

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

# 2013



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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 Ageing and is affiliated with the Faculty of Medicine, The University of New South Wales. The Surveillance and Evaluation Program 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 seventeenth 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 2012 and reported by 31 March 2013, 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 2013* 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 2013*, edited by the Centre for 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 2013* also appears in the report on behavioural data.

Unless specifically stated otherwise, all data provided in the report are to the end of 2012, as reported by 31 March 2013. 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, Sydney, NSW
- Australian Federation of AIDS Organisations, Sydney, NSW
- Australian Government Department of Health and Ageing, Canberra, ACT
- Australian Injecting and Illicit Drug Users' League, ACT
- 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 for Social Research in Health, The University of New South Wales, NSW
- Communicable Diseases Network Australia, Canberra, ACT
- Hepatitis Australia, Canberra, ACT
- National Aboriginal Community Controlled Health Organisation, ACT
- National Association of People Living with HIV/AIDS, Sydney, NSW
- National Drug and Alcohol Research Centre, The University of New South Wales, Sydney, NSW
- National Serology Reference Laboratory, Australia, Fitzroy, VIC

## State/Territory health departments

- Communicable Disease Control, Health Directorate, ACT Government, Canberra, ACT
- Centre for Health Protection, NSW Ministry of Health, North Sydney, NSW
- Sexual Health and Blood Borne Virus Unit, CDC, Department of Health and Families, Darwin, NT
- Queensland Health, Brisbane, QLD
- STI and BBV Section, Communicable Disease Control Branch, SA Health, Adelaide, SA
- Department of Health and Human Services, Hobart, TAS
- Communicable Disease Epidemiology and Surveillance, Health Protection Branch, Victorian Government Department of Health, Melbourne, VIC; The Macfarlane Burnet Institute for Medical Research and Public Health Limited, Prahran; Hepatitis B Program, Epidemiology Unit, Victorian Infectious Diseases Reference Laboratory, VIC
- Communicable Diseases Control Branch, Department of Health, Perth, WA

## Australian Gonococcal Surveillance Programme

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- Department of Microbiology, The Prince of Wales Hospital, Randwick, NSW
- Microbiology Laboratory, Royal Darwin Hospital, Casuarina, NT
- Queensland Health Scientific Services, Coopers Plains, QLD
- SA Pathology at Women's and Children's Hospital, North Adelaide, SA
- Department of Microbiology and Infectious Diseases, Royal Hobart Hospital, Hobart, TAS
- 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

## Genital Warts Surveillance Network

### Contributing organisations

- Northern Sydney Sexual Health Service, St Leonards; Royal Prince Alfred Hospital Sexual Health Clinic, NSW
- NT Sexual Health and BBV Unit, NT
- Cairns Sexual Health Services, Cairns Base Hospital, Cairns; Gold Coast Sexual Health Clinic, 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; Parramatta Sexual Health Clinic, Parramatta; Albion Street Centre, Sydney; Clinic 16, St Leonards, 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.
- 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; Resource and Education Program for IDUs, Redfern; Central Access Service, Kogarah and Sutherland; South Court Primary Care NSP, Nepean; Western Sydney HIV/Hepatitis C Prevention Service, Blacktown, Mt Druitt and Parramatta.
- 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.
- Drug and Alcohol Services South Australia, Adelaide; Hindmarsh Centre, Hindmarsh; Nunkuwarrin Yunti Community Health Centre, Adelaide; South Australia Voice for Intravenous Education (SAVIVE): AIDS Council South Australia, Norwood; Parks Community Health Service, Adelaide; Port Adelaide Community Health Service, Port Adelaide; Noarlunga Community Health Service, Adelaide; Northern Metropolitan Community Health Service NSP and Shopfront, Salisbury.
- Anglicare NSP Service, Hobart and Glenorchy; Clarence Community Health Centre, Clarence; Devonport Community Health Centre, Devonport; Salvation Army Launceston, Launceston.
- 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.
- WA AIDS Council Mobile Exchange, Perth; Western Australia Substance Users Association (WASUA), Perth and South Coast.
- 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 2013 Advisory Committee

- Dr Russell Waddell, Australasian Chapter of Sexual Health Medicine, Sydney, NSW
- Dr Benjamin Cowie, Australasian Society for HIV Medicine, NSW
- Ann Roberts, Australasian Society for HIV Medicine, NSW
- Simon Donohoe, Australian Federation of AIDS Organisations, Sydney, NSW
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- James Ward, Baker Institute, Alice Springs, NT
- Dr Limin Mao, Centre for Social Research in Health, The University of New South Wales, Sydney, NSW
- Helen Tyrrell, Hepatitis Australia, Canberra, ACT
- Jo Watson, National Association of People Living with HIV/AIDS, Sydney, NSW
- Associate Professor David Wilson (Chair), Professor Basil Donovan, Professor Lisa Maher, Associate Professor Rebecca Guy, Dr Iryna Zablotka-Manos, Ann McDonald, Melanie Middleton, Andrew Nakhla, The Kirby Institute



# Summary

## HIV infection

- A total of 1 253 cases of HIV infection was newly diagnosed in Australia in 2012, a 10% increase over the number in 2011. The annual number of new HIV diagnoses has gradually increased over the past 13 years, from 724 diagnoses in 1999.
- An estimated 25 708 people were living with diagnosed HIV infection in Australia at the end of 2012.
- 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 6.3 in 2003 to 4.9 in 2010 and then increased to 6.2 in 2012. In Victoria, the rate increased from around 5.0 in 2003 – 2007 to 5.3 in 2008 – 2012. Population rates of HIV diagnosis increased over time in Queensland, from around 4.0 in 2003 – 2007 to 4.9 in 2008 – 2012, in Western Australia, from 3.1 to 4.0, and in Tasmania, from 1.4 to 2.8. Increasing HIV diagnosis rates were also reported in the Australian Capital Territory and in the Northern Territory but have remained relatively stable in South Australia.
- HIV continued to be transmitted primarily through sexual contact between men.
- The number of diagnoses of newly acquired HIV infection in Australia increased from 286 in 2008 to 397 in 2012. Diagnoses of newly acquired HIV infection indicate the lower bound to the number of cases of recent HIV transmission that have actually occurred in Australia. Use of a laboratory test for detecting recent HIV infection among cases newly diagnosed in 2012 resulted in an increase in cases with evidence of recent infection of 30%.
- The *per capita* rate of HIV diagnosis in the Aboriginal and Torres Strait Islander population was similar to that in the non-Indigenous population, excluding cases and populations from high HIV prevalence countries. Aboriginal and Torres Strait Islander cases of HIV infection differed from non-Indigenous cases, in that a substantially greater proportion were attributed to injecting drug use (13% compared with 2%) in the five years 2008 – 2012.
- Of 1 364 cases of HIV infection newly diagnosed in 2008 – 2012, for which exposure to HIV was attributed to heterosexual contact, 58% were in people from high prevalence countries or their partners.

## Viral hepatitis

- The *per capita* rate of diagnosis of hepatitis B infection in Australia in 2008 – 2012 was stable at around 31 per 100 000 population. The rate of diagnosis of newly acquired hepatitis B infection steadily declined in Australia from 1.2 in 2008 to 0.8 per 100 000 population in 2012.
- An estimated 207 000 people were living in Australia in 2012 with hepatitis B infection. An estimated 383 deaths in 2012 were attributable to chronic hepatitis B infection. The estimated prevalence of chronic hepatitis B infection in the Australian population was 0.97%.
- The *per capita* rate of diagnosis of hepatitis C infection declined from 52.5 in 2008 to 44.2 per 100 000 population in 2012.
- An estimated 230 000 people were living in Australia with chronic hepatitis C infection, including 58 000 with moderate to severe liver disease.
- The reported annual number of diagnoses of newly acquired hepatitis C infection increased from 365 to 466 in 2008 – 2012 and accounted for 4.6% of new hepatitis C diagnoses in 2012.
- 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.
- In 2012, chronic hepatitis B infection and chronic hepatitis C infection were the underlying causes of liver disease in 5.6% and 22% of liver transplants, respectively.
- The proportion of people seen at needle and syringe programs who reported having injected drugs for five years or less was stable in 2008 – 2012 at around 10%. Within this group, hepatitis C prevalence declined from 28% in 2008 to 17% in 2012.

## Sexually transmissible infections other than HIV

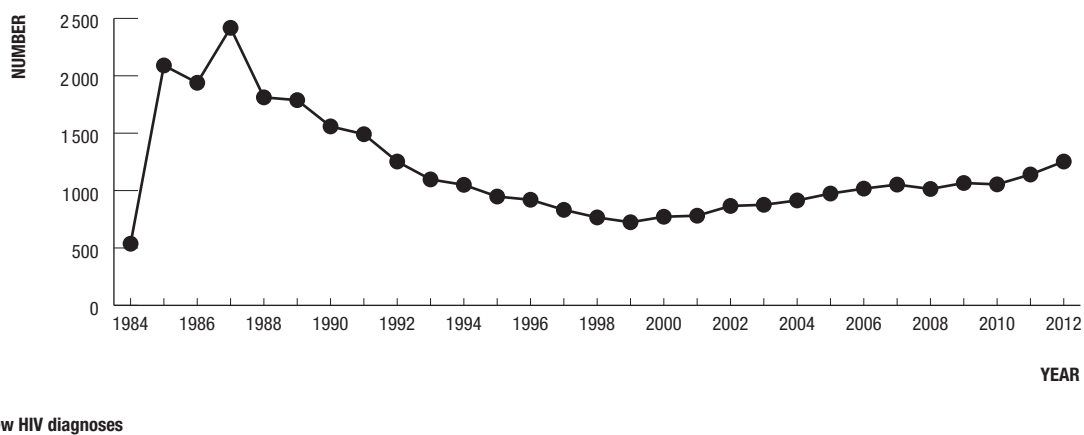
- Chlamydia was the most frequently reported notifiable condition in Australia in 2012 with 82 707 diagnoses. The population rate of diagnosis of chlamydia in 2012 was 355 per 100 000 population.
- The number of diagnoses of donovanosis declined from 2 in 2008 to 0 in 2011 and 1 in 2012, demonstrating the continuing success of efforts to eliminate donovanosis from the Australian population.
- The rate of diagnosis of gonorrhoea increased by 67%, from 35.1 per 100 000 population in 2008 to 58.9 in 2012. The rate of diagnosis of infectious syphilis increased among males from 6.1 in 2008 to 6.7 in 2012. Increased rates of infectious syphilis in 2012 occurred in Queensland, Victoria and New South Wales and declining rates were reported in Western Australia and the Northern Territory.
- Substantially higher rates of diagnosis of chlamydia and gonorrhoea were recorded in the Aboriginal and Torres Strait Islander population compared with 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 decreased from 12.1% in 2007 to 1.1% in 2012.

# Main Findings

## HIV infection

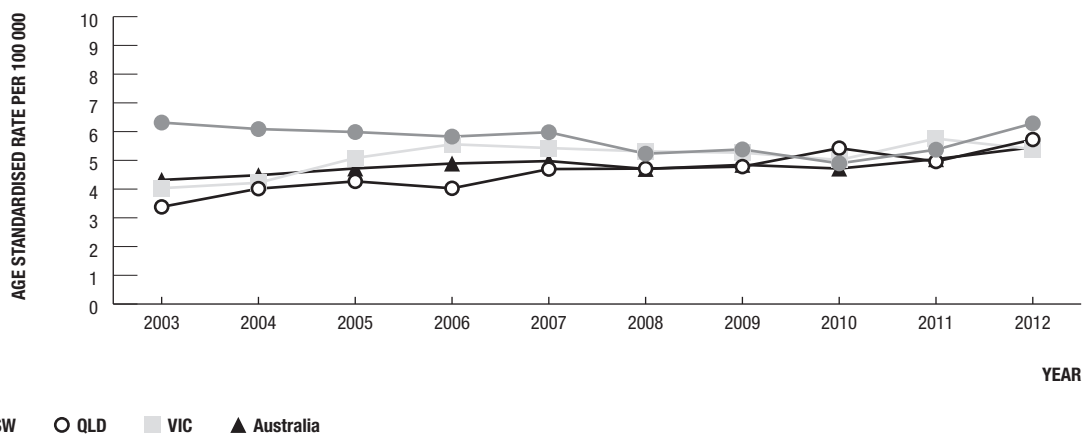
The annual number of new HIV diagnoses in Australia increased to 1 253 cases in 2012, a 10% increase over the numbers diagnosed in 2011. The number of new diagnoses has steadily increased over the past 13 years from 724 cases in 1999 (Figure 1). The rate of HIV diagnosis per 100 000 population has increased from 4.3 in 2003 to 5.4 in 2012, a 26% increase (Figure 2a and 2b).

**Figure 1** Newly diagnosed HIV infection in Australia by year

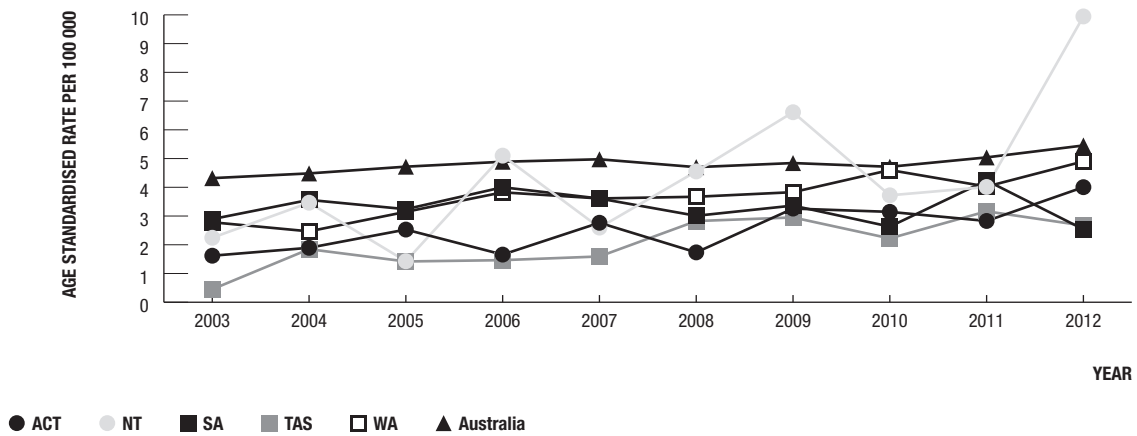


Recent trends in the population rate of newly diagnosed HIV infection have differed across Australia. In New South Wales, the rate of HIV diagnosis declined from 6.3 per 100 000 population in 2003 to 4.8 in 2010 and then increased to 6.2 in 2012 (Figure 2a). In Victoria, the rate of HIV diagnosis increased from around 5.0 in 2003 – 2007 to 5.3 in 2008 – 2012. Population rates of HIV diagnosis have increased over time in Queensland, from around 4.0 in 2003 – 2007 to 4.9 in 2008 – 2012, in Western Australia, from 3.1 to 4.0, and in Tasmania, from 1.4 to 2.8. Increases in the population rate of HIV diagnosis have also occurred in the Australian Capital Territory and in the Northern Territory but have remained relatively stable South Australia over the past 10 years. The median age at HIV diagnosis among males declined to 36 years in 2012 after having remained stable at 37 and 38 years from 2004 to 2011 (Table 1.1.1).

**Figure 2 (a)** Newly diagnosed HIV infection, 2003 – 2012, by year and State/Territory

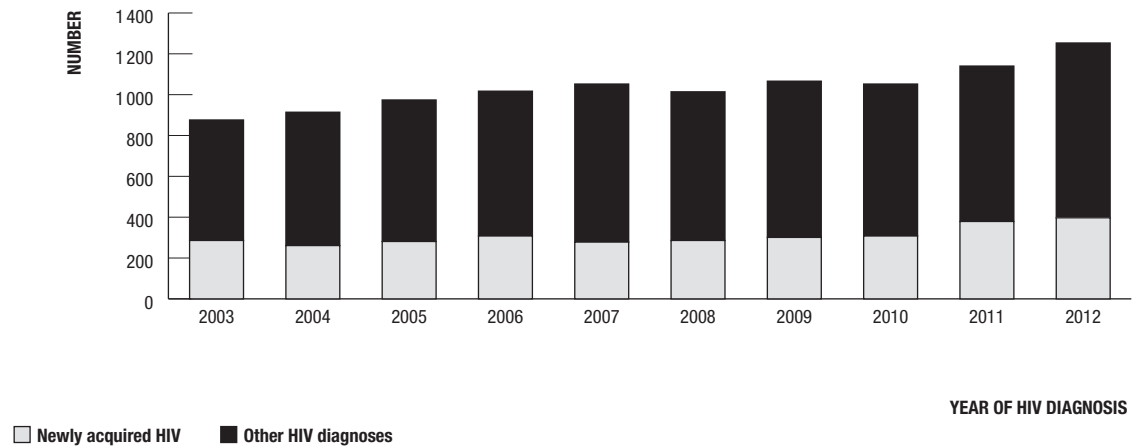


**Figure 2 (b) Newly diagnosed HIV infection, 2003 – 2012, by year and State/Territory**

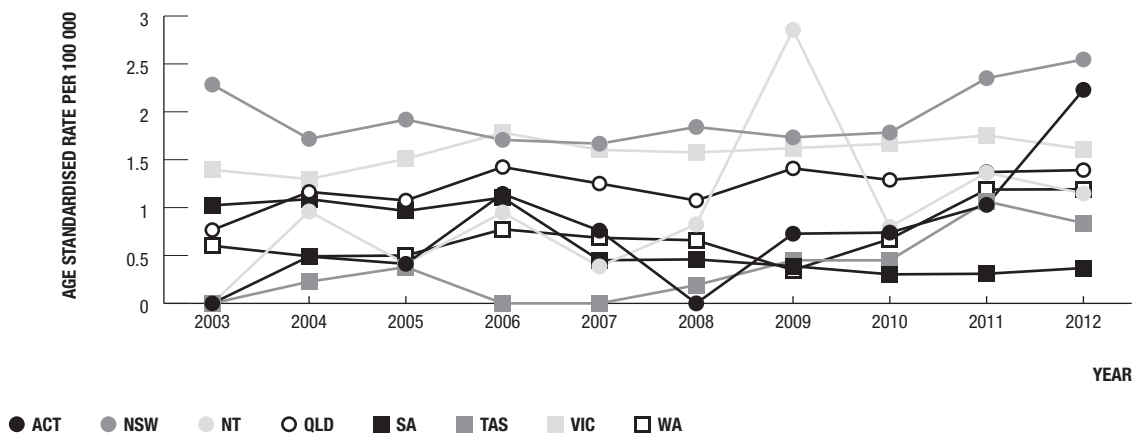


Of 1 253 cases of HIV infection newly diagnosed in Australia in 2012, 190 (15.2%) had been previously diagnosed overseas (Table 1.1.3). These cases have generally been included in past counts and are included in the count for 2012.

**Figure 3 Newly diagnosed HIV infection in Australia, 2003 – 2012, by newly acquired HIV status and year**



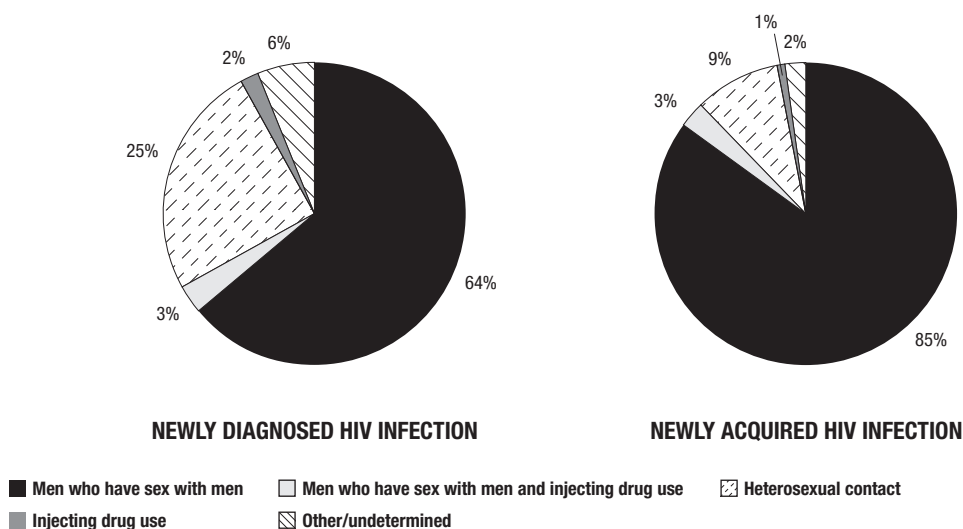
**Figure 4 Newly acquired HIV infection, 2003 – 2012, by year and State/Territory**



Among cases of newly diagnosed HIV infection, the proportion who acquired the infection in the 12 months prior to diagnosis gradually increased from 26% in 2007 to 32% in 2012 (Figure 3). The population rate of diagnosis of newly acquired HIV infection in New South Wales declined from 2.2 in 2003 to 1.6 in 2007 and increased to 2.3 and 2.5 in 2011 and 2012, respectively. The rate in Queensland increased from 1.1 in 2003 – 2007 to 1.3 in 2008 – 2012 whereas in Victoria, the rate was relatively stable over the past 10 years. In Western Australia, the rate in 2011 – 2012 was stable after substantial increases in 2010 and 2011 (Figure 4).

