	73 (86)	421 (80)	845 (83)	59 (89)	400 (80)	1 899
Yes	16 (12)	7 (8)	58 (11)	65 (6)	3 (5)	62 (12)	211
<b>Regimen of longest duration in 2011</b>							
None	92 (83)	0 (0)	7 (1)	19 (2)	0 (0)	9 (2)	127
Mono and Double therapy	1 (1)	70 (82)	3 (1)	4 (0)	0 (0)	4 (1)	82
3+ NRTI±PI (not NNRTI, not II)	5 (5)	7 (8)	500 (96)	22 (2)	3 (5)	38 (8)	575
3+ NRTI+NNRTI (not PI,not II)	8 (7)	4 (5)	9 (2)	940 (95)	0 (0)	13 (3)	974
3+ NNRTI+PI, ±NRTI (not II)	1 (1)	0 (0)	0 (0)	0 (0)	62 (94)	5 (1)	68
3+ II, ±NRTI, ±NNRTI, ±PI	4 (4)	4 (5)	2 (0)	6 (1)	1 (2)	425 (86)	442

1 **NRTI**: Nucleoside reverse transcriptase inhibitor; **NNRTI**: Non-nucleoside reverse transcriptase inhibitor; **PI**: protease inhibitor; **II**: Integrase Inhibitor.

**Table 7.1.2** Number of men with diagnosed HIV infection participating in the Gay Community Periodic Surveys, 2009 – 2013, and proportion<sup>1</sup> reporting use of antiretroviral treatment for HIV infection by city and year

City	Year of survey				
	2009	2010	2011	2012	2013
<b>Melbourne</b>					
Sample size	145	214	162	157	157
Proportion reporting use of antiretroviral therapy	61.3	69.7	72.6	77.7	65.7
<b>Queensland</b>					
Sample size	74	123	125	95	136
Proportion reporting use of antiretroviral therapy	61.5	68.5	69.7	69.8	86.3
<b>Sydney<sup>2</sup></b>					
Sample size	267	286	351	313	267
Proportion reporting use of antiretroviral therapy	73.5	68.9	70.6	80.2	76.6
<b>Adelaide, Canberra &amp; Perth (combined)</b>					
Sample size	46	96	53	63	12
Proportion reporting use of antiretroviral therapy	62.9	76.4	89.1	83.3	46.5

1 Age standardised and venue adjusted prevalence.

2 Sydney Gay Community Periodic Survey includes February survey data only.

3 2009 data from Adelaide and Canberra; 2010 data from Adelaide and Perth; 2011 data from Adelaide and Canberra; 2012 data from Adelaide and Perth; 2013 data from Canberra.

Source: Centre for Social Research in Health; The Kirby Institute; State AIDS Councils, State/Territory organisations representing people living with HIV/AIDS

## 7.2 Monitoring prescriptions for HIV treatment

Table 7.2.1 Number of people prescribed antiretroviral treatment for HIV infection through the Highly Specialised Drugs (S100) Program by antiretroviral agent and year

Antiretroviral agent	Year of prescription <sup>1,2</sup>				
	2009	2010	2011	2012	2013
<b>Nucleoside analogue reverse transcriptase inhibitors</b>					
Abacavir	544	492	473	425	400
Didanosine	229	163	117	84	60
Emtricitabine	131	211	146	157	60
Lamivudine	921	822	718	609	540
Stavudine	104	77	48	36	20
Zidovudine	156	128	98	70	60
Lamivudine & Zidovudine	846	719	602	461	400
Abacavir & Lamivudine	2 243	2 220	2 179	2 041	2 500
Abacavir, Lamivudine & Zidovudine	240	163	133	103	100
Tenofovir	1 294	1 586	1 967	2 039	2 480
Tenofovir & Emtricitabine	5 246	4 772	4 510	4 404	4 340
<b>Non-nucleoside analogue reverse transcriptase inhibitors</b>					
Delavirdine	7	6	-	-	-
Efavirenz	2 996	2 003	973	738	700
Nevirapine	2 791	2 809	2 728	2 376	2 260
Etravirine	155	403	456	454	520
Rilpivirine	-	-	-	18	40
<b>Protease inhibitors</b>					
Atazanavir	2 609	2 879	2 906	2 582	2 380
Darunavir	685	887	1 058	1 131	1 140
Fosamprenavir	219	181	148	111	80
Indinavir	52	31	21	18	20
Lopinavir & ritonavir	1 871	1 734	1 581	1 341	960
Ritonavir	2 850	3 181	3 098	2 652	3 180
Saquinavir	148	121	95	72	40
Tipranavir	27	20	15	11	<5
<b>Fusion inhibitors</b>					
Enfuvirtide	60	37	22	13	20
Maraviroc	-	55	118	122	160
<b>Integrase inhibitor</b>					
Raltegravir	821	1 250	1 848	2 250	2 740
<b>Combination Class Agents</b>					
Tenofovir, Emtricitabine & Efavirenz	-	2 013	2 873	2 786	3 100
Tenofovir, Emtricitabine & Rilpivirine	-	-	-	217	1 040
<b>Total patients<sup>3</sup></b>	<b>10 900</b>	<b>12 400</b>	<b>12 700</b>	<b>12 800</b>	<b>13 700</b>
<b>Total cost<sup>4</sup> (\$'000s)</b>	<b>156 810</b>	<b>181 508</b>	<b>200 165</b>	<b>210 005</b>	<b>229 000</b>