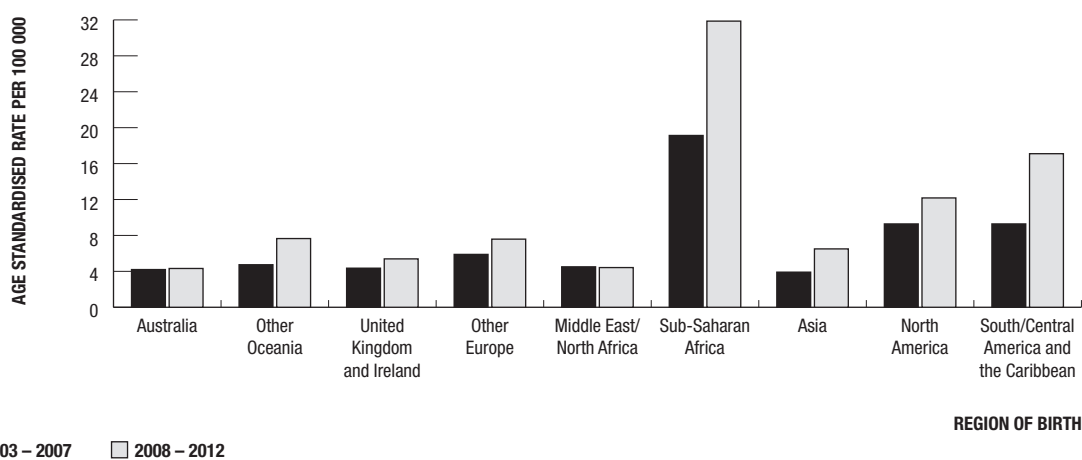


**Figure 5 HIV diagnoses in Australia, 2008 – 2012, by HIV exposure category**



Transmission of HIV in Australia continues to occur primarily through sexual contact between men (Figure 5). In 2008 – 2012, 67% of new HIV diagnoses occurred among men who have sex with men, 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.

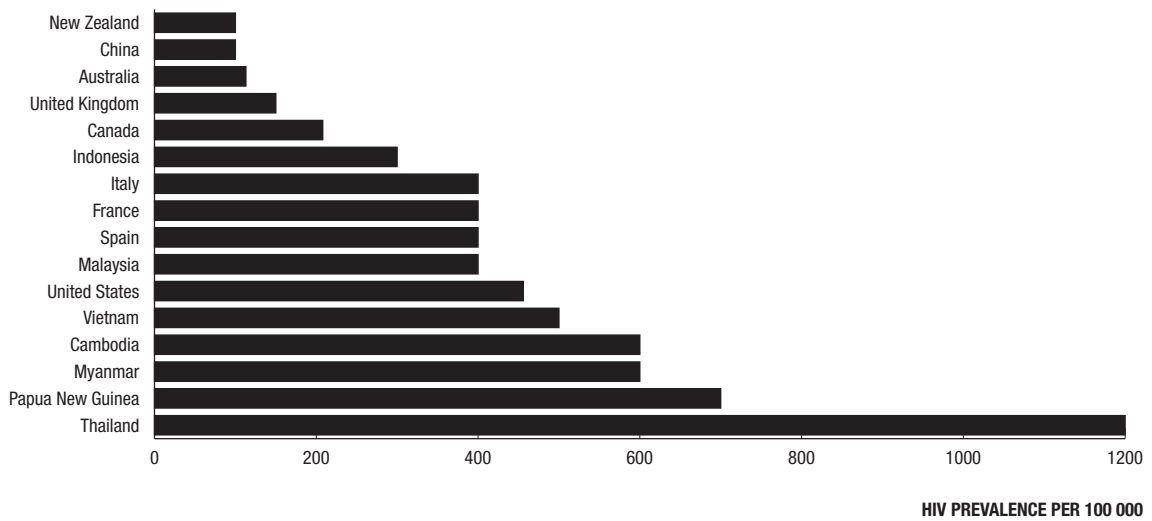
**Figure 6 HIV diagnoses in Australia, 2003 – 2012, by year and region of birth**



A new HIV surveillance program has been established to provide a more complete indication of recent HIV transmission than is available through diagnoses of newly acquired infection. Testing of cases of HIV infection newly diagnosed in Australia in 2012 with a specialised laboratory test identified 125 additional cases of recent infection, resulting in a 30% increase over the number of diagnoses of newly acquired HIV infection.

People born in Australia accounted for 54% of cases of HIV infection newly diagnosed in 2008 – 2012. Among Australian born cases, the rate of HIV diagnosis increased from 4.1 in 2008 and 2009 to 4.9 in 2012 (Figure 6). The rate of HIV diagnosis in the overseas born population increased from 7.1 in 2008 to 9.5 in 2012. The population rate of HIV diagnosis in the sub-Saharan African-born and Asian-born populations in the 5 years from 2008 to 2012 compared to the previous 5 years increased by 66% and 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**

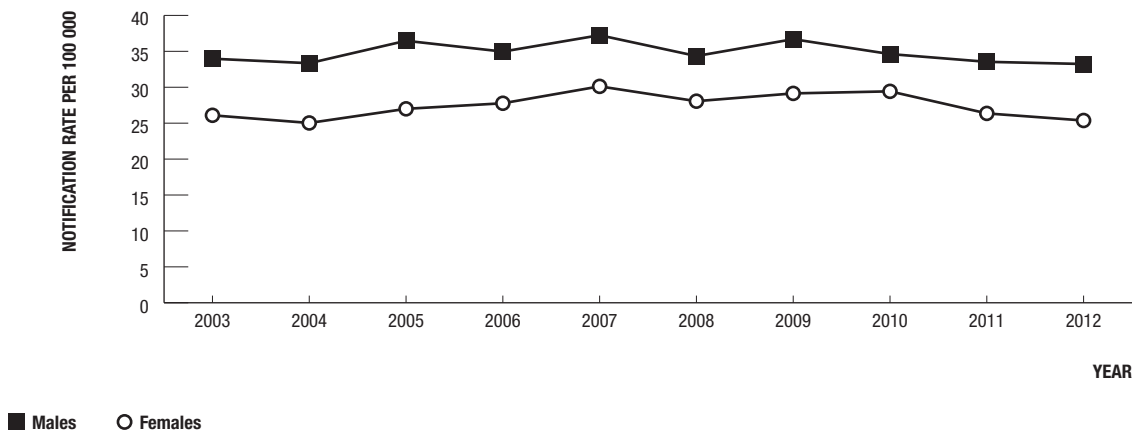


At the end of 2012, an estimated 28 000 – 34 000 people were living with HIV infection in Australia of whom approximately 25 700 were diagnosed with their infection. As an overall national prevalence (130 – 158 per 100 000), the level of HIV infection in Australia is slightly lower than in the United Kingdom in 2011 (150 per 100 000 population) and three to four-fold lower than in the United States in 2009 (456 per 100 000) (Figure 7).

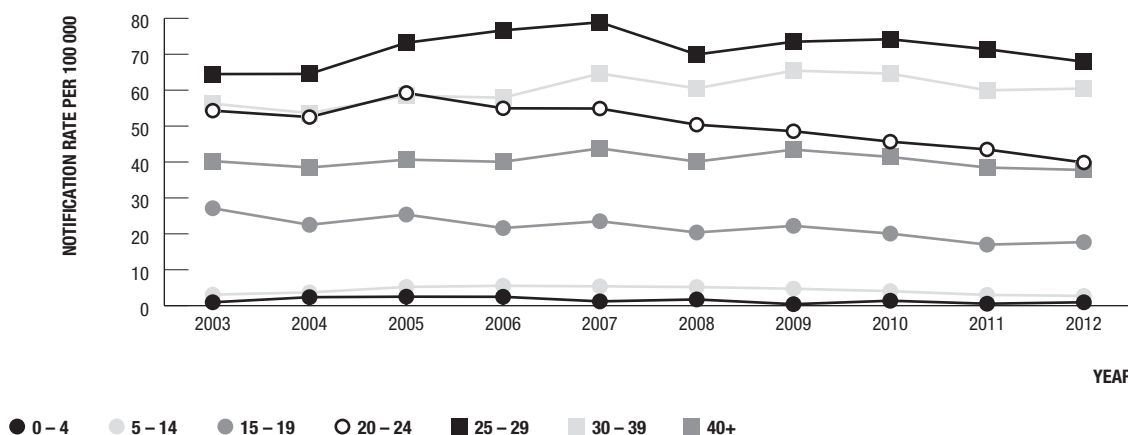
## Viral hepatitis

The population rate of reported diagnoses of hepatitis A infection in Australia remained below at 1.3 per 100 000 population in 2008 – 2012, 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, 2003 – 2012, by year and sex**

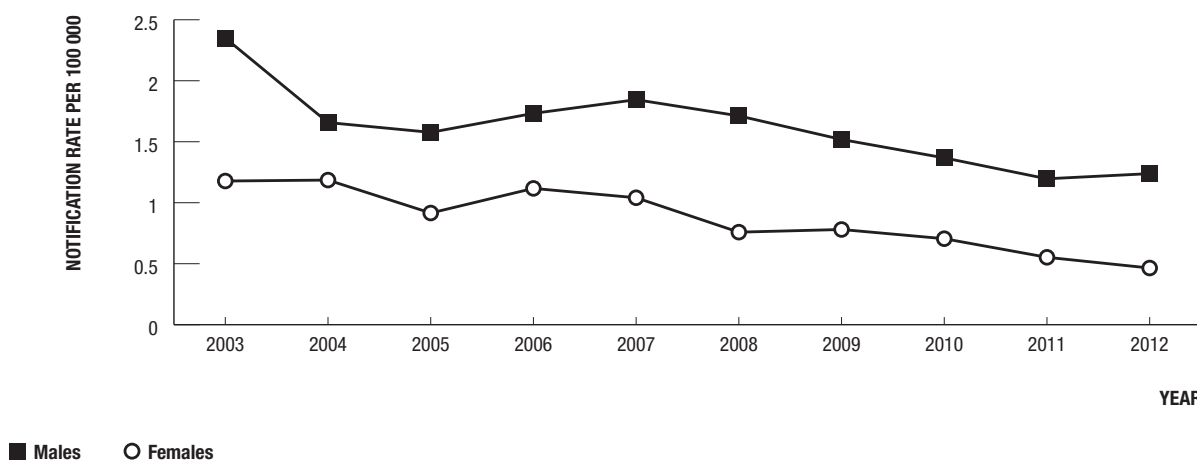


**Figure 9 Hepatitis B notifications, 2003 – 2012, by year and age group**

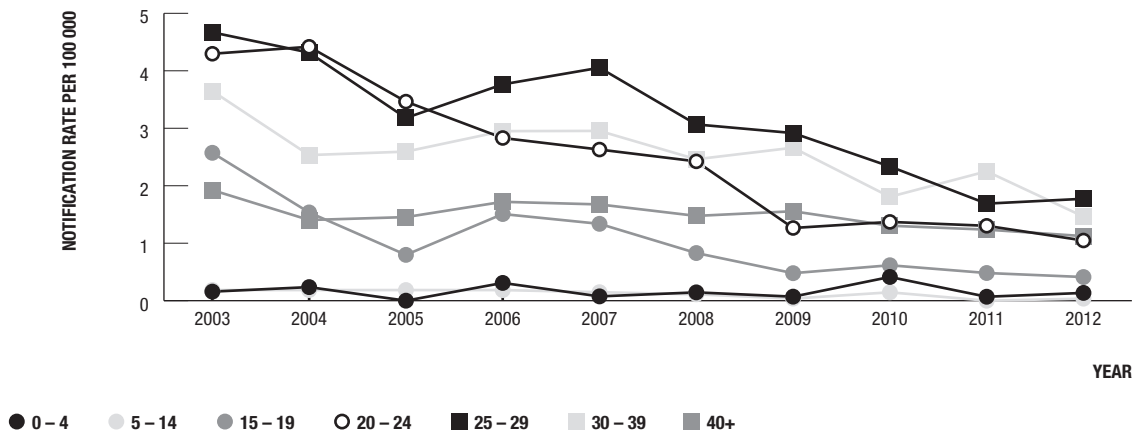


The population rate of diagnosis of hepatitis B infection in Australia declined from 31.0 in 2008 to 29.1 in 2012 (Figure 8). The decreases in the rate of hepatitis B diagnosis were among people aged 20 – 24 years, from 54.3 in 2003 to 39.8 in 2012 and among those aged 15 – 19 years, from 27.1 in 2003 to 17.6 in 2012 (Figure 9). The number and rate of diagnosis of newly acquired hepatitis B decreased from 262 and 1.2 in 2008 to 193 and 0.8 in 2012 (Figure 10). The rate of diagnosis of newly acquired hepatitis B infection declined substantially from 2003 among people aged 15 – 19 years, 20 – 24 years and 25 – 29 years (Figure 11). Adolescent “catch up” vaccination programs may have contributed in this reduction. However, the rate of diagnosis of newly acquired hepatitis B infection also declined among those aged 30 years or older.

**Figure 10 Newly acquired hepatitis B notifications, 2003 – 2012, by year and sex**

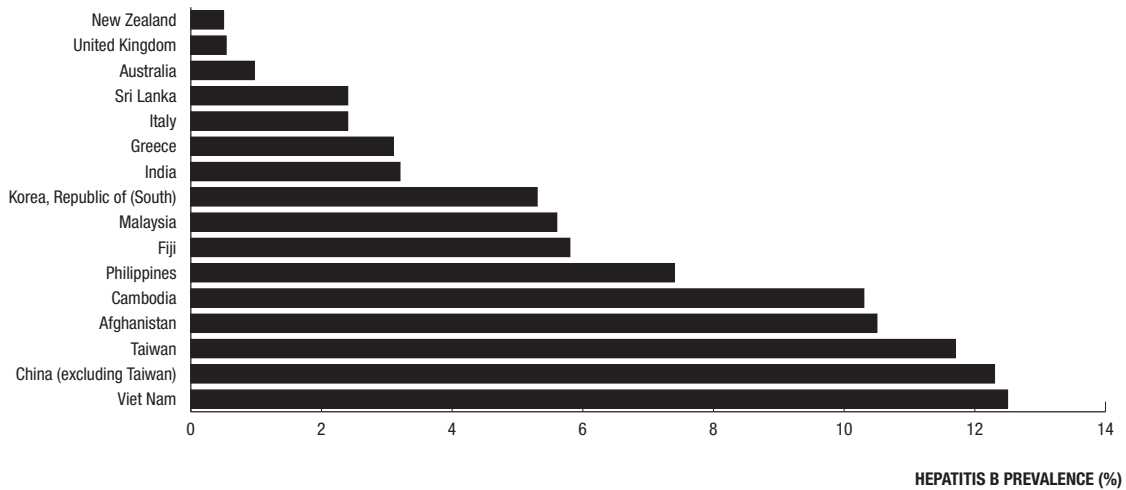


**Figure 11 Newly acquired hepatitis B notifications, 2003 – 2012, by year and age group**



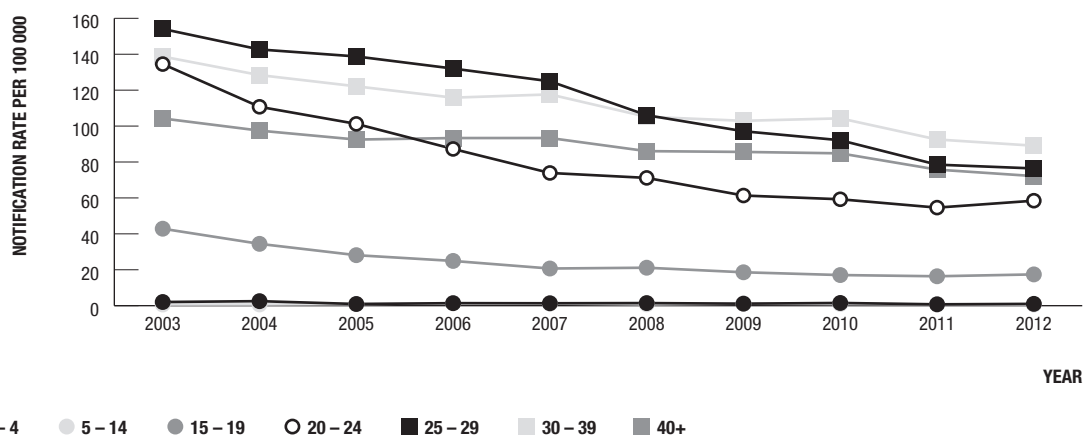
In 2012, the estimated number of people living in Australia with chronic hepatitis B was 207 000. As a national prevalence (0.97%), the level of hepatitis B infection in Australia is greater than in New Zealand and the United Kingdom but substantially less than prevalence levels in many countries of birth of people living in Australia (Figure 12).

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

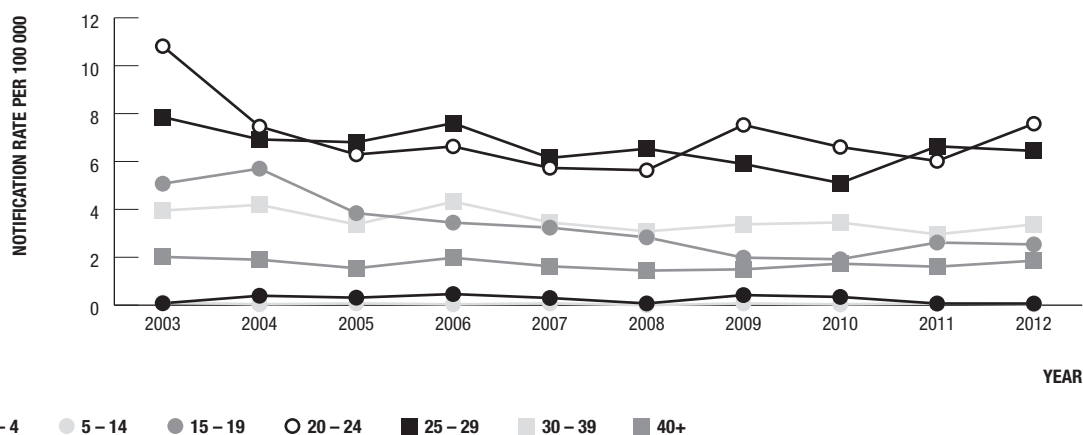


The number and rate of diagnosis of hepatitis C infection per 100 000 population declined from 11 308 and 52.5 in 2008 to 10 114 and 44.2 in 2012. Declines have been observed in all age groups. In the past ten years, the rate declined by 59% in the 15 – 19 year age group, by 56% in the 20 – 24 year age group and by 50% in the 25 – 29 year age group (Figure 13).

**Figure 13 Hepatitis C notifications, 2003 – 2012, by year and age group**



**Figure 14 Newly acquired hepatitis C notifications, 2003 – 2012, by year and age group**



Around 4.6% of cases of hepatitis C infection diagnosed in 2008 – 2012 were documented as having been acquired within the previous two years. Reported hepatitis C transmission continued to occur at the highest rate among adults aged 20 – 24 and 25 – 29 years (Figure 14), primarily those with a history of injecting drug use (Table 2.1.13). Among people who inject drugs seen at the Kirketon Road Centre in Sydney, hepatitis C incidence ranged 6.0 per 100 person years in 2009 to 14.8 in 2011 (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 8.5 in the years 2011 – 2012 (Table 4.3.2).

The vast majority of diagnoses of newly acquired hepatitis B infection and newly acquired hepatitis C infection occurred among Australian born people. 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 207 000 people were living with hepatitis B infection and 383 deaths were attributed to chronic hepatitis B infection in 2012 (Table 6.2.1). This is a significant increase compared with previous years and is the result of revised estimates of net overseas migration since the last Census in 2006. 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)

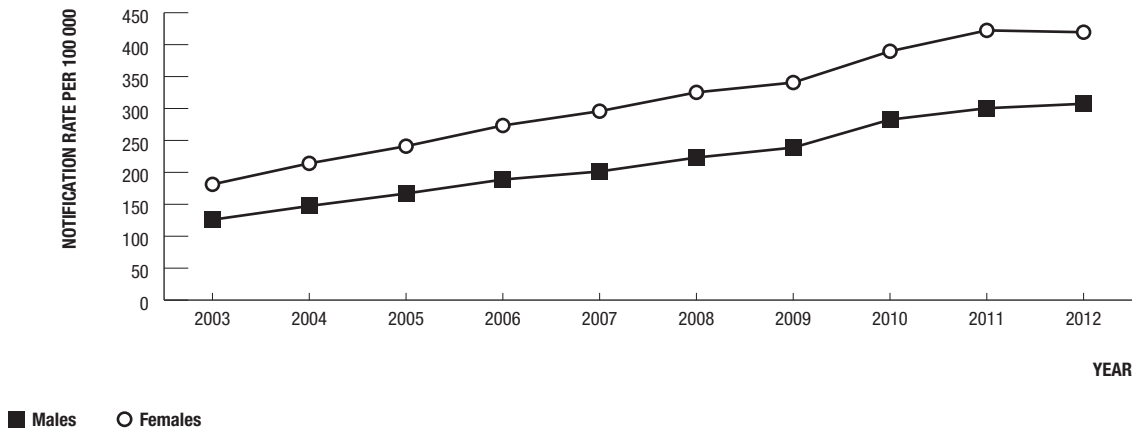
An estimated 310 000 people living in Australia in 2012 had been exposed to hepatitis C virus. Of these, 80 000 people were estimated to have cleared their infection, 173 500 had chronic hepatitis C infection and early liver disease (stage F0/1), 51 500 had chronic hepatitis C infection and moderate liver disease (stage F2/3), and 6 500 were living with hepatitis C related cirrhosis.