1 The number of people dispensed each antiretroviral drug during a calendar year was estimated by calculating the average of the total number of people dispensed each drug during the corresponding financial year quarters. Number of person years for July – December 2009 to December 2012 estimated from the HSD Program Public Hospital Dispensed National Pack Number Report because of changes to S100 data collection methodology. Number of person years for January 2013 onwards estimated from the PBS item reports on services and benefits.

2 Dashes (-) indicate that data were not available.

3 Total patients calculated as (Lamivudine + Combivir (Lamivudine & Zidovudine)+Trizivir (Abacavir, Lamivudine & Zidovudine)+Kivexa (Abacavir & Lamivudine)+Emtricitabine +Truvada(Tenofovir & Emtricitabine) + Atripla(Tenofovir & Emtricitabine & Efavirenz) + Exiplera(Tenofovir & Emtricitabine & Rilpivirine) )/the proportion of patients in the Australian HIV Observational Database receiving any of the previously mentioned drugs in each year. Estimates of total patients are rounded to nearest 100 patients.

4 Public Hospital Expenditure.

Source: Highly Specialised Drugs (S100) Program

## 7.3 Monitoring prescriptions for viral hepatitis

**Table 7.3.1** Number of people dispensed drugs for hepatitis B infection<sup>1</sup> through the Highly Specialised Drugs (S100) Program, by year

Quarter/Year	Lamivudine	Adefovir	Entacavir	Telbivudine <sup>2</sup>	Pegylated interferon <sup>3</sup>	Total cost (\$'000s) <sup>4</sup>
<b>2009<sup>5</sup></b>						
January – March	1 154	732	1 415	17	165	3 947
April – June	1 233	817	1 600	15	223	4 418
July – September	1 233	817	1 752	19	207	4 630
October – December	1 226	767	1 864	17	184	4 695
<b>2010<sup>5</sup></b>						
January – March	1 184	704	1 775	16	163	4 439
April – June	1 125	661	1 802	19	144	4 377
July – September	1 156	644	1 911	10	151	4 513
October – December	1 167	616	2 015	13	134	4 606
<b>2011<sup>5</sup></b>						
January – March	1 059	551	1 878	7	106	4 255
April – June	1 031	510	1 902	13	109	4 425
July – September	964	460	1 853	6	104	4 359
October – December	872	425	1 705	6	114	4 368
<b>2012<sup>5</sup></b>						
January – March	828	353	1 754	9	141	4 284
April – June	734	319	1 556	9	92	3 732
July – September	771	347	1 783	8	82	4 432
October – December	777	355	1 891	11	81	4 703
<b>2013<sup>6</sup></b>						
January – March	-	-	-	-	-	-
April – June	710	480	2 200	<5	110	5 075
July – September	700	440	2 170	<5	110	4 976
October – December	690	390	2 170	<5	110	4 925

1 Tenofovir is not included in the table due to an inability to separate tenofovir treatment for hepatitis B infection from tenofovir treatment for HIV infection.

2 Telbivudine included in S100 program from July 2008.

3 Includes any hepatitis C monotherapy.

4 Public hospital expenditure only.

5 Number of person years estimated (July 2008 to December 2012) from the HSD Program Public Hospital Dispensed National Pack Number Report because of changes to S100 data collection methodology.