Hepatitis C prevalence in 2012 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).

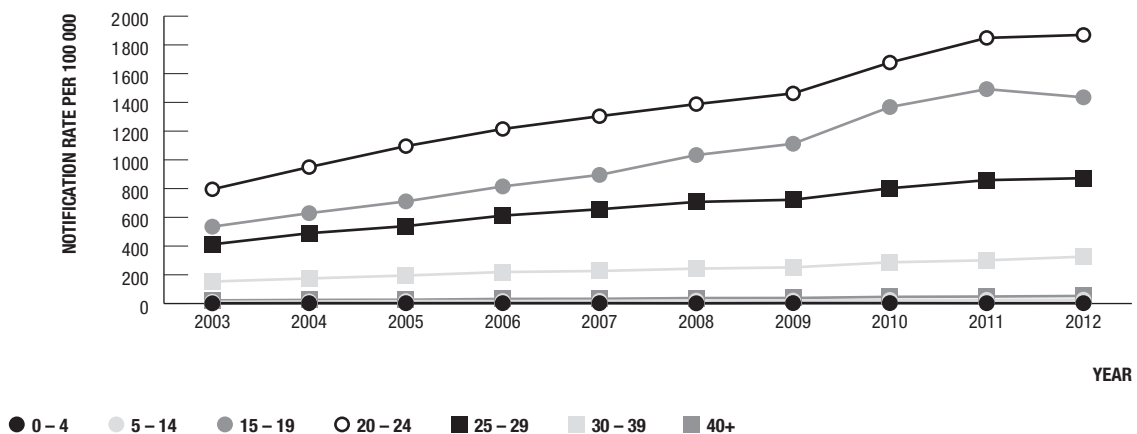
## Sexually transmissible infections other than HIV

Chlamydia was the most frequently reported infection in Australia in 2012, with 82 707 newly diagnosed cases. The population rate of reported diagnoses more than doubled in both the male and female populations, from 125 in 2003 to 307 per 100 000 male population in 2012, and from 181 in 2003 to 419 per 100 000 female population in 2012 (Figure 15).

**Figure 15 Chlamydia notifications, 2003 – 2012, by year and sex**

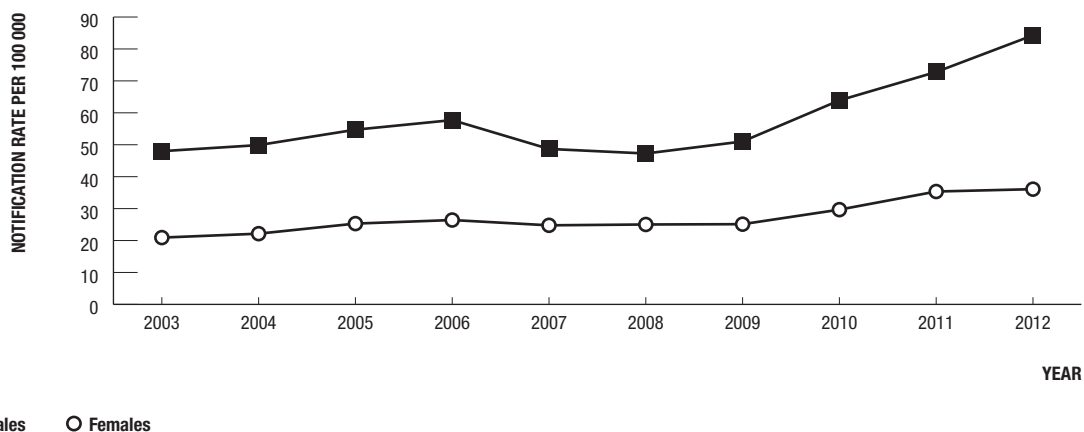


**Figure 16 Chlamydia notifications, 2003 – 2012, by year and age group**

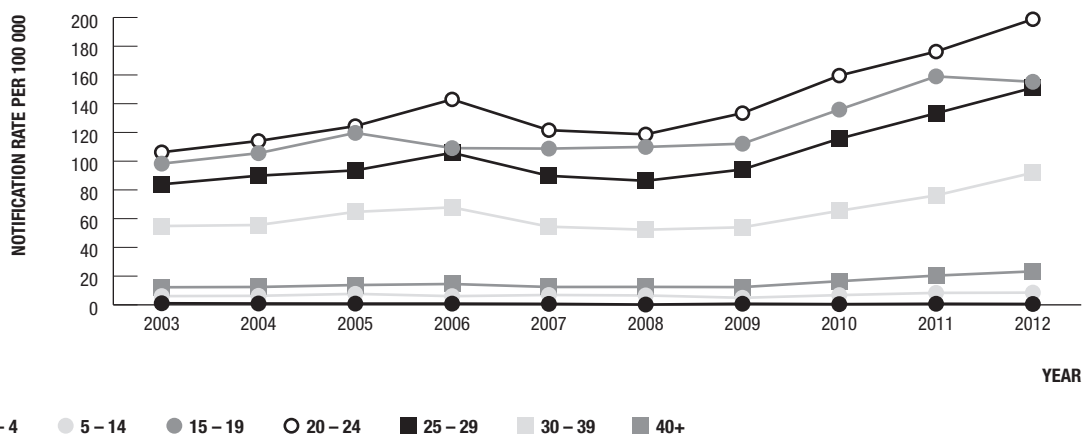


Increasing rates of diagnosis of chlamydia were reported in the majority of states and territories. Diagnoses in the 15 – 24 year age group accounted for 81% of the annual number (Figure 16). In 2008 – 2012, the female-to-male sex ratio in the 15 – 19 year age group was 3:1 whereas it was 1.3:1 in the 20 – 29 year age group. Age and sex specific patterns of diagnosis may have been influenced by differential testing rates. In the Northern Territory, Queensland and Tasmania, the rates of chlamydia diagnosis declined in 2012 compared with 2011 and these declines are the first to have occurred in the past 10 years.

**Figure 17** Gonorrhoea notifications, 2003 – 2012, by year and sex

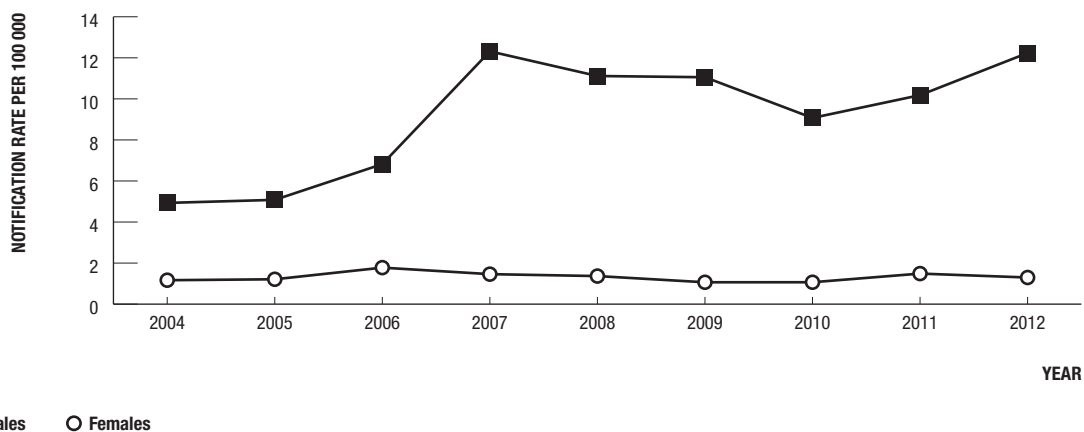


**Figure 18** Gonorrhoea notifications, 2003 – 2012, by year and age group

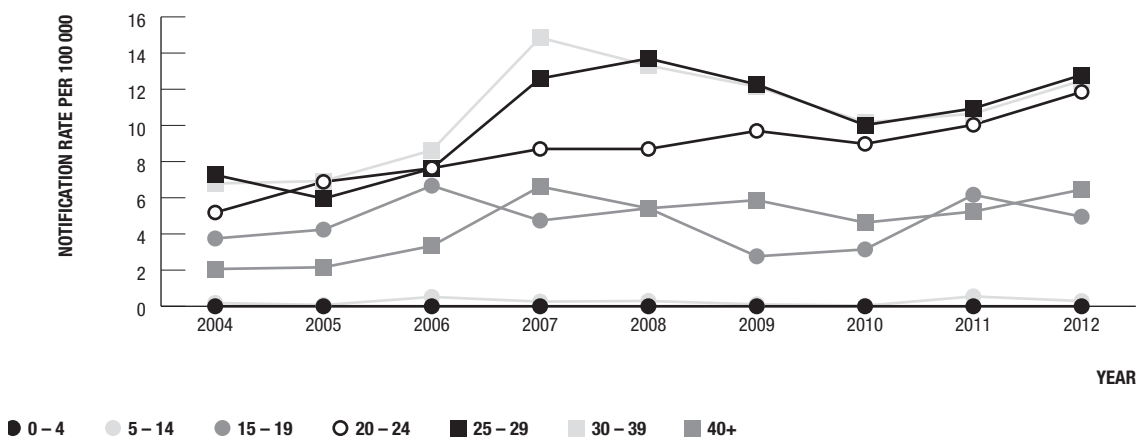


Following a stable population rate of gonorrhoea diagnosis in both males and females in the years from 2003 to 2007, the rate increased to 84.3 and 36.1 among males and females, respectively, in 2012 (Figure 17). The rates of diagnosis of gonorrhoea increased almost 3 fold in New South Wales, 2.5 times in Victoria and by 53% in Queensland and 12% in Western Australia. In the past ten years, the rate of gonorrhoea diagnosis was highest among people aged 20 – 24 years and 15 – 19 years (Figure 18).

**Figure 19** Infectious syphilis notifications, 2004 – 2012, by year and sex



**Figure 20 Infectious syphilis notifications, 2004 – 2012, by year and age group**



The rate of diagnosis of infectious syphilis among men has remained above 9.0 over the past six years whereas the rate among women remained low at less than 2.0 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, rates of diagnosis of infectious syphilis were stable in New South Wales and Victoria, increasing in Queensland and declining in the Northern Territory and Western Australia. 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, gonorrhoea and infectious syphilis in the Northern Territory continue to be substantially higher than those in other states and territories. The continuing decline in the number of diagnoses of donovanosis, from 2 in 2008 to 0 in 2011 and 1 in 2012, may be a consequence of improved case ascertainment and treatment.

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

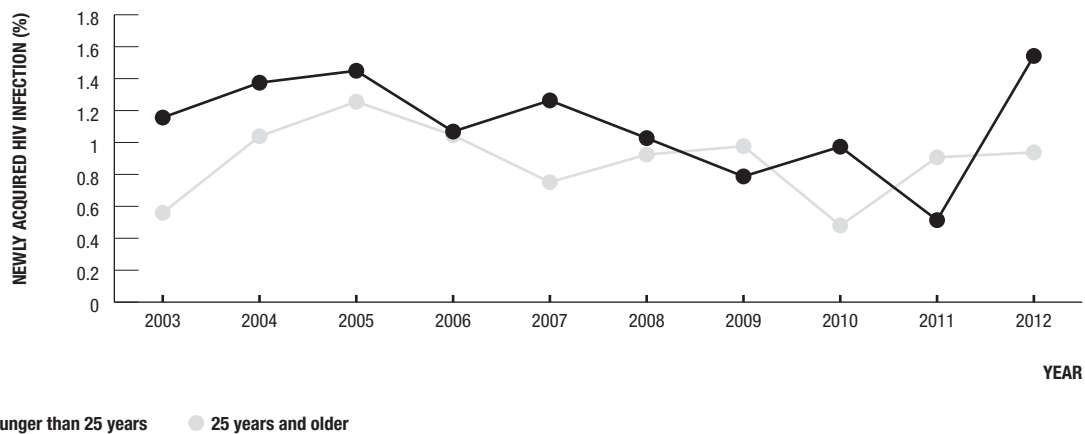
Population groups regarded as priorities for prevention and health promotion activities under the most recent national strategies for HIV, hepatitis B, hepatitis C, sexually transmissible infections (STI) and the National Aboriginal and Torres Strait Islander Blood Borne Viruses and Sexually Transmissible Infections Strategy, include people living with HIV infection, men who have sex with men, Aboriginal and Torres Strait Islander people, sex workers, prison entrants, people who have injected drugs and young people. 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 in 2003 – 2007 and in 2008 – 2012 was 3 302 and 3 703, including 1 208 (37%) and 1 472 (39%) diagnoses of newly acquired HIV infection, respectively. Sexual transmission between men accounted for a higher proportion of diagnoses of newly acquired HIV infection (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.

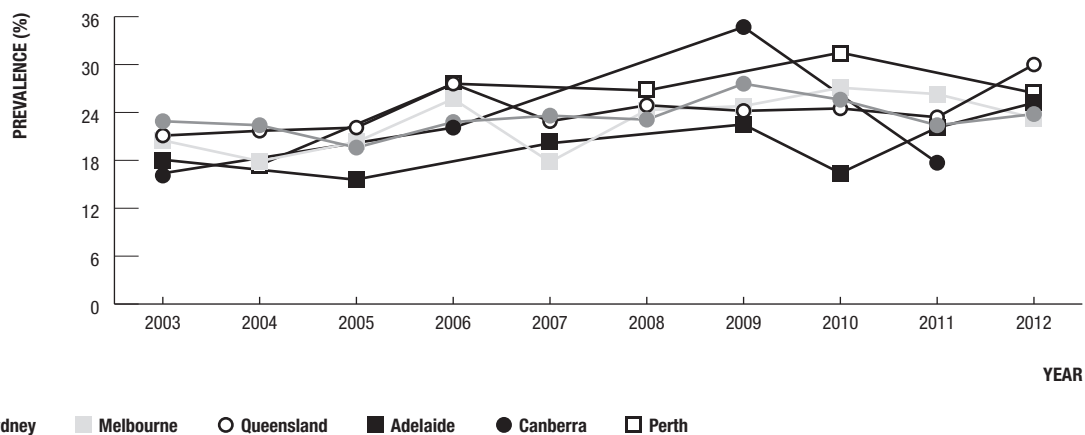


**Figure 21** Newly acquired HIV infection among men who have sex with men seen at sexual health clinics, 2003 – 2012, by year and age group



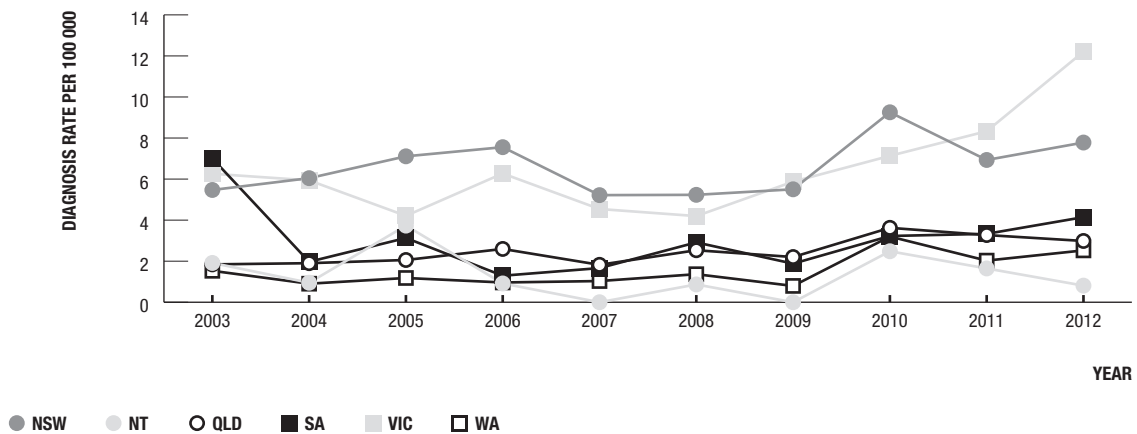
Among men who have sex with men seen at metropolitan sexual health clinics, the percentage diagnosed with newly acquired HIV infection at younger than 25 years of age declined from 1.4% in 2005 to 0.5% in 2011 and then increased to 1.5% in 2012. Among men aged 25 years and older, the percentage with newly acquired infection declined from 1.3% in 2005 to 0.5% in 2010 and increased to 0.9% in 2011 – 2012 (Figure 21).

**Figure 22** Prevalence of unprotected anal intercourse with casual partners, 2003 – 2012, reported by men in Gay Community Periodic Surveys



The Gay Community Periodic Survey indicated that the proportion of Sydney respondents who reported unprotected anal intercourse with casual partners remained relatively stable at around 24% in 2003 – 2012 (Figure 22). The same survey carried out in Queensland indicates that the proportion of respondents reporting unsafe sexual behaviour increased from around 22% in 2003 – 2007 to around 24% in 2008 – 2012. The respondents in Melbourne also indicated an increase in unsafe sexual behaviour, from around 20% in 2003 – 2007, to 25% in 2008 – 2012. Recent declines in unsafe sexual behaviour were reported in Canberra and Perth.

**Figure 23 Gonococcal rectal infection among men, 2003 – 2012, by State/Territory and year**

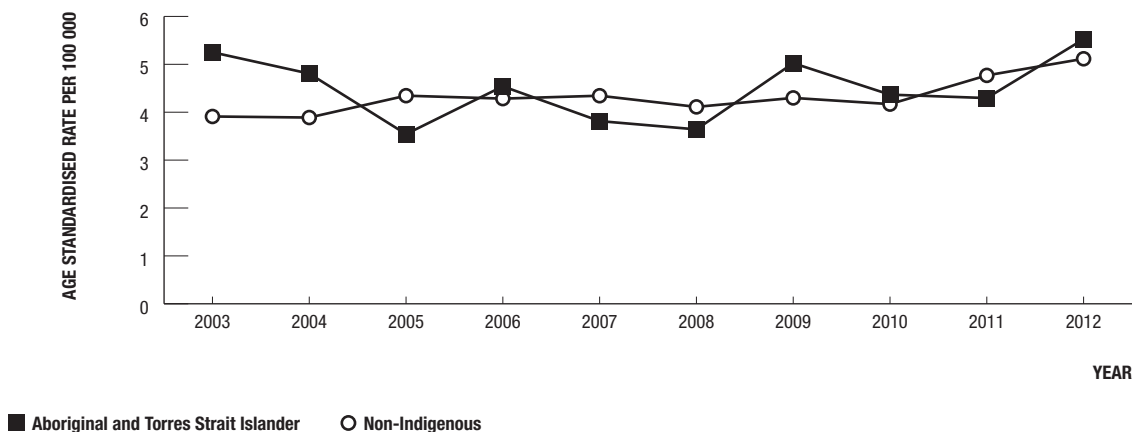


Surveillance data for gonorrhoea also provide an indication of unsafe sexual behaviour among men who have sex with men in Australia. The rate of rectal gonococcal isolates among men in New South Wales increased from around 6.0 in 2003 – 2007 to 6.9 in 2008 – 2012. In Victoria, the rate of rectal gonorrhoea isolates increased steadily from 4.1 in 2008 to 12.2 in 2012 (Figure 23).