6 Estimates from April 2013 based on PBS item reports. Patient numbers estimated from monthly services reports. Total cost estimated from monthly benefit reports and rounded to nearest 10 patients.

Source: Highly Specialised Drugs (S100) Program

**Table 7.3.2** Number of people dispensed drugs for hepatitis C infection through the Highly Specialised Drugs (S100) Program, by year<sup>1</sup>

<b>Year</b>	<b>Pegylated Interferon and Ribavirin</b>	<b>Total cost (\$'000s)<sup>2</sup></b>
<b>2009<sup>3</sup></b>		
January – March	2 235	10 124
April – June	2 497	11 346
July – September	2 673	11 983
October – December	2 632	11 777
<b>2010<sup>3</sup></b>		
January – March	2 387	10 702
April – June	2 500	11 205
July – September	2 605	11 969
October – December	2 366	10 937
<b>2011<sup>3</sup></b>		
January – March	2 061	9 712
April – June	2 103	10 176
July – September	2 020	10 098
October – December	1 746	9 170
<b>2012<sup>3</sup></b>		
January – March	1 564	8 399
April – June	1 627	8 471
July – September	2 024	10 977
October – December	1 865	10 477
<b>2013<sup>4</sup></b>		
January – March	-	-
April – June	2 120	9 293
July – September	2 130	9 564
October – December	2 060	9 457

1 An estimated 3397, 3286, 2643, 2360 and 2808 people were receiving treatment throughout 2009 to 2013, respectively. Calculations were based on the assumption that 50% of people were receiving treatment for 6 months and the remaining 50% were receiving treatment for 12 months.

2 Public hospital expenditure only.

3 Number of person years estimated (January 2009 to December 2012) from the HSD Program Public Hospital Dispensed National Pack Number Report.

4 Estimates from April 2013 based on PBS item reports; this is a change in methodology due to a change in data reporting from PBS and therefore caution should be taken in comparing trends between 2013 and pre-2013 data. Patient numbers estimated from monthly services reports and total cost estimated from monthly benefit reports.

Source: Highly Specialised Drugs (S100) Program

# Methodological notes

## 1 National surveillance for newly diagnosed HIV infection

### 1.1 National HIV Registry

#### ***National surveillance for newly diagnosed HIV infection***

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, namecode (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). Advanced HIV diagnosis was defined as newly diagnosed HIV infection with a CD4+ cell count of less than 200 cells/ $\mu$ l, and late HIV diagnosis was defined as newly diagnosed HIV infection with a CD4+ cell count of less than 350 cells/ $\mu$ 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 Vandenberg 1993), carried out monitoring of HIV antibody testing.

### 1.2 Monitoring incident HIV infection

Information on the date of the last negative or indeterminate test or date of onset of primary HIV infection has been routinely sought through each State/Territory health jurisdiction for cases of HIV infection newly diagnosed in Australia from 1 January 1991. Newly acquired HIV infection was defined as newly diagnosed infection with evidence of a negative or indeterminate HIV antibody test or a diagnosis of primary HIV infection within 12 months of HIV diagnosis. The surveillance system for newly acquired HIV infection is described in McDonald *et al* (1994).

#### ***Monitoring transmitted drug resistance in Australian HIV-1 isolates***

The NSW State Reference Laboratory for HIV/AIDS at St Vincent's Hospital, Sydney, and the Victorian Infectious Diseases Reference Laboratory, Melbourne, perform genotypic antiretroviral drug resistance testing on a selection of cases of newly acquired HIV-1 infection. Results from these tests, including HIV-1 subtype and HIV-1 drug resistance mutations, were compiled and forwarded to the Kirby Institute for analysis. The specific drug resistance mutations collected were based on the recommended World Health Organisation form, as published by Shafer *et al* 2007. For this analysis, HIV-1 drug resistance mutations were grouped by the class of drug they conferred resistance against.

### 1.3 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 the Australian Capital Territory and in New South Wales from January 1992 and from June 1998 in Victoria. 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 2004 – 2013, Aboriginal and Torres Strait Islander status was reported at HIV diagnosis 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 the 2011 census population distribution available through the Australian Bureau of Statistics. The Australian-born non-Indigenous population was used to compare rates with those in the Aboriginal and Torres Strait Islander population. The area of residence by Aboriginal and Torres Strait Islander status was calculated using the 2011 census population distribution, based on the Australian Standard Geographical Classification.