### Aboriginal and Torres Strait Islander people

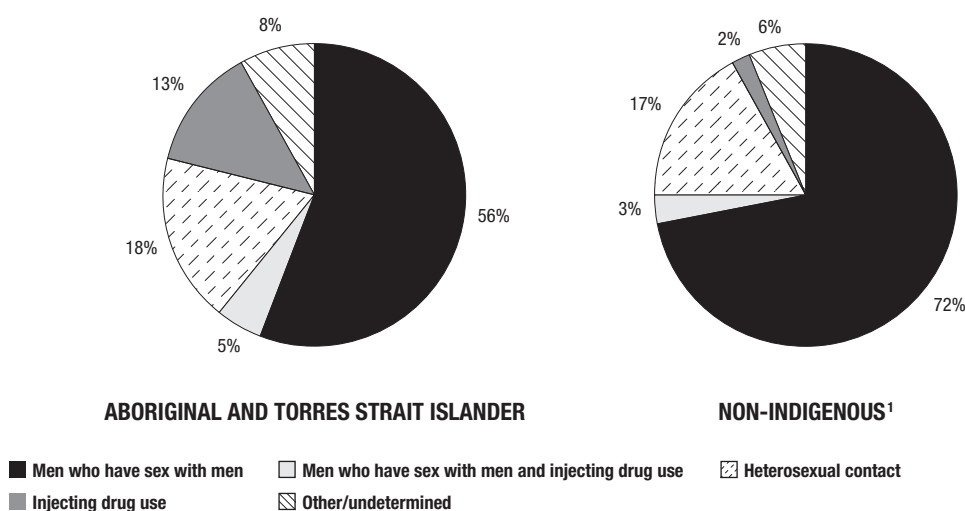
The rates of HIV diagnosis *per capita* in the Aboriginal and Torres Strait Islander and the non-Indigenous population, excluding cases and populations from high HIV prevalence countries in sub-Saharan Africa and South East Asia, differed little in 2003 – 2012 (Figure 24). In the Aboriginal and Torres Strait Islander population, the rate of HIV diagnosis was relatively stable in 2003 – 2010 at around 4.5 and increased to 5.5 per 100 000 population in 2012. In the non-Indigenous, non-high HIV prevalence country of birth population, the rate of HIV diagnosis was also relatively stable at around 4.2 in 2003 – 2010 and then increased to 5.1 in 2012. 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, 2003 – 2012, by Aboriginal and Torres Strait Islander status<sup>1</sup> and year**



1 The non-Indigenous category excludes cases and populations from high prevalence countries.

**Figure 25 HIV diagnoses, 2008 – 2012, by Aboriginal and Torres Strait Islander status and HIV exposure category**

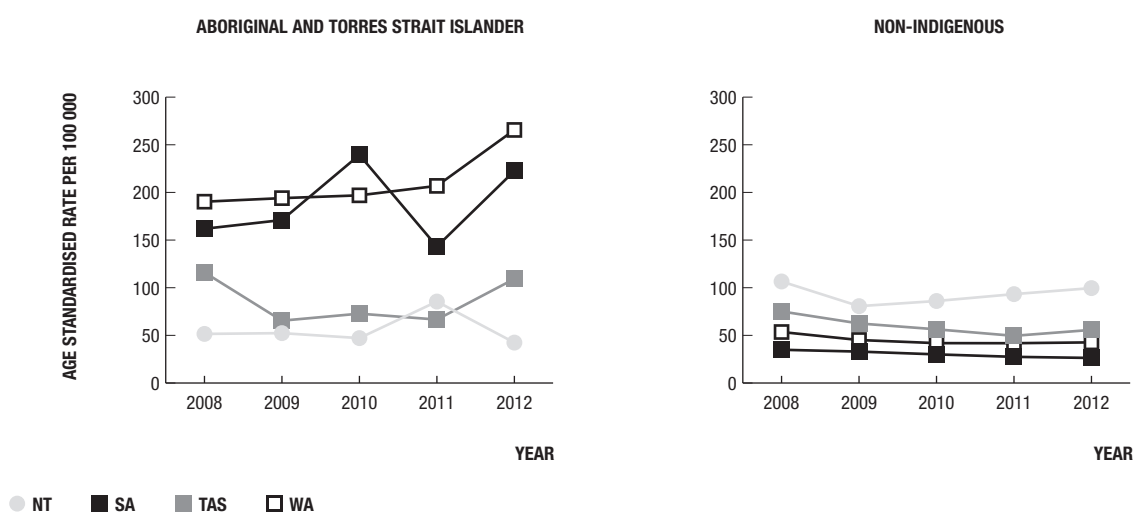


<sup>1</sup> The non-Indigenous category excludes cases from high prevalence countries.

In 2008 – 2012, the most frequently reported route of HIV transmission was sexual contact between men in both the non-Indigenous cases (75%) and in the Aboriginal and Torres Strait Islander cases (61%). Heterosexual contact was the reported source of exposure to HIV in 18% of Aboriginal and Torres Strait Islander cases and in 17% of non-Indigenous, non-high prevalence country of exposure cases (Figure 25). Aboriginal and Torres Strait Islander cases differed from non-Indigenous cases in that a higher proportion of infections were attributed to injecting drug use (13% among Aboriginal and Torres Strait Islander cases vs 2% for non-Indigenous cases), and a higher proportion of infections were among women (22% among Aboriginal and Torres Strait Islander cases vs 8% for non-Indigenous non-high prevalence country of exposure cases in 2008 - 2012).

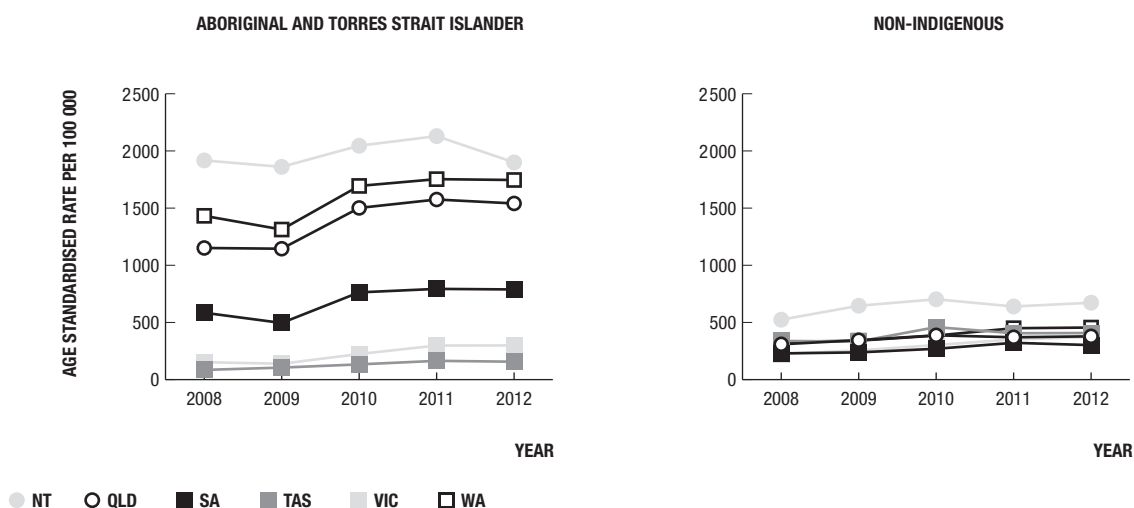
The rate of diagnosis of hepatitis B infection in the Aboriginal and Torres Strait Islander population resident in the Northern Territory, South Australia, Tasmania and Western Australia declined from 156.1 in 2008 to 85.6 in 2012, and the rate of diagnosis of newly acquired hepatitis B infection was 5 or less in 2008 – 2012. In the non-Indigenous population, the rate of diagnosis of hepatitis B increased from 26.3 in 2008 to 31.5 in 2012. The population rate of diagnosis of newly acquired hepatitis B infection was around 1 per 100 000 population in 2008 – 2012.

**Figure 26 Hepatitis C notifications, 2008 – 2012, by Aboriginal and Torres Strait Islander status, State/Territory and year**



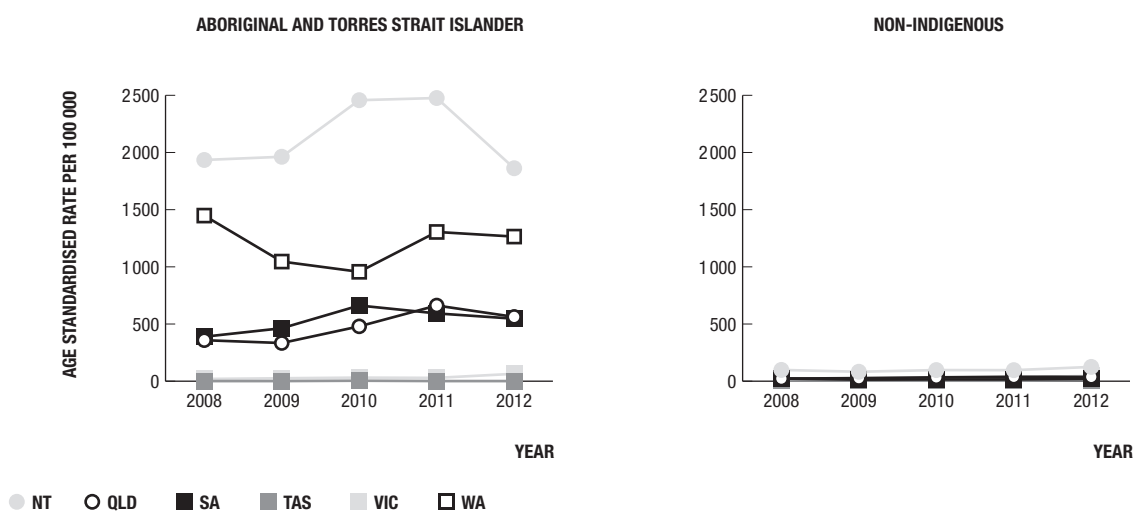
The population rate of diagnosis of hepatitis C infection in the Aboriginal and Torres Strait Islander population resident in the Northern Territory, South Australia, Tasmania and Western Australia increased from 130.2 in 2008 to 166.2 per 100 000 population in 2012 and decreased in the non-Indigenous population from 51.1 in 2008 to 40.3 in 2012. In the Northern Territory, the rate of hepatitis C diagnosis in the Aboriginal and Torres Strait Islander population declined from 51.1 in 2008 to 42.4 in 2012 and in the non-Indigenous population, from 106.5 in 2008 to 99.6 in 2012. In South Australia, Tasmania and Western Australia, the rate of hepatitis C diagnosis was substantially higher in the Aboriginal and Torres Strait Islander population than in the non-Indigenous population.

**Figure 27 Chlamydia notifications, 2008 – 2012, by Aboriginal and Torres Strait Islander status, State/Territory and year**



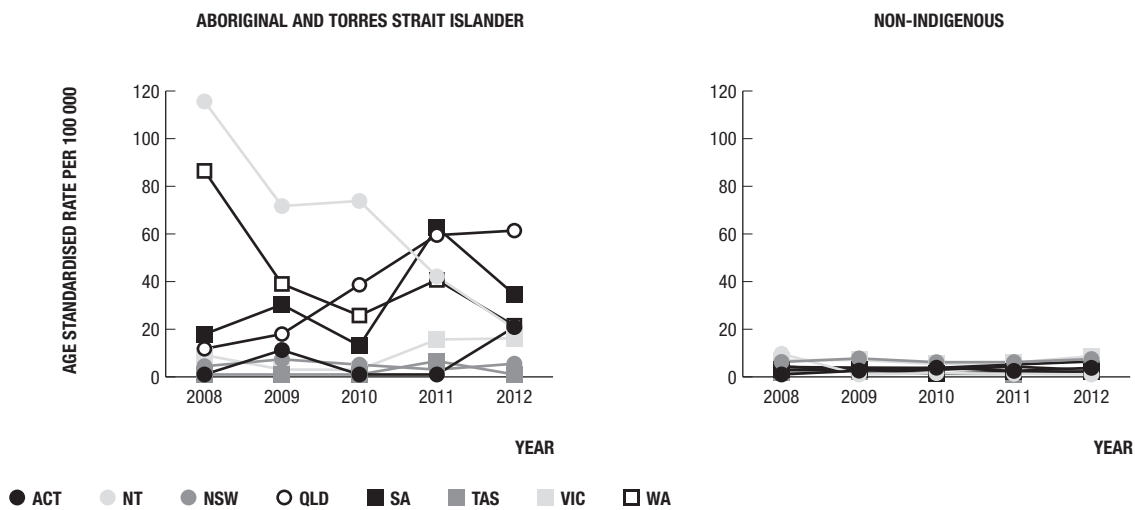
The rate of diagnosis of chlamydia in the Aboriginal and Torres Strait Islander population was around 1 300 in 2008 – 2012. In the non-Indigenous population resident in State/Territory jurisdictions other than the Australian Capital Territory and New South Wales, the rate of chlamydia diagnosis increased steadily from 274 in 2008 to 384 in 2012 (Figure 27).

**Figure 28 Gonorrhoea notifications, 2008 – 2012, by Aboriginal and Torres Strait Islander status, State/Territory and year**



The rate of diagnosis 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 772.4 in 2008 to 828.5 in 2012. In the non-Indigenous population, the rate of gonorrhoea diagnosis increased from 20.7 in 2008 to 40.3 in 2012 (Figure 28).

**Figure 29** Infectious syphilis notifications, 2008 – 2012, by Aboriginal and Torres Strait Islander status, State/Territory and year

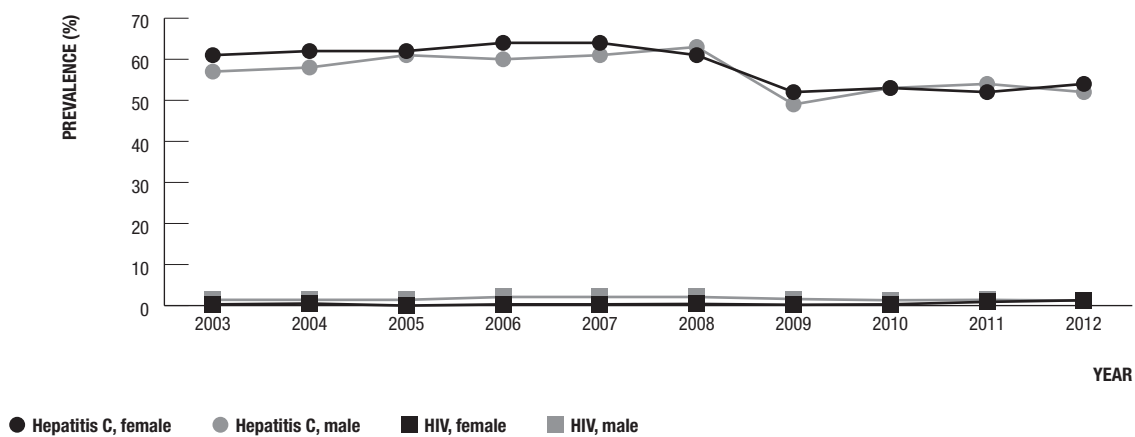


The rate of diagnosis of infectious syphilis in the Aboriginal and Torres Strait Islander population resident in State/Territory jurisdictions other than the Australian Capital Territory declined from 30 in 2008 to 27.2 in 2012 (Figure 29). The rate of infectious syphilis diagnosis in the Aboriginal and Torres Strait Islander population resident in the Northern Territory declined substantially whereas the rate increased in Queensland, from 11.8 in 2008 to 61.4 in 2012. The rate of diagnosis of infectious syphilis in the non-Indigenous population was stable at around 5.4 per 100 000 population in 2008 – 2012.

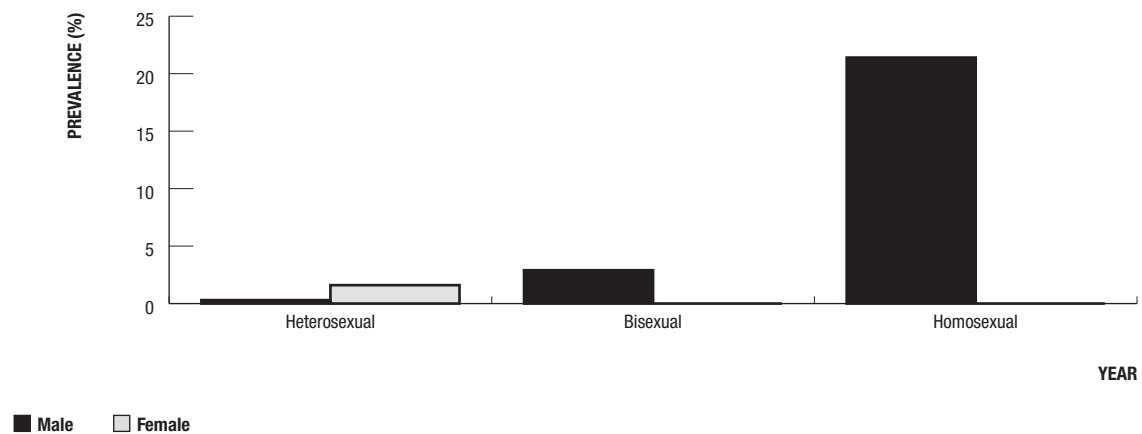
### People who inject drugs

In 2003 – 2012, approximately 6% of HIV diagnoses 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, 2003 – 2012, by year and sex



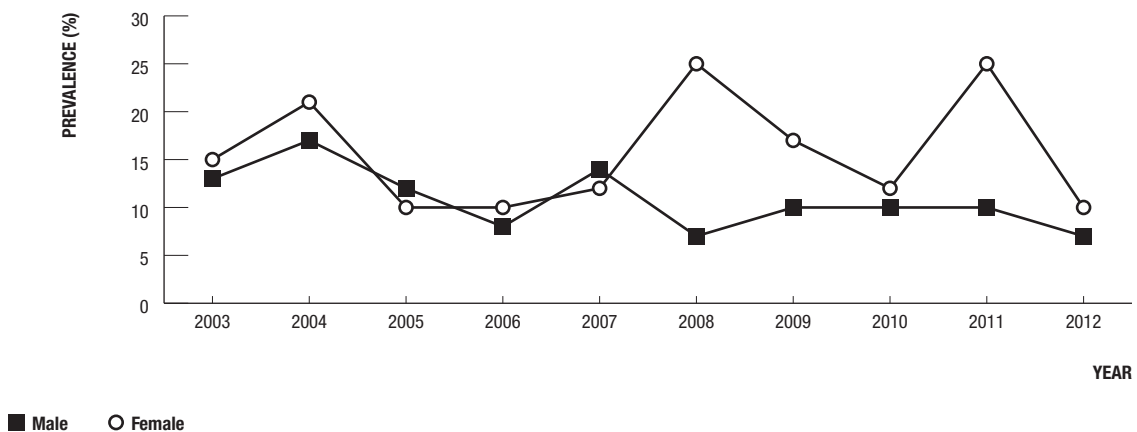
**Figure 31 HIV prevalence at needle and syringe programs, 2012, by sexual identity**



HIV prevalence among people attending needle and syringe programs has remained low (around 1% in 2003 – 2012) (Figure 30) but in the subgroup of men who have sex with men, it was 21.4% in 2012 (Figure 31). Of 3 293 men and 2 251 women with a history of injecting drug use who were tested for HIV antibody at metropolitan sexual health centres in 2003 – 2012, 8 males (0.2%) and 1 woman (0.04%) were diagnosed with HIV infection (Figures 36 and 37).

In contrast to the low HIV prevalence, hepatitis C prevalence among people attending needle and syringe programs remained at high levels in 2003 – 2012 (Figure 30). Hepatitis C prevalence dropped among males from 63% in 2008 to 52% in 2012, and among females from 61% in 2008 to 54% in 2012. The decline in hepatitis C prevalence was not explained by demographic or laboratory factors. Hepatitis C prevalence among people who inject drugs has remained stable from 2009.

**Figure 32 Prevalence of sharing among recent initiates to injecting<sup>1</sup> seen at needle and syringe programs, 2003 – 2012, by year and sex**



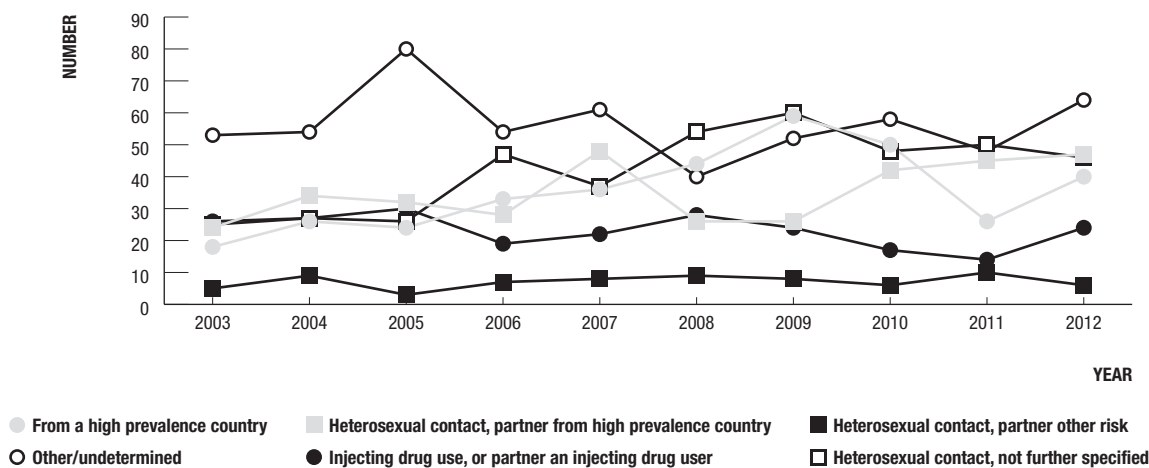
<sup>1</sup> With a history of injecting drug use less than five years who were tested for HIV or hepatitis C.

The percentage of people attending needle and syringe programs who reported having injected drugs for five years or less remained stable at approximately 10% between 2008 and 2012; hepatitis C prevalence among these people declined from 28% in 2008 to 17% in 2012. The fluctuations in the prevalence of reported sharing of injecting equipment among women 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 having injected drugs for five years or less (around 9%) and the low proportion of survey respondents aged less than 20 years (around 2%) suggests that there has been a decrease in the prevalence of injecting drug use among young people.