### 1.4 National surveillance for perinatal exposure to HIV

Cases of perinatal exposure to HIV were reported to the national HIV surveillance centre by paediatricians, through the Australian Paediatric Surveillance Unit, and through assessment of perinatal exposure in children born to women with diagnosed HIV infection. Diagnoses of HIV infection in women and their exposed children were notified through national HIV surveillance procedures. Further details are given in McDonald *et al* (1997), McDonald *et al* (2001) and McDonald *et al* (2009).

### 1.5 Global comparisons

The data in Table 1.5.1 were obtained from the following sources:

Centers for Disease Control and Prevention. *HIV Surveillance Report 2011*; vol 23. Published February 2013.

Public Health England. HIV in the United Kingdom: 2013 Report: data to end 2012. November 2013. Public Health England, London

Joint United Nations Programme on HIV/AIDS (UNAIDS). Report on the global AIDS epidemic 2014. UNAIDS, 2014. <http://www.unaids.org>

## 2 National surveillance for viral hepatitis

### 2.1 Notification of viral hepatitis to the National Notifiable Diseases Surveillance System

New diagnoses of hepatitis A, 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.

Information on self-report of exposure to hepatitis B and hepatitis C is reported in a subset of diagnoses of newly acquired infection in the health jurisdictions which monitor incident hepatitis B and C. Exposure to hepatitis C was categorised into a hierarchy of risk for infection. For example, if injecting drug use was reported as well as a history of surgery, blood transfusion or tattoos, exposure was categorised as injecting drug use. Exposure to hepatitis C was categorised as household transmission when a case reported sharing items such as a toothbrush or razor with a person with documented hepatitis C infection, in the absence of other exposures to hepatitis C.

## 2.2 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 hepatitis A, 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 2009 – 2013) using the 2011 census population distribution available through the Australian Bureau of Statistics.

## 2.3 Long term outcomes among people with chronic viral hepatitis

A network of liver transplant centres in Australia and New Zealand has collected information on the characteristics of people undergoing liver transplantation. People undergoing liver transplantation have been routinely tested for hepatitis B infection and for hepatitis C infection since antibody testing became available in 1990. Information was sought on the primary and secondary causes of liver disease including the results of tests for hepatitis B virus and hepatitis C virus. The information was forwarded to the Liver Transplant Registry located at Princess Alexandra Hospital in Brisbane.

Information on the prevalence of hepatitis B infection by country of birth was compiled from the following sources:

Kowdley K, Wang C, Welch S, Roberts H. Prevalence of chronic hepatitis B among foreign born persons living in the United States by country of origin. *Hepatology*. Epub 2012 Feb 16

Turnour CE, Cretikos MA, Conaty SJ. Prevalence of chronic hepatitis B in South Western Sydney: evaluation of the country of birth method using maternal seroprevalence data. *Aust N Z J Public Health*. 2011;35(1):22-26.

The prevalence estimates for Australia presented in this table were taken from Table 6.2.1

## 3 National surveillance for sexually transmissible infections

### 3.1 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. 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

## 3.2 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 sought information on Aboriginal and Torres Strait Islander status through doctor notification of infectious syphilis, and through a statewide pilot project of enhanced surveillance for gonorrhoea during the last 5 months of 2013. Tasmania 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 the 2011 census population distribution available through the Australian Bureau of Statistics.

## 3.3 Gonococcal isolates

The Australian Gonococcal Surveillance Programme (AGSP) is a collaborative project involving gonococcal reference laboratories in each State/Territory and is coordinated by the NSW Gonococcal Reference Laboratory at the Prince of Wales Hospital, Sydney. The primary objective of the programme is to monitor antibiotic susceptibility of isolates of *Neisseria gonorrhoeae*, to assist in the effective treatment of gonorrhoea. Information on sex and site of isolation of gonococcal strains was also collected (AGSP 2014).