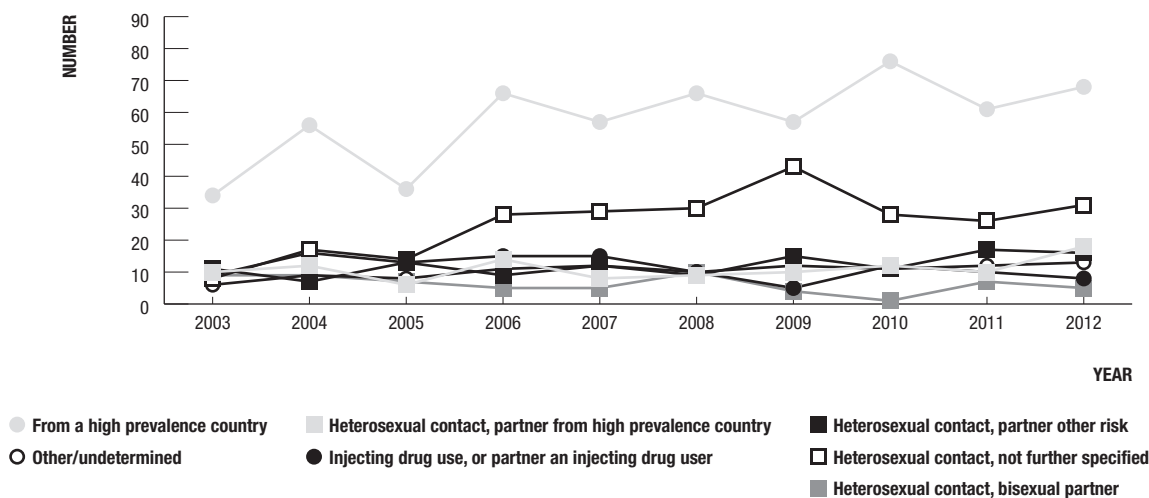
## Heterosexual transmission of HIV infection

The number of new HIV diagnoses for which exposure to HIV was attributed to heterosexual contact increased from 1 016 in 2003 – 2007 to 1 364 in 2008 – 2012, accounting for 21% and 24.7% of total HIV diagnoses in 2003 – 2007 and in 2008 – 2012, respectively.

**Figure 33** Newly diagnosed HIV among men who report an exposure other than sex with men, 2003 – 2012, by year and HIV exposure category



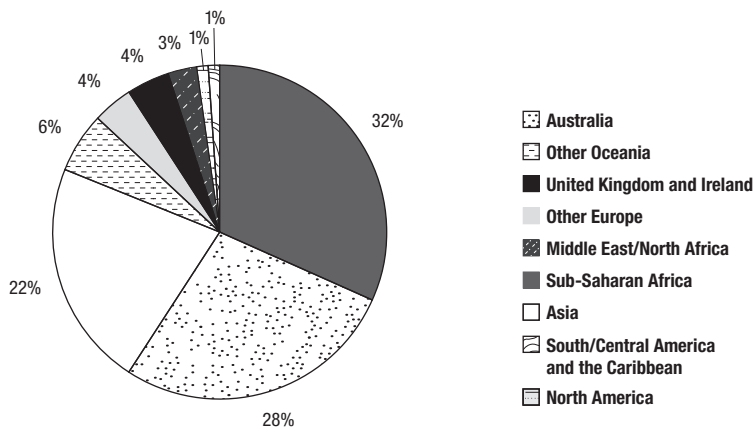
**Figure 34** Newly diagnosed HIV among women, 2003 – 2012, by year and HIV exposure category



Men and women whose HIV infection was acquired in a high HIV prevalence country accounted for 37.6% and 40% of HIV diagnoses attributed to heterosexual contact in 2003 – 2007 and 2008 – 2012, respectively. In both five year intervals, the majority of cases came from high HIV prevalence countries in sub-Saharan Africa (58% in 2003 – 2007 and 75% in 2008 – 2012), South East Asia (32% in 2003 – 2007 and 22% in 2008 – 2012) and North Africa/Middle East (8% in 2003 – 2007 and 2% in 2008 – 2012). Women accounted for 65% and 60% of cases from high prevalence countries in 2003 – 2007 and in 2008 – 2012, respectively.

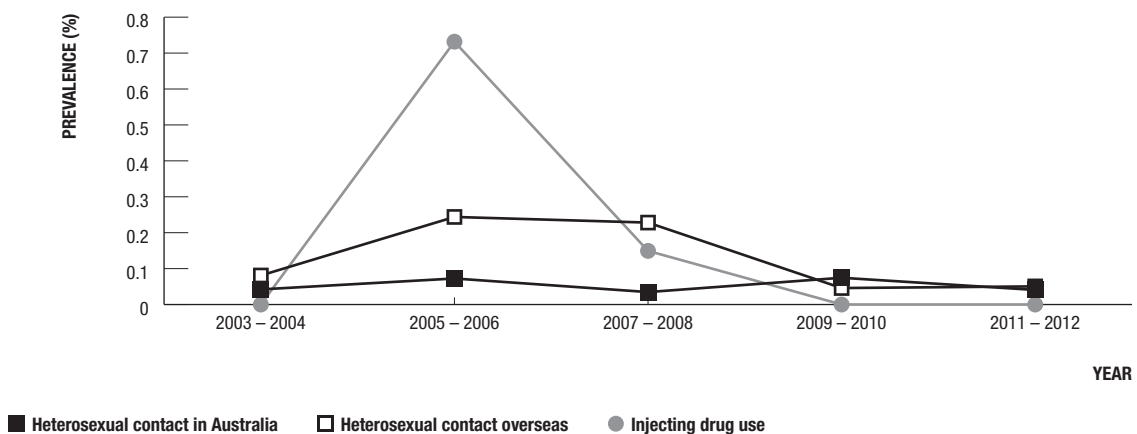
Excluding cases from a high prevalence country, the number whose exposure to HIV was attributed to heterosexual contact increased by 29%, from 634 in 2003 – 2007 to 819 in 2008 – 2012. Men and women with HIV infection who reported a partner from a high prevalence country accounted for 34% and 30% of heterosexual cases newly diagnosed in 2003 – 2007, and in 2008 – 2012, respectively. Of new HIV diagnoses in 2008 – 2012 for which the country of birth of the heterosexual partner was reported (73.5%), 27% of partners were from a high prevalence country in sub-Saharan Africa, 71% were from a high prevalence country in South East Asia and 2% were from high prevalence countries in North Africa/Middle East. Cases with partners with other risks for HIV infection accounted for 25% and 19% of diagnoses in 2003 – 2007 and in 2008 – 2012, respectively. Heterosexual contact, not further specified, was reported in 41% of cases attributed to heterosexual contact in 2003 – 2007 and 51% in 2008 – 2012. The source of exposure to HIV remained undetermined for substantial numbers of men in 2003 – 2012 (Figure 33).

**Figure 35 HIV infection attributed to heterosexual contact, 2008 – 2012, by region of birth**

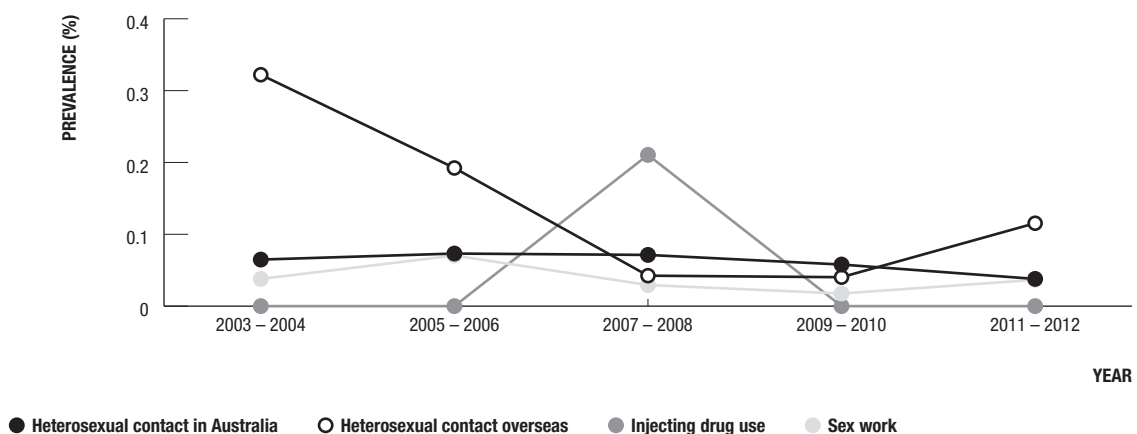


Among 1 364 cases of HIV infection diagnosed in Australia in 2008 – 2012 for which exposure to HIV was attributed to heterosexual contact, the country of birth was reported as Australia in 28%, sub-Saharan Africa in 32% and Asia in 22% (Figure 35).

**Figure 36 HIV prevalence among heterosexually active men seen at sexual health clinics, 2003 – 2012, by year and HIV exposure category**



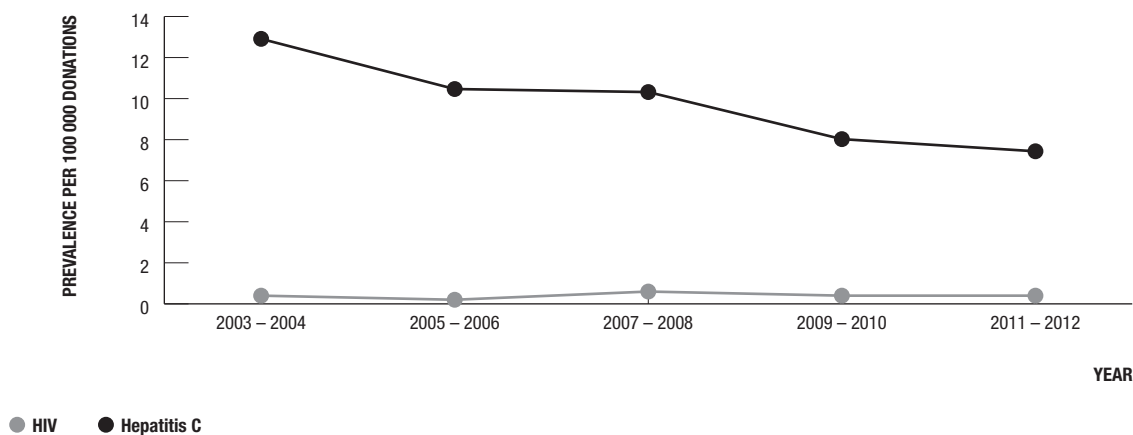
**Figure 37 HIV prevalence among heterosexually active women seen at sexual health clinics, 2003 – 2012, by year and HIV exposure category**





HIV prevalence has remained below 0.5% among heterosexually active men and women seen through metropolitan sexual health clinics. In 2003 – 2012, 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, 2003 – 2012, by year**

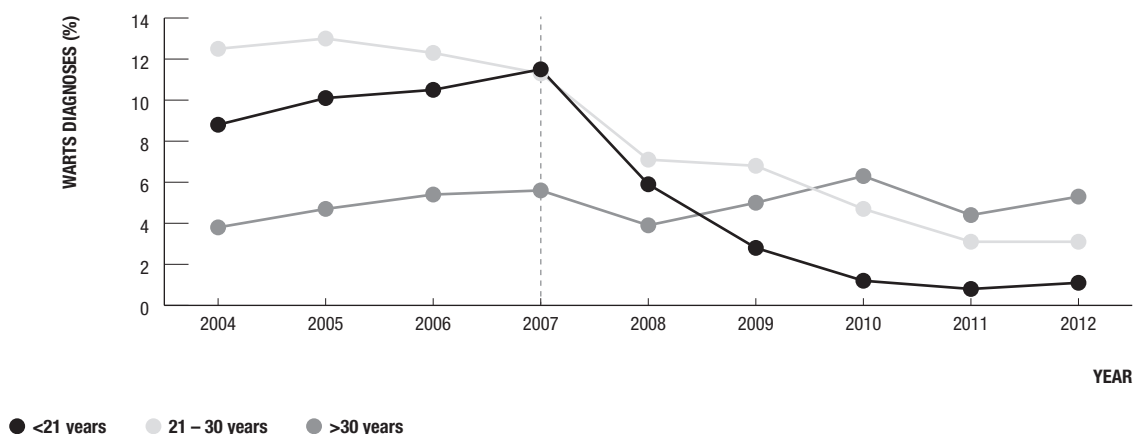


Levels of HIV infection in blood donors, who undergo a screening interview to exclude those with recognised risk factors for HIV infection, have been below 1 per 100 000 donations since 1985 (Figure 38).

### 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.

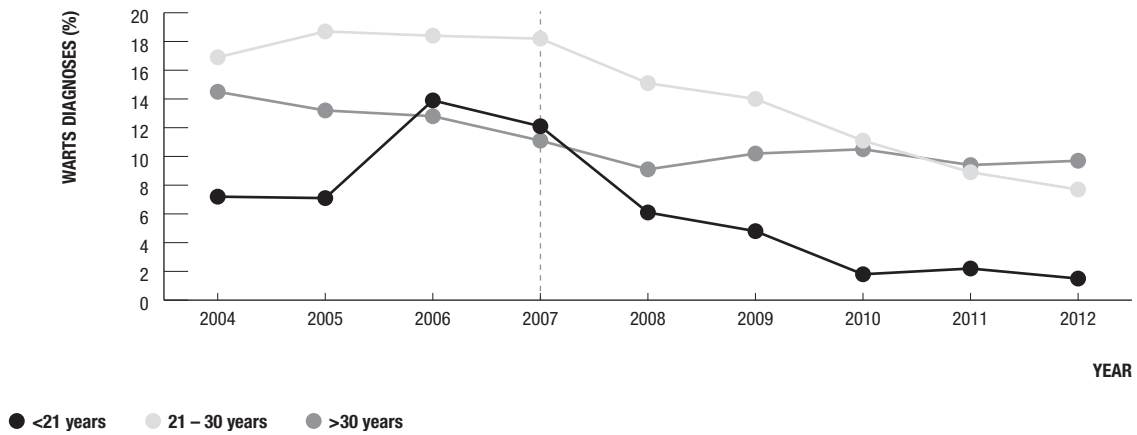
**Figure 39 Proportion of Australian born women diagnosed with genital warts at first visit, by age group, 2004 – 2012**



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

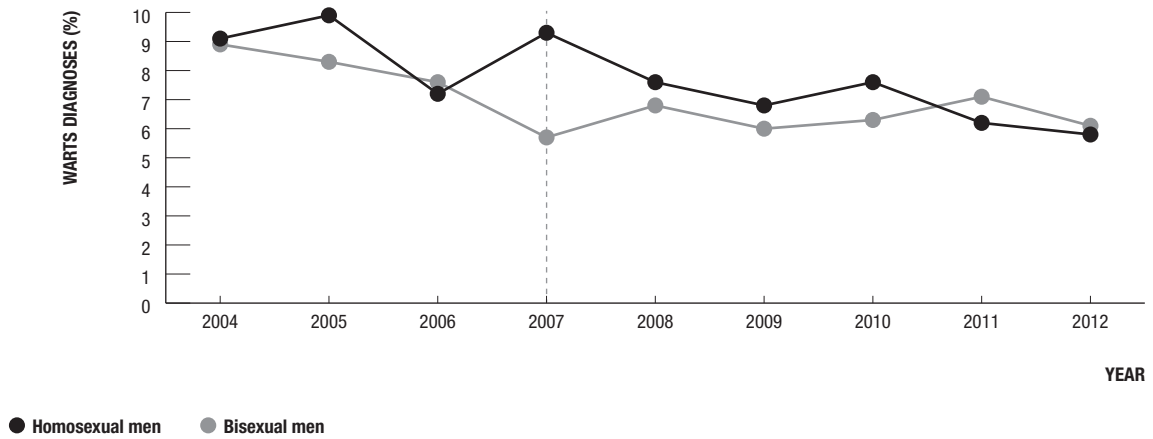
Information available through the Genital Warts Surveillance Network indicates that the genital warts diagnosis rate among Australian born women, aged 21 years or younger in July 2007 and thus eligible for free HPV vaccine, was above 10% in 2007 and then declined to less than 2% in 2012 (Figure 39). Among Australian born heterosexual men in the same age group, the genital warts diagnosis rate was above 12% in 2007 and declined to less than 2% in 2012 (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, by age group, 2004 – 2012



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, by exposure, 2004 – 2012



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

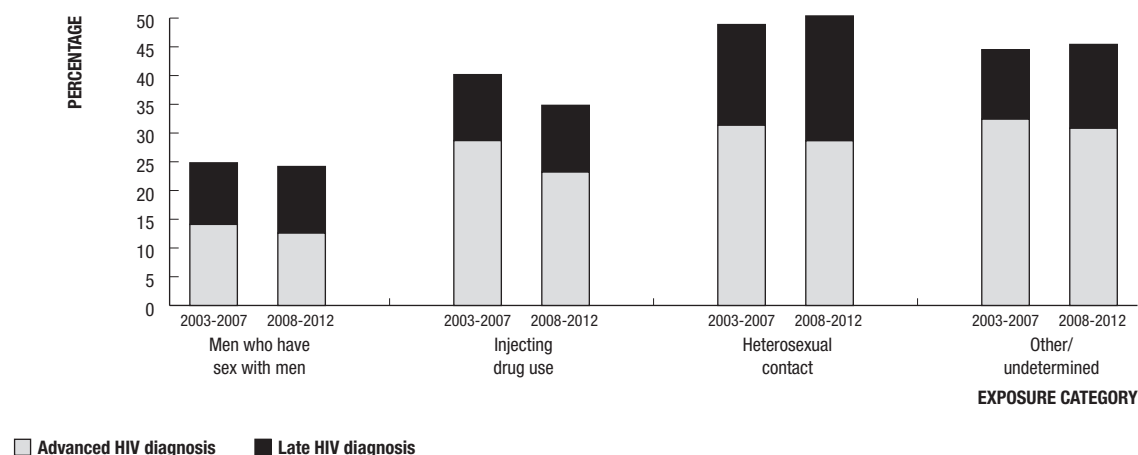
In the past 10 years, the proportion of cases diagnosed with advanced HIV infection, measured by a CD4+ cell count of less than 200 cells/μl at HIV diagnosis, has declined slightly from 23.1% among cases diagnosed in 2003 – 2007 to 15.1% among cases diagnosed in 2008 – 2012 (Figure 42). However, the proportion with a late diagnosis, defined by a CD4+ cell count of less than 350 cells/μl at HIV diagnosis, has increased slightly from 38.6% in 2003 – 2007 to 39.3% in 2008 – 2012 (Table 1.1.1).

**Figure 42** Diagnoses of recent HIV infection and CD4+ cell count among other HIV diagnoses in Australia, 2010 – 2012, by year



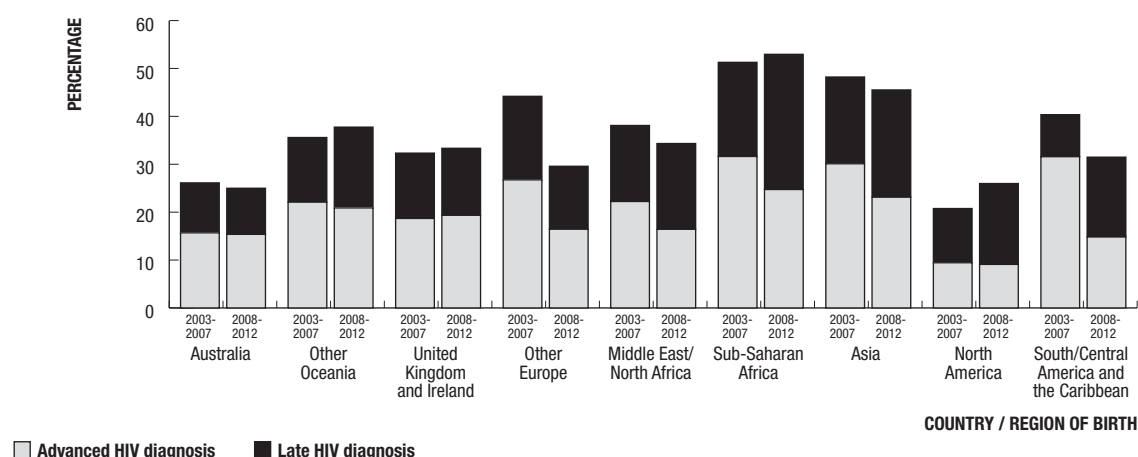
Advanced and late HIV diagnoses were least common among men who have sex with men (Figure 43). In 2008 – 2012, around 12% and 24% of HIV diagnoses among men who have sex with men were advanced and late HIV diagnoses, respectively, whereas advanced and late diagnoses accounted for 23% and 35% of diagnoses among people who injected drugs and for 28% and 50% 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/advanced HIV diagnoses<sup>1</sup>, 2003 – 2012, by year and exposure category



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

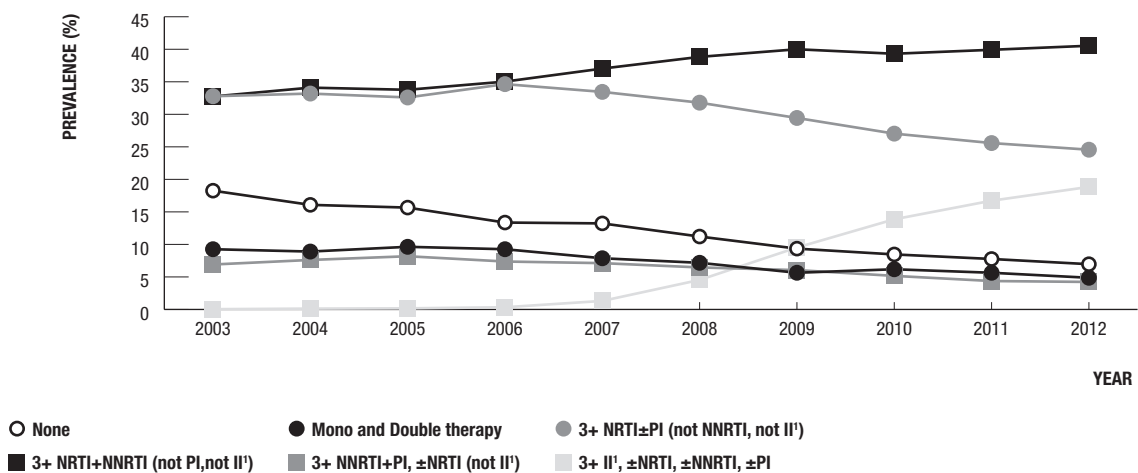
**Figure 44 Late/advanced HIV diagnoses<sup>1</sup>, 2003 – 2012, by year and region of birth**



<sup>1</sup> A late diagnosis of HIV infection 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.

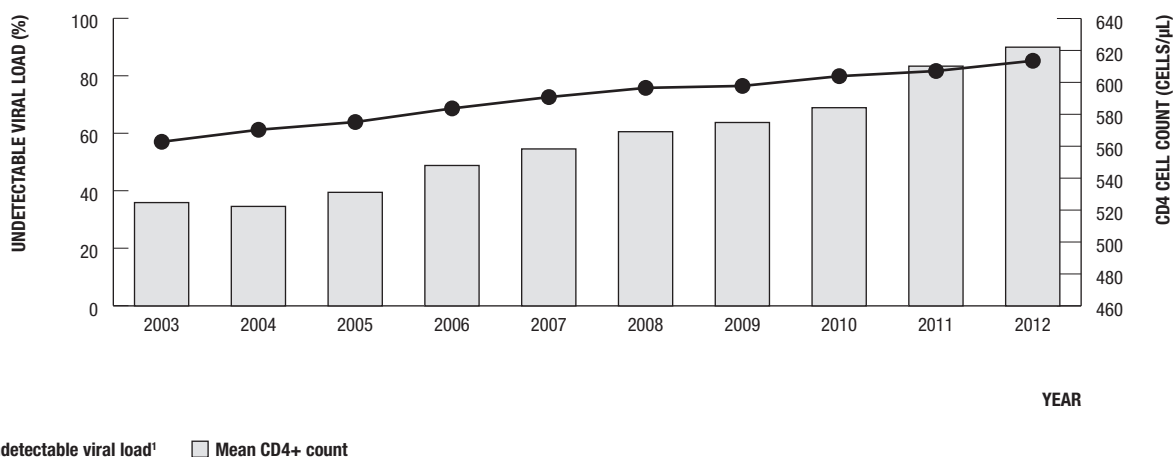
There is no comprehensive registry of advanced illness related to hepatitis B and C in Australia. One indicator of the extent of illness caused by hepatitis C is the number of liver transplants due to chronic infection. Of 202 people who had a liver transplant in 2012, 67 (33.2%) had hepatitis C infection whereas hepatitis B was the primary cause of liver failure for 2 (1.0%) people having liver transplants (Table 2.3.1).

**Figure 45 Treatment uptake among people enrolled on the Australian HIV Observational Database, 2003 – 2012**



<sup>1</sup> II = Integrase Inhibitor.

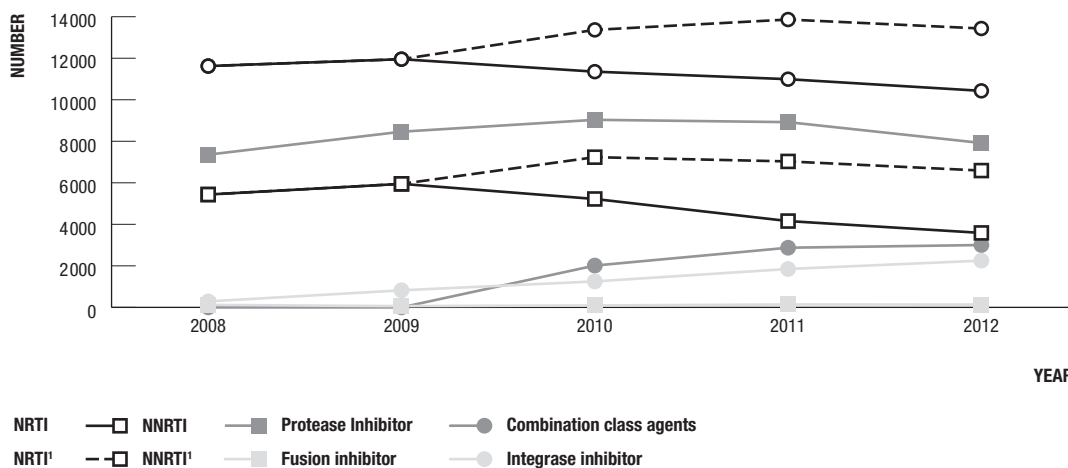
**Figure 46 HIV viral load and CD4+ cell count, 2003 – 2012, by year**



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

The Australian HIV Observational Database (AHOD) indicated that 88% of 2 342 people under follow up in 2012 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 2003 to 88% in 2012. The mean CD4+ cell count also steadily increased to 620 cells/μl in 2012 (Figure 46). Of people enrolled in the Australian HIV Observational Database in 2012, 9% had been diagnosed with both HIV and hepatitis C antibody.

**Figure 47 Number of people dispensed drugs for HIV infection through the Highly Specialised Drugs Program, 2003 – 2012, by class of drug and year**

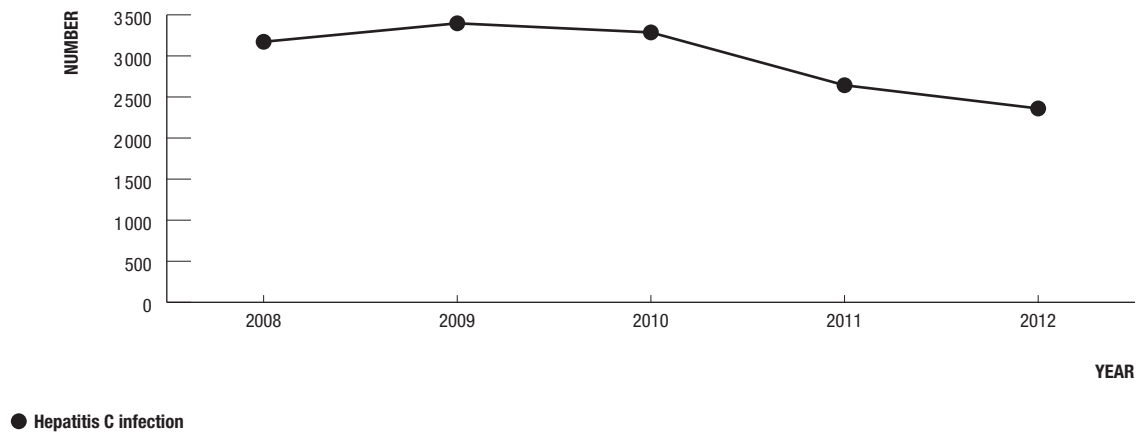


1 Includes NRTI/NNRTIs in fixed dose combinations with other classes.

The number of NRTI and NNRTI, prescribed in fixed dose combinations with other drug classes, shown with dashed lines in Figure 47, indicates that the total number of NRTI and NNRTI drugs dispensed has remained stable over the past five years.

Use of antiretroviral therapy by men who have sex with men participating in the Gay Community Periodic Surveys in Melbourne increased steadily from 69.7% in 2010 to 77.7% in 2012 whereas uptake in Queensland remained stable at close to 70% in 2010 – 2012. In Sydney, reported uptake of antiretroviral therapy increased from 70% in 2011 to 80% in 2012.

**Figure 48** Number of people dispensed drugs for hepatitis C infection through the Highly Specialised Drugs Program, 2008 – 2012



The estimated number of people receiving treatment for hepatitis C infection through the Highly Specialised Drugs Program has declined from a peak of 3 397 in 2009 to 2 360 in 2012. The decline in the estimated number of people receiving treatment for hepatitis C infection may be due to delaying treatment uptake until new generation hepatitis C drugs become available or to treatment availability through participation in clinical trials.

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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, 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>1,2</sup>
	≤ 03 <sup>1</sup>	04	05	06	07	08	09	10	11	12	
<b>Total cases</b>	<b>24 545</b>	<b>914</b>	<b>974</b>	<b>1 017</b>	<b>1 052</b>	<b>1 014</b>	<b>1 066</b>	<b>1 054</b>	<b>1 140</b>	<b>1 253</b>	<b>34 029</b>
Males (%)	92.5	86.0	89.9	85.2	86.8	85.8	86.1	85.2	87.4	87.2	90.8
<b>Median age (years)</b>											
Male	33	37	37	38	38	37	37	37	37	36	34
Female	29	31	32	31	32	31	32	31	34	33	30
<b>Language spoken at home<sup>3</sup></b>											
English		552	659	659	787	757	798	761	877	900	6 750
Other language		49	55	74	82	68	112	110	111	121	782
Not reported		313	260	284	183	189	156	183	152	232	1 952
<b>Late and advanced HIV infection status at HIV diagnosis(%)<sup>4</sup></b>											
Late HIV diagnosis	23.0	20.2	20.8	23.3	19.6	18.0	20.1	21.0	19.9	18.1	20.3
Advanced HIV infection	15.5	16.3	15.3	20.0	18.2	20.2	21.1	22.0	17.2	19.1	18.7
<b>State/Territory</b>											
Australian Capital Territory	283	7	8	6	9	7	12	14	11	17	374
New South Wales	14 238	414	408	399	415	367	382	351	389	459	17 822
Northern Territory	138	8	3	11	6	11	16	6	9	26	234
Queensland	2 551	156	171	164	195	201	209	241	223	261	4 372
South Australia	899	54	51	62	56	47	53	42	67	41	1 372
Tasmania	102	9	7	7	7	13	14	10	15	13	197
Victoria	5 075	216	262	288	287	286	291	281	328	314	7 628
Western Australia	1 259	50	64	80	77	82	89	109	98	122	2 030
<b>HIV exposure category (%)<sup>5</sup></b>											
Men who have sex with men	78.1	67.4	71.9	67.0	68.0	65.6	64.4	66.4	70.9	70.3	75.1
Men who have sex with men and injecting drug use	4.4	4.1	4.5	4.1	2.9	3.3	3.7	2.2	2.7	2.8	4.1
Injecting drug use <sup>6</sup>	4.1	4.3	3.5	2.7	2.8	3.3	2.4	2.4	1.9	2.3	3.7
Heterosexual contact	10.5	23.8	19.5	25.6	25.2	27.1	28.4	28.3	23.4	23.8	14.9
<i>Person from a high prevalence country</i>	<i>24.9</i>	<i>40.4</i>	<i>34.7</i>	<i>40.6</i>	<i>37.3</i>	<i>41.8</i>	<i>40.4</i>	<i>45.2</i>	<i>34.1</i>	<i>38.3</i>	<i>32.2</i>
<i>Partner with/at risk of HIV infection</i>	<i>38.2</i>	<i>37.9</i>	<i>42.2</i>	<i>28.7</i>	<i>36.1</i>	<i>26.2</i>	<i>23.7</i>	<i>27.6</i>	<i>36.1</i>	<i>34.4</i>	<i>35.0</i>
<i>Not further specified</i>	<i>37.0</i>	<i>21.7</i>	<i>23.1</i>	<i>30.7</i>	<i>26.5</i>	<i>31.9</i>	<i>35.9</i>	<i>27.2</i>	<i>29.8</i>	<i>27.3</i>	<i>32.8</i>
Haemophilia/coagulation disorder	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Receipt of blood/tissue	1.2	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.2	0.4	0.9
Mother with/at risk of HIV infection	0.4	0.1	0.6	0.6	0.9	0.6	1.1	0.6	0.9	0.3	0.4
Health care setting	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Other undermined exposure	14.9	6.8	8.7	6.2	6.1	4.2	5.1	6.4	4.3	5.6	12.4

1 Late diagnosis and advanced infection for HIV diagnoses in 2003 only. Total percentage with late HIV diagnosis and advanced HIV infection in 2003 – 2012 only.

2 Not adjusted for multiple reporting.

3 Language spoken at home was sought among cases of HIV infection newly diagnosed from 1 January 2004.

4 Late HIV diagnosis was defined as newly diagnosed HIV infection with a CD4+ cell count of 200 or more to 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 1.1.2 Number of new diagnoses of HIV infection<sup>1</sup>, cumulative to 31 December 2012, by age group, year and sex**

Age group (years)	Sex	Year of HIV diagnosis										Total
		≤ 03	04	05	06	07	08	09	10	11	12	
0 – 1	M	45	0	0	1	1	1	0	1	1	0	50
	F	22	1	1	3	1	1	2	1	1	0	33
2 – 12	M	90	0	2	2	4	4	3	3	3	1	112
	F	24	0	2	1	5	1	8	2	5	0	48
13 – 19	M	441	8	10	9	8	7	10	12	12	17	534
	F	95	6	3	6	2	6	3	3	6	6	136
20 – 24	M	2 729	63	70	54	64	86	71	70	91	110	3 408
	F	258	23	13	18	11	23	12	20	8	20	406
25 – 29	M	4 580	98	113	118	129	134	151	140	172	205	5 840
	F	362	28	14	36	29	25	33	37	25	32	621
30 – 39	M	8 567	310	322	301	310	276	305	276	308	326	11 301
	F	443	31	43	48	55	57	53	60	55	65	910
40 – 49	M	4 163	191	218	242	253	234	232	244	238	241	6 256
	F	164	21	16	25	19	22	22	17	35	23	364
50 – 59	M	1 468	85	99	101	96	89	115	105	126	127	2 411
	F	60	12	4	9	12	7	10	9	6	10	139
60+	M	481	31	41	38	47	39	31	47	45	65	865
	F	69	4	1	2	4	2	3	2	2	3	92
Not reported	M	134	0	1	0	1	0	0	0	0	0	136
	F	32	0	0	0	0	0	0	0	0	0	32
Sub-total	M	22 698	786	876	866	913	870	918	898	996	1092	30 913
	F	1 529	126	97	148	138	144	146	151	143	159	2 781
<b>Total<sup>2</sup></b>		<b>24 545</b>	<b>914</b>	<b>974</b>	<b>1 017</b>	<b>1 052</b>	<b>1 014</b>	<b>1 066</b>	<b>1 054</b>	<b>1 140</b>	<b>1 253</b>	<b>34 029</b>

1 Not adjusted for multiple reporting.

2 Totals include 86 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 2012, by State/Territory and whether or not HIV infection was first diagnosed in Australia

State/Territory	Place of first diagnosis of HIV infection		Total diagnoses
	Newly diagnosed in Australia	Newly diagnosed overseas	
Australian Capital Territory	17	0	17
New South Wales	408	51	459
Northern Territory	20	6	26
Queensland	208	53	261
South Australia	31	10	41
Tasmania	13	0	13
Victoria	264	50	314
Western Australia	102	20	122
<b>Total</b>	<b>1 063</b>	<b>190</b>	<b>1 253</b>

Source: State/Territory health authorities

**Table 1.1.4** Number (percent) of new HIV diagnoses in Australia, 2008 – 2012, and age standardised rate per 100 000<sup>1</sup> population by year of HIV diagnosis and region of birth

Region/Country of birth	2008			2009			2010			2011			2012		
	Number	%	Age standardised rate	Number	%	Age standardised rate	Number	%	Age standardised rate	Number	%	Age standardised rate	Number	%	Age standardised rate
Australia	576	56.8	4.1	566	53.1	4.1	561	53.3	4.0	629	55.2	4.5	675	53.9	4.9
Overseas born	402	39.6	7.1	476	44.7	8.6	467	44.4	8.1	485	42.5	8.6	557	44.5	9.5
<i>Other Oceania</i>	60	5.9	8.9	49	4.6	6.7	43	4.1	6.2	62	5.4	8.0	65	5.2	8.4
<i>United Kingdom and Ireland</i>	49	4.8	4.8	59	5.5	6.3	43	4.1	4.3	57	5.0	5.0	58	4.6	6.6
<i>Other Europe</i>	35	3.5	5.2	46	4.3	7.5	54	5.1	7.9	51	4.5	8.5	52	4.2	8.9
<i>Middle East/North Africa</i>	6	0.6	1.9	21	2.0	5.9	13	1.2	3.3	16	1.4	5.7	19	1.5	5.3
<i>Sub-Saharan Africa</i>	99	9.8	31.0	115	10.8	36.3	121	11.5	37.1	86	7.5	27.3	93	7.4	27.5
<i>Asia</i>	115	11.3	4.3	149	14.0	6.3	158	15.0	6.3	166	14.6	7.0	214	17.1	8.6
<i>North America</i>	14	1.4	9.4	15	1.4	10.5	17	1.6	12.0	16	1.4	11.8	25	2.0	17.2
<i>South/Central America and the Caribbean</i>	24	2.4	15.8	22	2.1	15.5	18	1.7	13.9	31	2.7	20.7	31	2.5	19.6
<b>Total with a reported country of birth</b>	<b>978</b>	<b>96.4</b>	<b>4.6</b>	<b>1 042</b>	<b>97.7</b>	<b>4.9</b>	<b>1 028</b>	<b>97.7</b>	<b>4.8</b>	<b>1 114</b>	<b>97.7</b>	<b>5.3</b>	<b>1 232</b>	<b>98.3</b>	<b>5.8</b>
Not reported	36	3.6		24	2.3		24	2.3		26	2.3		21	1.7	
<b>Total</b>	<b>1 014</b>	<b>100</b>		<b>1 066</b>	<b>100</b>		<b>1 052</b>	<b>100</b>		<b>1 140</b>	<b>100</b>		<b>1 253</b>	<b>100</b>	

<sup>1</sup> 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), 2008 – 2012, by State/Territory, HIV exposure category, newly acquired infection status, sex and year**

Characteristic	Sex	Year of HIV diagnosis									
		2008		2009		2010		2011		2012	
<b>State/Territory</b>											
Australian Capital Territory	M	272	(4)	275	(6)	640	(10)	460	(10)	515	(14)
	F	635	(2)	218	(2)	465	(2)	–	(1)	215	(2)
New South Wales	M	440	(261)	409	(306)	413	(290)	440	(332)	460	(387)
	F	450	(37)	340	(42)	356	(29)	255	(29)	470	(43)
Northern Territory	M	407	(7)	433	(10)	418	(4)	307	(7)	245	(18)
	F	–	(1)	680	(5)	–	(1)	–	(1)	372	(8)
Queensland	M	410	(131)	435	(146)	375	(182)	430	(168)	480	(219)
	F	360	(29)	380	(24)	400	(39)	420	(22)	350	(30)
South Australia	M	418	(41)	379	(40)	357	(36)	432	(44)	440	(28)
	F	314	(5)	353	(9)	582	(6)	313	(16)	440	(9)
Tasmania	M	490	(8)	713	(10)	340	(9)	363	(11)	336	(13)
	F	247	(5)	216	(3)	–	(1)	357	(4)	–	(0)
Victoria	M	428	(212)	442	(229)	419	(207)	433	(192)	413	(128)
	F	290	(31)	322	(25)	388	(30)	260	(21)	399	(21)
Western Australia	M	390	(61)	344	(56)	402	(70)	372	(62)	444	(90)
	F	321	(20)	299	(24)	364	(28)	380	(27)	420	(25)
<b>HIV exposure category</b>											
Men who have sex with men <sup>1</sup>	M	460	(565)	447	(624)	437	(621)	451	(664)	470	(718)
Injecting drug use <sup>2</sup>	M	483	(19)	352	(18)	400	(17)	345	(14)	559	(16)
	F	450	(7)	–	(1)	511	(7)	275	(6)	360	(5)
Heterosexual contact	M	300	(115)	284	(126)	254	(130)	317	(116)	338	(118)
	F	330	(115)	320	(121)	356	(119)	341	(105)	377	(124)
Other/undetermined	M	348	(26)	320	(34)	321	(40)	349	(32)	324	(45)
	F	430	(8)	465	(12)	440	(9)	457	(11)	620	(9)
<b>Newly acquired HIV infection status</b>											
Diagnoses of newly acquired infection <sup>3</sup>	M	535	(225)	550	(259)	524	(275)	510	(319)	550	(322)
	F	675	(12)	630	(13)	516	(12)	592	(15)	498	(16)
Other HIV diagnoses <sup>4</sup>	M	385	(500)	360	(544)	330	(533)	380	(507)	370	(575)
	F	320	(118)	307	(121)	357	(124)	305	(106)	384	(122)
<b>Total</b>		<b>420</b>	<b>(855)</b>	<b>406</b>	<b>(939)</b>	<b>400</b>	<b>(945)</b>	<b>429</b>	<b>(947)</b>	<b>435</b>	<b>(1036)</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
	2008		2009		2010		2011		2012		2008 – 2012		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
Person from a high prevalence country	44	65	59	57	50	75	26	60	40	68	219	325	544
<i>Sub-Saharan Africa</i>	40	44	55	38	44	54	25	39	31	43	195	218	413
<i>South East Asia</i>	4	20	3	17	4	19	1	19	8	23	20	98	118
<i>North Africa/Middle East</i>	0	1	1	2	2	2	0	2	1	2	4	9	13
Partner from a high prevalence country	18	5	22	8	27	7	32	9	28	7	127	36	163
<i>Sub-Saharan Africa</i>	3	3	7	8	2	7	5	8	2	4	19	30	49
<i>South East Asia</i>	15	1	15	0	25	0	27	1	26	1	108	3	111
<i>North Africa/Middle East</i>	0	1	0	0	0	0	0	0	0	2	0	3	3
Heterosexual contact with partner at risk	67	51	69	66	54	45	60	53	54	55	304	270	574
<i>Injecting drug use</i>	4	2	1	4	0	5	0	3	2	3	7	17	24
<i>Bisexual man</i>	–	10	–	4	–	1	–	7	–	5	–	27	27
<i>Partner with medically acquired HIV</i>	0	1	0	1	0	1	0	0	0	1	0	4	4
<i>Partner with HIV infection whose exposure was other than those above</i>	9	8	8	14	6	10	10	17	6	15	39	64	103
<i>Not further specified</i>	54	30	60	43	48	28	50	26	46	31	258	158	416
<b>Total</b>	<b>129</b>	<b>121</b>	<b>150</b>	<b>131</b>	<b>131</b>	<b>127</b>	<b>118</b>	<b>122</b>	<b>122</b>	<b>130</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, 2003 – 2012, by State/Territory and year of test**