# 4 HIV, viral hepatitis and sexually transmissible infections in selected populations

## 4.1 HIV seroprevalence among people seen at sexual health clinics

A network of selected metropolitan sexual health clinics provided, at the end of each quarter and annually, tabulations of the number of people seen, the number tested for HIV antibody and the number newly diagnosed with HIV infection, broken down by sex, age group, HIV exposure category and HIV antibody testing history. Potential exposure to HIV was categorised according to the person's reported sexual behaviour in the 12 months prior to being seen at the clinic and any history of injecting drug use. HIV antibody testing history was subdivided into two categories: any history of HIV antibody testing prior to being seen at the clinic and HIV antibody testing in the 12 months prior to being seen. The proportion of men who have sex with men with newly acquired HIV infection was based on the number of men seen at the clinic during the year who had a negative HIV antibody test within 12 months of their last HIV antibody test. Further information is available in McDonald *et al* (2001).

## 4.2 HIV and hepatitis C seroprevalence among people who inject drugs

All clients attending needle and syringe program (NSP) sites during one week in 2009 (51 sites), 2010 (53 sites), 2011 (53 sites), 2012 (52 sites) and 2013 (50 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).

## 4.3 Incidence of hepatitis C infection among people who inject drugs

Incidence of hepatitis C infection was monitored among people with a history of injecting drug use attending the Kirketon Road Centre, a primary care clinic in central Sydney. Incidence of hepatitis C infection was calculated among people who were retested following a negative test for hepatitis C antibody when first assessed at the Centre. Repeat hepatitis C antibody testing was carried out, based on the assessment of risk behaviour for hepatitis C infection. The timing of hepatitis C seroconversion was estimated as the mid-point between the last negative test and the first positive test. Indeterminate hepatitis C antibody tests were considered to be negative in the analysis.

The Hepatitis C Incidence and Transmission Study – community (HITS-c) is a prospective observational study of hepatitis C antibody negative people who inject drugs. Participants are tested for hepatitis C antibody and RNA every six months. Incidence of hepatitis C infection was calculated among people completing at least one follow-up visit since enrolment and date of infection was estimated as the mid-point between the last negative and the first positive test.

#### **4.4 HIV, hepatitis B surface antigen and hepatitis C antibody among blood donors**

All blood donations in Australia have been screened for HIV-1 antibodies since May 1985, for HIV-2 antibodies since April 1992 and for hepatitis C antibody from 1990. Prior to donation, all donors are required to sign a declaration that they do not have a history of any specified factors associated with a higher risk of HIV infection and other blood-borne infections. In all State/Territory health jurisdictions, detailed information is routinely sought on donors found to have antibody to HIV-1, HIV-2 or hepatitis C, and reports are routinely forwarded to the NCHECR. Further details of the national data collection on HIV infection in blood donors are given in NCHECR (1996), and Kaldor *et al* (1991).

#### **4.5 Genital warts surveillance network**

The Genital Warts Surveillance Network is a surveillance system to monitor the diagnosis of genital warts in Australia and is funded by CSL Biotherapies. The network comprises eight sexual health services in New South Wales, Northern Territory, Queensland, Tasmania, Victoria and Western Australia. The aim of the network is to determine the population effects of the national human papillomavirus (HPV) vaccination program that began in mid-2007 by monitoring the diagnosis rates of genital warts in various populations, and determining HPV vaccination rates (Donovan B *et al*. 2011).

Routinely collected data at sexual health services includes data on demographics, sexual behavior, residency status, wart diagnosis and HPV vaccination status. These data are extracted directly from patient management information systems at each site and are collated at the Kirby Institute. For this analysis, only the patients seen for the first time at sexual health services were included. Genital warts diagnosis rates were calculated by dividing the total number of patients seen at the clinic by the number of patients diagnosed with genital warts, multiplied by 100.

### **5 Risk behaviour**

#### **5.1 Sexual, injecting and HIV antibody testing behaviour among men who have sex with men**

The Sydney Gay Community Periodic Survey commenced in 1996 with the objective of providing information on sexual behaviour in a broad cross section of gay community attached men in Sydney. In February of each year, men who have sex with men were recruited at the Sydney Gay and Lesbian Mardi Gras Fair Day or at one of several gay community venues or medical clinics during the subsequent week. In August/September of each year, the sample was available only for the venues. Results from the two surveys in each year have been combined. The questionnaire was self-completed and takes approximately 5 minutes to answer. Information was sought on participant demographics, level of gay community attachment, sexual practices with regular and casual male partners, injecting drug use, patterns of testing for HIV antibody and other sexually transmissible infections, and antiretroviral use for respondents with HIV infection.