State/ Territory	Year of HIV antibody test									
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
ACT <sup>1</sup>	7 978	14 388	15 551	16 565	17 602	19 443	20 173	–	21 316	22 435
NSW	358 063	347 064	356 046	322 569	251 724	191 873	114 041	151 320	119 225	128 425
NT	16 407	15 323	15 217	7 247	6 686	7 782	6 360	6 924	8 466	10 065
QLD	188 403	206 322	222 558	238 509	251 430	253 778	210 315	135 198	144 908	148 677
SA	79 409	83 970	88 158	88 552	80 664	95 696	62 560	61 252	64 010	42 501
TAS	12 967	12 754	13 041	12 573	12 248	13 346	4 126	4 447	4 571	16 038
VIC	204 561	152 284	165 461	183 508	253 145	231 844	224 300	148 623	235 822	200 331
WA	100 483	102 694	114 203	101 277	104 540	124 688	167 695	134 241	133 468	173 890
<b>Total</b>	<b>968 271</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>

<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<sup>1</sup>, 2003 – 2012, 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>2</sup>
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
<b>Total cases</b>		<b>286</b>	<b>261</b>	<b>281</b>	<b>308</b>	<b>278</b>	<b>286</b>	<b>301</b>	<b>308</b>	<b>379</b>	<b>397</b>	<b>3 085</b>
Males (%)	M	96.2	94.3	96.8	93.5	95.7	95.1	94.7	95.5	95.5	95.7	95.3
Median age (years)	M	33	35	35	36	35	35	36	35	35	33	35
	F	34	23	27	35	35	31	29	38	35	26	31
<b>State/Territory</b>												
Australian Capital Territory	M	0	2	1	3	2	0	3	3	4	10	28
	F	0	0	0	1	0	0	0	0	0	0	1
New South Wales	M	153	113	128	110	112	123	114	125	166	177	1 321
	F	4	5	3	7	4	6	8	2	4	8	51
Northern Territory	M	0	2	1	2	1	2	4	2	2	2	18
	F	0	0	0	0	0	0	3	0	1	1	5
Queensland	M	26	42	42	57	48	44	60	54	58	61	492
	F	3	3	1	1	4	2	2	4	4	3	27
South Australia	M	15	15	15	17	7	6	6	4	5	6	96
	F	1	1	0	0	0	1	0	1	0	0	4
Tasmania	M	0	1	2	0	0	1	2	2	5	4	17
	F	0	0	0	0	0	0	0	0	0	0	0
Victoria	M	69	62	74	85	82	81	88	89	97	92	819
	F	3	4	4	8	3	5	2	5	4	2	40
Western Australia	M	12	9	9	14	14	15	8	15	25	28	149
	F	0	1	1	2	1	0	0	1	4	2	12
<b>HIV exposure category</b>												
Men who have sex with men	M	243	209	234	247	231	240	246	265	327	344	2 586
Men who have sex with men and injecting drug use	M	12	12	15	14	5	11	11	7	7	14	108
Injecting drug use <sup>3</sup>	M	5	2	2	2	2	0	3	1	2	3	22
	F	2	4	1	2	1	3	0	1	1	1	16
Heterosexual contact	M	13	16	9	16	20	18	19	13	21	14	159
	F	9	10	8	16	10	11	14	12	15	15	120
Health care setting	M	0	2	0	0	0	0	0	0	0	0	2
	F	0	0	0	0	0	0	0	0	0	0	0
Other/undetermined	M	2	5	12	9	8	3	6	8	5	5	63
	F	0	0	0	1	1	0	1	0	1	0	4
<b>Evidence of newly acquired infection</b>												
Testing history only	M	139	105	128	150	122	123	136	131	142	158	1 334
	F	5	10	5	7	5	7	5	7	4	2	57
Primary HIV infection only	M	44	46	49	44	61	60	52	80	98	91	625
	F	0	3	2	9	5	5	6	1	9	10	50
Testing history and primary HIV infection	M	92	95	95	94	83	89	97	83	122	131	981
	F	6	1	2	3	2	2	4	5	4	4	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 5 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 of cases of HIV infection newly diagnosed in 2012, number with newly acquired HIV infection, number without newly acquired HIV infection with a matching BED capture enzyme immunoassay (BED-CEIA) record, number with BED-CEIA evidence only of incident infection and total number (%) of diagnoses of recent infection, by State/Territory

State/Territory	Number of new HIV diagnoses	Number with newly acquired infection <sup>2</sup>	Number without newly acquired infection tested for incident infection	Number with incidence assay evidence only of incident infection	Total number (%) with recent infection <sup>3</sup>
Australian Capital Territory	17	10	2	0	10 58.8%
New South Wales <sup>1</sup>	206	87	119	29	116 56.3%
Northern Territory	26	3	8	0	3 11.5%
Queensland	261	64	129	32	96 36.8%
South Australia	41	6	25	7	13 31.7%
Tasmania	13	4	0	0	4 30.8%
Victoria	314	94	185	48	142 45.2%
Western Australia	122	30	44	9	39 32.0%
<b>Total</b>	<b>1 000</b>	<b>298</b>	<b>512</b>	<b>125</b>	<b>423 42.3%</b>

1 Includes NSW cases newly diagnosed at St Vincent's Hospital, Sydney, only.

2 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 12 months of HIV diagnosis.

3 Recent infection includes cases with evidence of newly acquired HIV infection and cases with incidence assay evidence only of incident infection.

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

**Table 1.2.3** Number of new diagnoses of HIV infection, 2010 – 2012, and proportion with recent infection by year of diagnosis and evidence of recent infection

	2010	2011	2012	Total
Newly diagnosed infection <sup>1</sup>	820	869	1 000	2 689
Recent HIV infection <sup>2</sup>	308	368	423	1 099
Newly acquired infection <sup>3</sup>	252	271	298	821
Incidence assay evidence only of incident infection <sup>4</sup>	56	97	125	278
<b>Proportion with recent infection (%)</b>	<b>37.6</b>	<b>42.3</b>	<b>42.3</b>	<b>40.9</b>

1 Includes NSW cases newly diagnosed at St Vincent's Hospital, Sydney, only.

2 Recent infection includes cases with newly acquired HIV infection plus cases with incident infection only, detected by the BED-CEIA.

3 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 12 months of HIV diagnosis.

4 Number of cases of newly diagnosed HIV infection, excluding cases with newly acquired infection, tested for incident infection using the BED capture enzyme immunoassay (BED-CEIA).

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

**Table 1.2.4** 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 (%)
2007	81	8.6	0 (0.0)	3 (3.7)	5 (6.2)
2008	90	6.7	1 (1.1)	3 (3.3)	5 (5.6)
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)	3 (3.3)	7 (7.7)

1 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<sup>1</sup>, 2003 – 2012, by year. Number of cases, median age and percent (number) of total cases by sex, newly acquired infection, late HIV diagnosis, State/Territory and HIV exposure category**

Characteristic	Year of HIV diagnosis										Total
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
<b>Total cases</b>	23	22	18	23	19	19	24	22	23	32	225
<b>Males (%)</b>	73.9	72.7	83.3	73.9	84.2	79.0	83.3	68.2	73.9	81.3	77.3
<b>Median age (years)</b>	34	29	33	31	33	36	37	35	33	27	33
<b>Newly acquired infection (%)</b>	17.4 (4)	31.8 (7)	16.7 (3)	30.4 (7)	26.3 (5)	31.6 (6)	29.2 (7)	22.7 (5)	21.7 (5)	31.3 (10)	26.2 (59)
<b>HIV status at diagnosis (%)<sup>2</sup></b>											
Late HIV diagnosis	4.3	4.5	5.6	13.0	21.1	21.1	12.5	18.2	4.3	9.4	11.6
Advanced HIV infection	26.1	31.8	11.1	8.7	10.5	15.8	33.3	9.1	34.8	18.7	20.4
<b>State/Territory (%)</b>											
ACT	–	–	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)
NSW	17.4 (4)	18.2 (4)	11.1 (2)	38.1 (9)	42.1 (8)	38.9 (8)	39.1 (9)	31.8 (7)	21.7 (5)	34.4 (11)	29.8 (67)
NT	4.3 (1)	4.5 (1)	0.0 (0)	0.0 (0)	0.0 (0)	5.6 (1)	0.0 (0)	4.5 (1)	8.7 (2)	6.2 (2)	3.6 (8)
QLD	26.1 (6)	22.7 (5)	44.4 (8)	23.8 (6)	26.3 (5)	11.1 (2)	30.4 (8)	36.4 (8)	34.8 (8)	40.6 (13)	30.7 (69)
SA	8.7 (2)	9.1 (2)	0.0 (0)	0.0 (0)	5.3 (1)	22.2 (4)	8.7 (2)	4.5 (1)	4.3 (1)	3.1 (1)	6.2 (14)
TAS	0.0 (0)	4.5 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	4.4 (1)	0.0 (0)	4.3 (1)	0.0 (0)	1.3 (3)
VIC	21.7 (5)	18.2 (4)	11.1 (2)	9.5 (2)	15.8 (3)	0.0 (0)	4.4 (1)	13.6 (3)	4.3 (1)	15.6 (5)	11.6 (26)
WA	21.7 (5)	22.7 (5)	33.3 (6)	28.6 (6)	10.5 (2)	22.2 (4)	13.0 (3)	9.1 (2)	21.7 (5)	0.0 (0)	16.9 (38)
<b>HIV exposure category (%)</b>											
Men who have sex with men	31.8 (7)	52.4 (11)	27.8 (5)	47.8 (11)	47.4 (9)	47.4 (9)	52.6 (10)	60.0 (12)	63.6 (14)	71.0 (22)	51.4 (110)
Men who have sex with men, and injecting drug use	13.6 (3)	0.0 (0)	27.8 (5)	4.3 (1)	15.8 (3)	5.3 (1)	15.8 (3)	5.0 (1)	0.0 (0)	3.2 (1)	8.4 (18)
Injecting drug use <sup>3</sup>	13.6 (3)	19.0 (4)	16.7 (3)	21.7 (5)	15.8 (3)	36.8 (7)	10.5 (2)	20.0 (4)	4.5 (1)	6.5 (2)	15.9 (34)
Heterosexual contact	40.9 (9)	28.6 (6)	27.8 (5)	26.1 (6)	21.1 (4)	10.5 (2)	21.1 (4)	15.0 (3)	27.3 (6)	19.4 (6)	23.8 (51)
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 for HIV infection	0.0 (0)	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)	0.5 (1)
Other/undetermined <sup>4</sup>	4.3 (1)	4.5 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	20.8 (5)	9.1 (2)	4.3 (1)	3.1 (1)	4.9 (11)

1 Indigenous status at HIV diagnosis was available for cases diagnosed in the Australian Capital Territory from 1 January 2005.

2 Late HIV diagnosis was defined as newly diagnosed HIV infection with a CD4+ cell count of 200 – 349 cells/μl and advanced HIV infection was defined as newly diagnosed HIV infection with a CD4+ cell count of less than 200 CD4+ cells/μl.

3 Excludes men who have sex with men.

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

Source: State/Territory health authorities

**Table 1.3.2 Rate<sup>1</sup> of diagnosis of HIV infection, 2008 – 2012, by year, Aboriginal and Torres Strait Islander status and area of residence**

Area of residence	Aboriginal and Torres Strait Islander status	Year of diagnosis				
		2008	2009	2010	2011	2012
Major cities	Aboriginal and Torres Strait Islander	7	10	7	7	12
	Non-Indigenous <sup>2</sup>	6	6	6	6	7
Inner regional	Aboriginal and Torres Strait Islander	1	1	3	2	3
	Non-Indigenous <sup>2</sup>	2	2	2	2	2
Outer regional	Aboriginal and Torres Strait Islander	1	2	3	2	3
	Non-Indigenous <sup>2</sup>	4	2	2	2	3
Remote	Aboriginal and Torres Strait Islander	0	3	0	0	0
	Non-Indigenous <sup>2</sup>	1	1	1	1	3
Very remote	Aboriginal and Torres Strait Islander	0	1	1	5	0
	Non-Indigenous <sup>2</sup>	0	3	2	1	3
<b>Total</b>	<b>Aboriginal and Torres Strait Islander</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>6</b>
	<b>Non-Indigenous<sup>2</sup></b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>6</b>

1 Rate per 100 000 population. Population estimates from *2006 Census of Population and Housing* (Australian Bureau of Statistics).

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

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, 2003 – 2012, by State/Territory and year of birth

State/ Territory	Year of birth									
	2003 – 2004		2005 – 2006		2007 – 2008		2009 – 2010 <sup>2</sup>		2011 – 2012	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	1	12.0	0	0.0	0	0.0	3	30.0	6	58.6
NSW	23	13.4	17	9.8	30	16.3	32	17.0	33	16.7
NT	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
QLD	13	13.2	9	8.6	9	7.2	20	15.3	8	6.3
SA	0	0.0	3	8.3	5	12.5	1	2.5	9	22.6
TAS	0	0.0	0	0.0	1	7.4	3	23.1	1	7.6
VIC	8	6.5	9	7.0	24	17.0	34	24.0	44	30.8
WA	5	10.1	3	5.6	0	0.0	2	3.2	9	13.9
<b>Total</b>	<b>50</b>	<b>9.9</b>	<b>41</b>	<b>7.8</b>	<b>69</b>	<b>11.9</b>	<b>97</b>	<b>16.3</b>	<b>110</b>	<b>18.2</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).

2 Includes 2 children born in 2009 – 2010 whose State/Territory of birth was not reported.

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

**Table 1.4.2** Number of women whose perinatally HIV exposed children were born in Australia, 2003 – 2012, by time of the woman's HIV diagnosis relative to the first exposed child's birth

First exposed child's year of birth	Interval of the woman's HIV diagnosis					
	Before or at the birth (years)			Total	After the birth	Total
	<1	1 – 2	>2			
2003 – 2004 <sup>1</sup>	16	3	28	47	1	49
2005 – 2006	13	4	13	30	0	34
2007 – 2008 <sup>1</sup>	19	9	20	48	1	52
2009 – 2010 <sup>1,2</sup>	31	8	30	69	5	75
2011 – 2012 <sup>1</sup>	20	6	46	72	3	77
<b>Total</b>	<b>99</b>	<b>30</b>	<b>137</b>	<b>266</b>	<b>10</b>	<b>287</b>

1 Totals include 1 woman whose first exposed child born in 2003 – 2004, 1 woman whose first exposed child born in 2007 – 2008, 5 women whose first exposed children born in 2009 – 2010 and 3 women whose first exposed children born in 2011 – 2012, whose the date of HIV diagnosis was not reported.

2 Total includes 1 child with diagnosed HIV infection.

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

**Table 1.4.3** Number of women whose perinatally HIV exposed children were born in Australia, 2003 – 2012, and number of perinatally exposed children, by year of birth of the first exposed child and the woman's HIV exposure category

Year of the first exposed child's birth/ HIV exposure category	2003 – 2007		2008 – 2012		2003 – 2012	
	Number of women	Number of exposed children	Number of women	Number of exposed children	Number of women	Number of exposed children
Injecting drug use	9	11	6	10	15	21
Heterosexual contact	96	111	160	218	256	329
<i>Sex with injecting drug user</i>	<i>11</i>	<i>13</i>	<i>10</i>	<i>14</i>	<i>21</i>	<i>27</i>
<i>Sex with bisexual male</i>	<i>3</i>	<i>4</i>	<i>11</i>	<i>15</i>	<i>14</i>	<i>19</i>
<i>From a high prevalence country</i>	<i>43</i>	<i>46</i>	<i>75</i>	<i>104</i>	<i>118</i>	<i>150</i>
<i>Sex with person from a high prevalence country</i>	<i>16</i>	<i>21</i>	<i>21</i>	<i>30</i>	<i>37</i>	<i>51</i>
<i>Sex with person with medically acquired HIV</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>2</i>	<i>2</i>	<i>3</i>
<i>Sex with person with HIV infection, other exposure</i>	<i>1</i>	<i>1</i>	<i>5</i>	<i>7</i>	<i>6</i>	<i>8</i>
<i>Not further specified</i>	<i>21</i>	<i>25</i>	<i>37</i>	<i>46</i>	<i>58</i>	<i>71</i>
Receipt of blood/tissue	0	0	0	0	0	0
Other/undetermined	4	4	12	13	16	17
<b>Total</b>	<b>109</b>	<b>126</b>	<b>178</b>	<b>241</b>	<b>287</b>	<b>367</b>

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

**Table 1.4.4** Number of perinatally exposed children born in Australia, 2003 – 2012, 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 <sup>1</sup>	Number with HIV <sup>2</sup>
2003 – 2004 <sup>1</sup>	48	2	1	0	50	2
2005 – 2006	36	3	5	2	41	5
2007 – 2008 <sup>1</sup>	65	0	3	3	69	3
2009 – 2010 <sup>1,2</sup>	91	1	1	0	97	2
2011 – 2012 <sup>1</sup>	105	1	2	1	110	2
<b>Total</b>	<b>345</b>	<b>7</b>	<b>12</b>	<b>6</b>	<b>367</b>	<b>14</b>

1 Totals include 1 exposed child born in 2003 – 2004, 1 exposed child born in 2007 – 2008, 5 exposed children born in 2009 – 2010 and 3 exposed children born in 2011 – 2012, for whom the date of the woman's HIV diagnosis was not reported.