The Adelaide, Brisbane, Melbourne and Perth Gay Community Periodic Surveys commenced in 1998 and the Canberra Gay Community Periodic Survey commenced in 2000. The Brisbane (including small numbers of men recruited in Cairns and on the Sunshine and Gold Coasts) and Melbourne surveys were carried out annually (June and January/February, respectively); the Adelaide and Perth surveys were carried out every two years (in October/November) and the Canberra survey is conducted every three years (in November). The surveys used similar recruitment strategies and a compatible survey instrument. Men who have sex with men were recruited at the local equivalent of Sydney's Mardi Gras Fair Day (the Pride Fair in Brisbane and Picnic in the Park in Adelaide) or at one of a small number of community venues or medical clinics during the subsequent week. The sites were selected to be comparable with the range of sites used in the Sydney surveys.

#### **5.2 Sexual, injecting and blood borne virus testing behaviour among people who inject drugs**

Information on sexual behaviour, history of injecting drug use and HIV and hepatitis C testing history was obtained by client completion of a questionnaire administered at 51 needle and syringe programs in 2009, 53 in 2010, 53 in 2011, 52 in 2012 and 50 in 2013. Further information is available in MacDonald *et al* (1997 and 2000).

## 6 Estimates of the number of people living with HIV infection and viral hepatitis

### 6.1 Estimates of the number of people living with diagnosed HIV infection

The estimated number of people living with diagnosed HIV was based on cumulative cases of newly diagnosed HIV infection notified to the National HIV Registry, adjusted for the estimated numbers of deaths. For each case, information on the year of birth, postcode of usual place of residence at the time of diagnosis, sex, CD4 count and date of HIV diagnosis was used in a computer modelling algorithm. The computer model simulated progression of disease, including potential development of AIDS-defining conditions, using CD4 counts at HIV diagnosis and established rates of change in CD4 count (Mellors *et al* 1997). Probabilistically-defined mortality was simulated using the age, sex and State/Territory-stratified ABS general population mortality data, AIDS status and previously calculated standardised mortality ratios for people living with HIV and AIDS in Australia (Nakhaee *et al* 2009).

### 6.2 Estimates of the number of people living with hepatitis B infection

Estimates of the number of people living with hepatitis B virus infection were developed by the Hepatitis B Program, Epidemiology Unit, Victorian Infectious Diseases Reference Laboratory. These estimates were derived from two sources:

- A deterministic compartmental mathematical model of hepatitis B virus infection in the Australian population from 1951-2050.
- Using the Census method, attributing prevalence of chronic hepatitis B by country of birth, Aboriginal and Torres Strait Islander status, and other risk status applied to the Australian population data provided in the 2011 Census.

The model was parameterised using a wide range of data sources including the Australian Bureau of Statistics, existing mathematical models, surveillance notifications, epidemiological research and clinical studies. Important factors such as migration, attributable and all-cause mortality, the ageing of the population, the variable natural history of chronic hepatitis B infection and the impact of vaccination were all incorporated.

Model construction included sensitivity analyses around critical parameters such as the force of infection (Fol) and migration estimates. Both static and dynamic Fol models were created, the latter using novel techniques for deriving the Fol over time. Model outcomes have been validated using a range of external data, particularly national and Victorian serosurvey results. These were not used to parameterise the model to allow independent comparison with modelled outcomes. The plausible range around estimates of hepatitis B prevalence was generated using the range of uncertainty inherent in original prevalence estimates applied in the Census-based methodology described above, with the range in estimated attributable deaths derived by adopting low and high mortality estimates directly in the model.

There has been a substantial increase in the estimated number of Australians living with hepatitis B since the last Annual Surveillance Report. This is due to the impact of much higher net overseas migration figures than were previously estimated, with a resultant additional 500,000 migrants than were projected as of 2011. As a result there is a significant estimated increase in the number of Australians born in areas with a high population prevalence of chronic hepatitis B. The re-calculations are based on a provisional analysis of these new data and will be subject to modification following refinement of the modelled outcomes. This re-calculation and a comparison between methods is presented in MacLachlan *et al*.

### 6.3 Estimates of the number of people living with hepatitis C infection

Estimates of the number of people living with hepatitis C virus were derived using a difference equation mathematical model produced collaboratively between the Center for Disease Analysis and the Kirby Institute. The model uses estimates of the number of people who had injected drugs in Australia over the last three decades, the pattern of injecting drug use and estimates of hepatitis C incidence among people who inject drugs derived from cohort studies, to determine hepatitis C incidence as a result of injecting drug use. These estimates of hepatitis C incidence due to injecting drug use were then adjusted in accordance with epidemiological data to allow for hepatitis C infections through other transmission routes, including nosocomial infection in migrants. Estimates of the number of people experiencing long term sequelae of hepatitis C infection were then obtained from the estimated pattern of hepatitis C incidence using rates of progression derived from

cohort studies. Estimates of the numbers of people living with hepatitis C in 2013 were adjusted to allow for mortality related to hepatitis C infection, injecting drug use and unrelated to hepatitis C infection or injecting. Further information about the methods can be obtained by contacting the Center for Disease Analysis <http://www.centerforda.com/>

## 7 Uptake of treatment for HIV and viral hepatitis

### 7.1 Uptake of antiretroviral treatment for HIV infection

The Australian HIV Observational Database (AHOD) is a collaborative study, recording observational data on the natural history of HIV infection and its treatment. The primary objective of the AHOD is to monitor the pattern of antiretroviral treatment use by demographic factors and markers of HIV infection stage. Other objectives are to monitor how often people with HIV infection change antiretroviral treatments and the reasons for treatment change.

Information is collected from hospitals, general practitioner sites and sexual health centres throughout Australia. Participating sites contribute data biannually from established computerised patient management systems. Core variables from these patient management systems are transferred electronically to the Kirby Institute, where the data are collated and analysed. By March 2014, 29 participating clinical sites enrolled over 3 800 people into the AHOD.

Data from all 29 participating clinical sites were included in the analysis in Table 7.1.1. A person with HIV infection was classified as not on treatment if they were under active follow up in 2013 and either had no treatment records or had received treatment for at most 14 days. If the person received more than one treatment regimen during 2013, the treatment regimen of longest duration was included in the analysis in Table 7.1.1. Viral load and CD4+ cell counts were measured within three months of the date of cohort enrolment.

A detailed summary of treatments data from the AHOD is published in the Australian HIV Observational Database Annual Report.

Self-reported use of antiretroviral therapy for the treatment of HIV infection was monitored among men who have sex with men with HIV infection participating in the Gay Community Periodic Surveys in Adelaide, Brisbane, Canberra, Melbourne, Perth and Sydney.

### 7.2 Monitoring prescriptions for HIV treatments

All antiretroviral treatments for HIV infection, and some treatments for HIV/AIDS opportunistic infections, are funded through the Highly Specialised Drugs (HSDs) Program, a joint Australian Government and State/Territory mechanism for the supply of HSDs. The HSDs Program is coordinated federally by the Australian Government Department of Health.

Prior to July 2009 the number of people dispensed each antiretroviral drug was estimated from the HSD Program Public Hospital Dispensed Patient Numbers Report by calculating the average of the total number of people dispensed each drug for each quarter of the corresponding financial year. The number of people dispensed lamivudine for this period was estimated using patient dose years based on dispensed pack numbers and dose per pack and using usual adult daily dosing. This was because patient numbers dispensed lamivudine were only reported as an aggregate of the number of people dispensed lamivudine for HIV treatment and HBV treatment but later reports included disaggregated data on dispensed lamivudine pack numbers.

The reported number of people prescribed each treatment for this period was for people treated in the community and day services only. Hospital in-patients and people treated in pharmaceutical company-sponsored clinical trials or expanded access schemes were excluded. The Australian Government covers the cost of antiretroviral treatment for people seen in community or day services. State/Territory health authorities meet the cost of in-patient supply and costs associated with the management of these drugs.

From July 2009 until December 2012 the number of people dispensed each antiretroviral drug was estimated from the HSD Program Public Hospital Dispensed Pack Numbers Report because of changes in S100 data collection methodology. The proportional quarterly change in total allocated dose was calculated as the product of dispensed pack numbers and dose per pack and applied to the 2008 quarter 1 and quarter 2 S100 patient numbers to estimate patient numbers for each successive quarter. A moving average filter incorporating the previous 2 quarters, current quarter and following quarter was applied to account for seasonal variation in

reported numbers. Patient numbers for antiretroviral drugs introduced after 2008 (rilpivirine, etravirine, maraviroc, atripla and eviplera) were estimated using patient dose years based on dispensed pack numbers and dose per pack and using usual adult daily dosing for this period.

From January 2013 onwards the number of people dispensed each antiretroviral drug was estimated from the online PBS item statistics reports using monthly services per PBS item available online ([https://www.medicareaustralia.gov.au/statistics/pbs\\_item.shtml](https://www.medicareaustralia.gov.au/statistics/pbs_item.shtml)) because of provision of complete online reporting by the Department of Human Services. Queries include PBS and RPBS data. Completeness of reporting was assessed by comparison of reported numbers and benefits with prior HSD data. Reporting from January 2013 to April 2013 was assessed as incomplete based on this, but complete thereafter. Patients numbers were estimated based on the assumption that patients receive, on average, 2 months supply of drug per service. Fluctuations in monthly reported services were smoothed using a moving average filter incorporating the previous 3 months, current month and following 3 months. Tabulated patient numbers were taken as those at June 2013 rounded to the nearest 10 patients.

The total number of people receiving treatment for HIV infection was estimated by summing the number of people dispensed (lamivudine + kivexa + combivir + trizivir + emtricitabine + truvada + atripla + eviplera) through the S100 Program, divided by the proportion of people enrolled on AHOD who were receiving any of these mutually exclusive antiretroviral treatments during the same calendar year.

Reported expenditure for 2013 was based on PBS contribution to service cost. Because data was incomplete for the interval from January 2013 to April 2013 inclusive, the expenditure for this period was estimated using average expenditure in the immediately following 5 months.

### 7.3 Monitoring prescriptions for treatment of viral hepatitis

Reporting of patient numbers and expenditure for viral hepatitis is based on analogous methodology to that described in detail above for HIV. Briefly, prior to July 2009 the number of people dispensed each drug was estimated from the HSD Program Public Hospital Dispensed Patient Numbers Report by calculating the average of the total number of people dispensed each drug for each quarter of the corresponding financial year. The number of people dispensed lamivudine for this period was estimated using patient dose years based on dispensed pack numbers and dose per pack and using usual adult daily dosing. This was because patient numbers dispensed lamivudine were only reported as an aggregate of the number of people dispensed lamivudine for HIV treatment and HBV treatment but later reports included disaggregated data on dispensed lamivudine pack numbers.

From July 2009 until December 2012 the number of people dispensed each antiretroviral drug was estimated from the HSD Program Public Hospital Dispensed Pack Numbers Report because of changes in S100 data collection methodology. From January 2013 onwards the number of people dispensed each antiretroviral drug was estimated from the online PBS item statistics reports using monthly services per PBS item available online ([https://www.medicareaustralia.gov.au/statistics/pbs\\_item.shtml](https://www.medicareaustralia.gov.au/statistics/pbs_item.shtml)) because of provision of complete online reporting by the Department of Human Services. PBS codes queried based on prior HSD report indications were 5606C, 5711N, 5712P, 5770Q, 5771R, 6450L, 9515T, 9516W, 9517X, 9518Y, 9520C, 9521D, 9522E, 9524G, 9525H, 9526J, 9527K, 9528L, 9529M, 9530N, 9531P, 9532Q, 9533R, 9534T, 9535W, 9536X, 9537Y, 9538B, 9539C, 9540D, 9562G. Tabulated patient numbers for each quarter were taken as the average of twice the number of services for each month of that quarter rounded to the nearest 10 patients. This may not be appropriate for hepatitis related treatment which may be of shorter and intermittent duration and caution should be made in comparing trends between 2013 and pre-2013 data.





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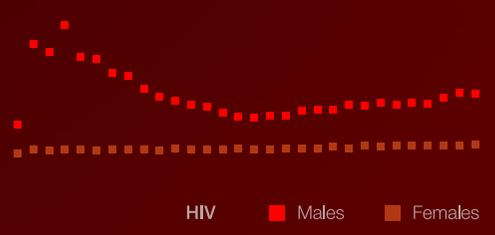
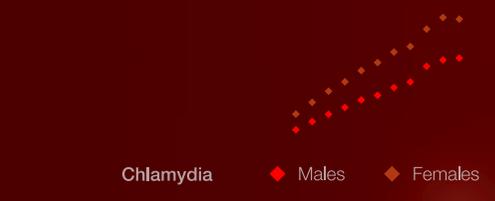
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