2 Total includes 1 exposed child with HIV infection.

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

**Table 1.4.5** Number of perinatally exposed children, born in 2003 – 2012 to women whose HIV infection was diagnosed antenatally, and number with diagnosed HIV infection by year of the child's birth and the proportion of women reporting use of interventions to reduce the risk of mother-to-child transmission

Child's year of birth/ Reported use of interventions	Proportion of women reporting use of interventions	Number of children with HIV infection
<b>2003 – 2004</b>	48	2
<i>No reported use of interventions</i>	2.1	1
<i>Use of 1 intervention</i>	4.2	0
<i>Use of 2 interventions</i>	35.4	0
<i>Use of 3 interventions</i>	58.3	1
<b>2005 – 2006</b>	36	3
<i>No reported use of interventions</i>	11.1	2
<i>Use of 1 intervention</i>	2.8	0
<i>Use of 2 interventions</i>	38.9	0
<i>Use of 3 interventions</i>	47.2	1
<b>2007 – 2008</b>	65	0
<i>No reported use of interventions</i>	3.1	0
<i>Use of 1 intervention</i>	1.5	0
<i>Use of 2 interventions</i>	46.2	0
<i>Use of 3 interventions</i>	49.2	0
<b>2009 – 2010</b>	91	1
<i>No reported use of interventions</i>	4.4	0
<i>Use of 1 intervention</i>	2.2	0
<i>Use of 2 interventions</i>	50.5	1
<i>Use of 3 interventions</i>	42.9	0
<b>2011 – 2012</b>	105	1
<i>No reported use of interventions</i>	0.0	0
<i>Use of 1 intervention</i>	7.6	0
<i>Use of 2 interventions</i>	59.0	1
<i>Use of 3 interventions</i>	33.3	0
<b>Total</b>	<b>345</b>	<b>7</b>

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	
	2012 <sup>1</sup>	Rate <sup>2</sup>
<b>Africa</b>		
Mauritius <sup>3</sup>	7 400	1 000
Somalia <sup>3</sup>	30 000	700
South Africa <sup>3</sup>	5 100 000	17 300
Sudan South <sup>3</sup>	130 000	3 100
Zambia <sup>3</sup>	800 000	12 500
Zimbabwe <sup>3</sup>	1 000 000	14 900
<b>Asia Pacific</b>		
Australia	25 708	120
Cambodia <sup>3</sup>	56 000	600
China <sup>3</sup>	771 000	<100
Indonesia <sup>3</sup>	370 000	300
Japan <sup>3</sup>	7 900	<100
Malaysia <sup>3</sup>	80 000	400
Myanmar <sup>3</sup>	210 000	600
New Zealand <sup>3</sup>	2 600	100
Papua New Guinea <sup>3</sup>	24 000	700
Philippines <sup>3</sup>	19 000	<100
Republic of Korea <sup>3</sup>	15 000	<100
Thailand <sup>3</sup>	480 000	1 200
Vietnam <sup>3</sup>	240 000	500
<b>Europe</b>		
France <sup>3</sup>	160 000	400
Germany <sup>3</sup>	73 000	200
Italy <sup>3</sup>	150 000	400
Spain <sup>3</sup>	150 000	400
United Kingdom <sup>4</sup>	96 000	150
<b>North America</b>		
Canada <sup>3</sup>	71 300	208
United States <sup>5</sup>	1 148 200	456

1 Estimated number of people living with HIV/AIDS.

2 Rate per 100 000 population.

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

4 Estimated HIV prevalence in 2011.

5 Estimated HIV prevalence for people aged ≥13 in 2009.





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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, 2008 – 2012, by State/Territory and year

State/ Territory	Year of diagnosis									
	2008		2009		2010		2011		2012	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	5	1.6	6	1.4	5	1.3	3	0.8	1	0.3
NSW	69	1.0	98	1.4	83	1.2	57	0.8	42	0.6
NT	3	2.3	1	0.4	3	1.6	3	1.1	3	1.0
QLD	71	1.6	56	1.3	40	0.9	26	0.6	34	0.7
SA	20	1.3	59	3.7	4	0.3	6	0.4	7	0.4
TAS	1	0.2	5	1.1	4	0.8	4	0.8	2	0.4
VIC	85	1.6	304	5.5	95	1.8	34	0.6	62	1.1
WA	22	1.0	35	1.5	32	1.4	12	0.5	14	0.5
<b>Total</b>	<b>276</b>	<b>1.3</b>	<b>564</b>	<b>2.6</b>	<b>266</b>	<b>1.2</b>	<b>145</b>	<b>0.6</b>	<b>165</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 2.1.2** Number of diagnoses of hepatitis A infection, 2008 – 2012, by age group, year and sex

Age group	Year of diagnosis														
	2008			2009			2010			2011			2012		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
0 – 4	9	6	15	13	6	19	12	14	26	5	4	9	7	4	11
5 – 14	35	25	60	29	21	50	35	23	58	15	9	24	12	24	36
15 – 19	12	7	19	22	23	45	9	14	23	6	5	11	6	5	11
20 – 24	20	21	41	47	38	85	11	10	21	9	3	12	7	8	15
25 – 29	21	13	34	26	24	50	12	15	27	11	9	20	17	10	27
30 – 39	22	10	32	56	64	120	21	15	36	18	14	32	8	9	17
40 – 49	14	15	29	35	43	78	11	15	26	5	2	7	10	7	17
50 – 59	15	8	23	26	38	64	14	9	23	7	6	13	3	2	5
60+	10	13	23	25	28	53	9	17	26	9	8	17	10	16	26
<b>Total</b>	<b>158</b>	<b>118</b>	<b>276</b>	<b>279</b>	<b>285</b>	<b>564</b>	<b>134</b>	<b>132</b>	<b>266</b>	<b>85</b>	<b>60</b>	<b>145</b>	<b>80</b>	<b>85</b>	<b>165</b>

Source: National Notifiable Diseases Surveillance System

**Table 2.1.3** Number and rate<sup>1</sup> of diagnosis of hepatitis B infection, 2008 – 2012, by State/Territory and year

State/Territory	Year of diagnosis									
	2008		2009		2010		2011		2012	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	58	15.6	106	27.8	95	24.6	95	23.4	106	25.9
NSW	2 489	35.5	2 618	36.9	2 561	35.6	2 525	34.8	2 327	31.8
NT	200	94.3	161	72.9	160	68.5	161	69.6	205	81.5
QLD	873	20.5	1 052	24.1	1 113	25.1	893	19.8	863	18.9
SA	431	27.4	458	28.8	432	26.9	412	25.7	399	24.5
TAS	67	14.4	85	18.2	54	11.4	50	10.7	72	15.4
VIC	1 916	35.6	2 018	36.5	1 954	34.8	1 980	34.8	1 907	33.0
WA	647	29.1	712	30.7	769	32.6	657	27.0	823	32.3
<b>Total</b>	<b>6 681</b>	<b>31.0</b>	<b>7 210</b>	<b>32.7</b>	<b>7 138</b>	<b>31.9</b>	<b>6 773</b>	<b>29.9</b>	<b>6 702</b>	<b>29.1</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, 2008 – 2012, by age group, year and sex

Age group	Year of diagnosis														
	2008			2009			2010			2011			2012		
	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	14	10	24	2	4	6	10	10	20	5	3	8	8	5	14
5 – 14	80	59	141	79	50	129	73	37	111	56	26	83	45	31	77
15 – 19	167	126	295	187	137	325	162	127	293	141	106	247	177	80	258
20 – 24	352	407	769	396	363	768	340	382	733	355	331	701	340	299	647
25 – 29	481	560	1 049	540	603	1 159	532	653	1 207	566	599	1 184	583	554	1 149
30 – 39	977	848	1 844	1 052	937	2 016	1 044	932	2 002	979	855	1 865	1 008	870	1 900
40 – 49	810	462	1 278	855	517	1 380	772	485	1 266	755	448	1 213	746	455	1 204
50 – 59	441	296	739	532	340	876	507	382	891	537	332	872	494	368	864
60 +	307	226	534	313	220	539	355	245	608	334	258	596	352	232	585
Not reported	2	2	8	7	3	12	2	3	7	1	0	4	4	0	4
<b>Total</b>	<b>3 631</b>	<b>2 996</b>	<b>6 681</b>	<b>3 963</b>	<b>3 174</b>	<b>7 210</b>	<b>3 797</b>	<b>3 256</b>	<b>7 138</b>	<b>3 729</b>	<b>2 958</b>	<b>6 773</b>	<b>3 757</b>	<b>2 894</b>	<b>6 702</b>

<sup>1</sup> Totals include diagnoses in people whose sex and age group 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, 2008 – 2012, by State/Territory and year

State/Territory	Year of diagnosis									
	2008		2009		2010		2011		2012	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	1	0.3	5	1.3	3	0.6	2	0.4	2	0.5
NSW	45	0.6	37	0.5	35	0.5	30	0.4	29	0.4
NT	8	4.3	4	1.5	4	1.5	4	1.5	5	1.8
QLD	46	1.1	51	1.2	57	1.3	46	1.0	55	1.2
SA	11	0.7	10	0.6	21	1.3	9	0.6	16	1.0
TAS	15	3.4	14	3.2	6	1.3	14	3.1	10	2.2
VIC	88	1.6	90	1.6	70	1.3	72	1.3	52	0.9
WA	48	2.1	38	1.7	32	1.4	18	0.7	24	1.0
<b>Total</b>	<b>262</b>	<b>1.2</b>	<b>249</b>	<b>1.1</b>	<b>228</b>	<b>1.0</b>	<b>195</b>	<b>0.9</b>	<b>193</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 2.1.6** Number of diagnoses of newly acquired hepatitis B infection, 2008 – 2012, by age group, year and sex

Age group	Year of diagnosis														
	2008			2009			2010			2011			2012		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
0 – 4	1	1	2	1	0	1	1	5	6	1	0	1	1	1	2
5 – 14	1	2	3	1	0	1	3	1	4	0	0	0	0	1	1
15 – 19	7	5	12	3	4	7	5	4	9	4	3	7	4	2	6
20 – 24	17	20	37	13	7	20	13	9	22	10	11	21	11	6	17
25 – 29	33	13	46	32	14	46	23	15	38	19	9	28	19	11	30
30 – 39	50	25	75	49	33	82	38	18	56	47	23	70	31	15	46
40 – 49	40	9	49	36	11	47	34	11	45	24	10	34	35	12	47
50 – 59	15	3	18	15	9	24	22	8	30	18	5	23	20	5	25
60 +	17	3	20	14	7	21	11	7	18	10	1	11	19	0	19
<b>Total</b>	<b>181</b>	<b>81</b>	<b>262</b>	<b>164</b>	<b>85</b>	<b>249</b>	<b>150</b>	<b>78</b>	<b>228</b>	<b>133</b>	<b>62</b>	<b>195</b>	<b>140</b>	<b>53</b>	<b>193</b>

Source: National Notifiable Diseases Surveillance System

**Table 2.1.7** Number of diagnoses of newly acquired hepatitis B infection<sup>1</sup>, 2008 – 2012, by exposure category, year and sex

Exposure category	Year of diagnosis														
	2008			2009			2010			2011			2012		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Injecting drug use	33	9	42	36	20	56	32	18	50	30	14	44	20	10	30
Sexual contact	16	8	24	23	10	33	6	8	14	11	6	17	12	8	20
<i>Men who have sex with men</i>	1	–	1	7	–	7	0	–	0	5	–	5	3	–	3
<i>Heterosexual contact</i>	13	7	20	12	9	21	5	7	12	5	6	11	9	8	17
<i>Not further specified</i>	2	1	3	4	1	5	1	1	2	1	0	1	0	0	0
Blood/tissue recipient	2	0	2	2	1	3	0	0	0	0	1	1	0	0	0
Skin penetration procedure	6	4	10	3	2	5	7	1	8	10	5	15	1	0	1
Healthcare exposure	4	1	5	3	1	4	3	0	3	2	3	5	2	2	4
Household contact	3	2	5	2	0	2	3	4	7	2	1	3	2	2	4
Other	3	1	4	7	2	9	6	5	11	14	1	15	13	1	14
Undetermined	15	5	20	88	49	137	93	42	135	64	31	95	90	30	120
<b>Total</b>	<b>82</b>	<b>30</b>	<b>112</b>	<b>164</b>	<b>85</b>	<b>249</b>	<b>150</b>	<b>78</b>	<b>228</b>	<b>133</b>	<b>62</b>	<b>195</b>	<b>140</b>	<b>53</b>	<b>193</b>

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

Source: National Notifiable Diseases Surveillance System

**Table 2.1.8** Number and percentage of diagnoses of newly acquired hepatitis B infection, 2008 – 2012, and the Australian population, by region/country of birth and year

Region/ country of birth	Year of diagnosis										Australian population <sup>1</sup>
	2008		2009		2010		2011		2012		
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
<b>Total with a reported country of birth</b>	<b>92</b>	<b>35.1</b>	<b>105</b>	<b>42.2</b>	<b>142</b>	<b>62.3</b>	<b>123</b>	<b>63.1</b>	<b>83</b>	<b>43.0</b>	<b>21 507 719</b>
Australia	68	73.9	70	66.7	96	67.6	89	72.4	62	74.7	69.8
Overseas born	24	26.1	35	33.3	46	32.4	34	27.6	21	25.3	24.6
<i>Other Oceania</i>	3	3.3	6	5.7	2	1.4	7	5.7	1	1.2	2.8
<i>United Kingdom and Ireland</i>	4	4.3	12	11.4	4	2.8	4	3.3	2	2.4	5.4
<i>Other Europe</i>	4	4.3	2	1.9	8	5.6	2	1.6	6	7.2	4.5
<i>Middle East/North Africa</i>	1	1.1	4	3.8	6	4.2	6	4.9	3	3.6	1.4
<i>Sub-Saharan Africa</i>	0	0.0	1	1.0	7	4.9	2	1.6	1	1.2	1.3
<i>Asia</i>	10	10.9	10	9.5	17	12.0	13	10.6	7	8.4	8.1
<i>North America</i>	0	0.0	0	0.0	1	0.7	0	0.0	0	0.0	0.5
<i>South/Central America and the Caribbean</i>	2	2.2	0	0.0	1	0.7	0	0.0	1	1.2	0.5
Not reported	170	64.9	144	57.8	86	37.7	72	36.9	110	57.0	5.6
<b>Total</b>	<b>262</b>	<b>100</b>	<b>249</b>	<b>100</b>	<b>228</b>	<b>100</b>	<b>195</b>	<b>100</b>	<b>193</b>	<b>100</b>	

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

Source: National Notifiable Diseases Surveillance System

**Table 2.1.9** Number and rate<sup>1</sup> of diagnosis of hepatitis C infection, 2008 – 2012, by State/Territory and year

State/ Territory	Year of diagnosis									
	2008		2009		2010		2011		2012	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	201	54.3	163	42.7	223	57.9	189	48.8	147	37.2
NSW	3 653	52.2	3 789	53.5	3 765	52.4	3 331	46.1	3 290	45.1
NT	212	92.1	166	70.8	170	72.8	209	84.7	195	77.1
QLD	2 575	60.2	2 634	60.3	2 681	60.4	2 424	53.8	2 376	51.9
SA	584	37.0	556	34.8	530	33.0	460	28.5	471	28.9
TAS	347	74.4	283	59.8	264	54.6	229	48.0	265	56.1
VIC	2 412	44.9	2 510	45.7	2 585	46.2	2 326	41.2	2 234	39.0
WA	1 324	59.2	1 145	49.5	1 066	45.1	1 077	44.3	1 136	45.1
<b>Total</b>	<b>11 308</b>	<b>52.5</b>	<b>11 246</b>	<b>51.2</b>	<b>11 284</b>	<b>50.6</b>	<b>10 245</b>	<b>45.4</b>	<b>10 114</b>	<b>44.2</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, 2008 – 2012, by age group, year and sex

Age group	Year of diagnosis														
	2008			2009			2010			2011			2012		
	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	8	11	20	4	12	16	10	12	22	6	5	11	6	9	15
5 – 14	12	9	21	14	16	31	14	10	26	11	10	22	7	10	18
15 – 19	131	174	306	127	144	272	113	133	249	107	131	238	143	111	254
20 – 24	612	470	1 086	513	453	970	540	396	951	508	365	880	624	323	949
25 – 29	951	635	1 591	881	641	1 532	854	606	1 499	802	495	1 302	808	478	1 293
30 – 39	2 048	1 150	3 205	2 075	1 073	3 171	1 992	1 201	3 232	1 879	978	2 878	1 808	975	2 800
40 – 49	1 915	951	2 872	1 923	926	2 859	1 838	932	2 779	1 707	796	2 506	1 588	772	2 365
50 – 59	1 170	533	1 707	1 306	565	1 876	1 338	626	1 970	1 238	599	1 837	1 198	595	1 795
60 +	268	228	499	254	256	511	311	224	537	324	233	562	360	258	618
Not reported	0	0	1	1	0	8	10	5	19	5	1	9	5	0	7
<b>Total</b>	<b>7 115</b>	<b>4 161</b>	<b>11 308</b>	<b>7 098</b>	<b>4 086</b>	<b>11 246</b>	<b>7 020</b>	<b>4 145</b>	<b>11 284</b>	<b>6 587</b>	<b>3 613</b>	<b>10 245</b>	<b>6 547</b>	<b>3 531</b>	<b>10 114</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, 2008 – 2012, by State/Territory and year

State/ Territory	Year of diagnosis				
	2008	2009	2010	2011	2012
ACT	6	8	12	9	15
NSW	26	41	38	53	47
NT	6	5	0	3	0
QLD	–	–	–	–	–
SA	43	38	43	33	77
TAS	21	22	23	27	23
VIC	163	193	205	168	179
WA	100	93	76	120	125
<b>Total</b>	<b>365</b>	<b>400</b>	<b>397</b>	<b>413</b>	<b>466</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, 2008 – 2012, by age group, year and sex**

Age group	Year of diagnosis														
	2008			2009			2010			2011			2012		
	M	F	T	M	F	T <sup>1</sup>	M	F	T	M	F	T <sup>1</sup>	M	F	T
0 – 4	0	1	1	1	5	6	2	3	5	1	0	1	1	0	1
5 – 14	0	0	0	0	2	2	1	0	1	0	2	2	0	1	1
15 – 19	22	19	41	18	11	29	8	20	28	15	23	38	18	19	37
20 – 24	55	31	86	76	43	119	59	47	106	64	32	97	91	32	123
25 – 29	62	36	98	52	41	93	47	36	83	84	26	110	66	43	109
30 – 39	52	42	94	70	34	104	59	48	107	68	24	92	66	40	106
40 – 49	22	11	33	18	15	33	34	15	49	39	14	53	46	19	65
50 – 59	3	4	7	5	4	9	13	3	16	11	7	18	16	4	20
60 +	3	2	5	1	0	1	0	2	2	1	1	2	2	2	4
Not reported	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>219</b>	<b>146</b>	<b>365</b>	<b>241</b>	<b>155</b>	<b>400</b>	<b>223</b>	<b>174</b>	<b>397</b>	<b>283</b>	<b>129</b>	<b>413</b>	<b>306</b>	<b>160</b>	<b>466</b>

<sup>1</sup> Totals include 4 cases whose sex and age group was not reported and 1 case whose sex was not reported.

Source: National Notifiable Diseases Surveillance System

**Table 2.1.13 Number of diagnoses of newly acquired hepatitis C infection, 2008 – 2012, by exposure category, year and sex**

Exposure category	Year of diagnosis														
	2008			2009			2010			2011			2012		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Injecting drug use	160	95	255	164	95	259	158	103	261	173	62	236	165	96	261
Sexual contact	6	8	14	7	8	15	8	3	11	6	7	13	6	3	9
Blood/tissue recipient	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Skin penetration procedure	6	4	10	4	4	8	5	5	10	13	2	15	4	2	6
Healthcare exposure	2	3	5	1	11	12	4	38	42	1	5	6	0	0	0
Household contact	1	0	1	0	2	2	2	1	3	1	1	2	0	0	0
Other	14	9	23	27	12	39	22	6	28	19	6	25	19	7	26
Undetermined	30	27	57	38	23	65	24	18	42	70	46	116	112	52	164
<b>Total</b>	<b>219</b>	<b>146</b>	<b>365</b>	<b>241</b>	<b>155</b>	<b>400</b>	<b>223</b>	<b>174</b>	<b>397</b>	<b>283</b>	<b>129</b>	<b>413</b>	<b>306</b>	<b>160</b>	<b>466</b>

<sup>1</sup> 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, 2008 – 2012, and the Australian population, by region/country of birth and year

Region/country of birth	Year of diagnosis										Australian population <sup>1</sup>
	2008		2009		2010		2011		2012		
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
<b>Total with a reported country of birth</b>	<b>282</b>	<b>77.3</b>	<b>174</b>	<b>43.5</b>	<b>179</b>	<b>45.1</b>	<b>202</b>	<b>48.9</b>	<b>180</b>	<b>38.6</b>	<b>21 507 719</b>
Australia	249	88.3	149	85.6	154	86.0	188	93.1	160	88.9	69.8
Overseas born	33	11.7	25	14.4	25	14.0	14	6.9	20	11.1	24.6
<i>Other Oceania</i>	3	1.1	5	2.9	5	2.8	2	1.0	2	1.1	2.8
<i>United Kingdom and Ireland</i>	9	3.2	5	2.9	7	3.9	3	1.5	4	2.2	5.4
<i>Other Europe</i>	3	1.1	4	2.3	4	2.2	0	0.0	2	1.1	4.5
<i>Middle East/North Africa</i>	2	0.7	2	1.1	2	1.1	1	0.5	1	0.6	1.4
<i>Sub-Saharan Africa</i>	2	0.7	2	1.1	1	0.6	1	0.5	3	1.7	1.3
<i>Asia</i>	13	4.6	3	1.7	4	2.2	4	2.0	8	4.4	8.1
<i>North America</i>	1	0.4	2	1.1	1	0.6	1	0.5	0	0.0	0.5
<i>South/Central America and the Caribbean</i>	0	0.0	2	1.1	1	0.6	2	1.0	0	0.0	0.5
Not reported	83	22.7	226	56.5	218	54.9	211	51.1	286	61.4	5.6
<b>Total</b>	<b>365</b>	<b>100</b>	<b>400</b>	<b>100</b>	<b>397</b>	<b>100</b>	<b>413</b>	<b>100</b>	<b>466</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, 2008 – 2012, by State/Territory and year**

State/ Territory	Year of diagnosis				
	2008	2009	2010	2011	2012
ACT	0	0	0	0	0
NSW	13	9	9	12	5
NT	1	0	0	0	0
QLD	7	13	20	7	6
SA	0	0	1	1	8
TAS	0	0	0	0	0
VIC	14	13	6	16	9
WA	6	0	0	2	2
<b>Total</b>	<b>41</b>	<b>35</b>	<b>36</b>	<b>38</b>	<b>30</b>

Source: National Notifiable Diseases Surveillance System

**Table 2.1.16 Number of diagnoses of hepatitis D infection, 2008 – 2012, by age group, year and sex**

Age group	Year of diagnosis														
	2008			2009			2010			2011			2012		
	M	F	T	M	F	T	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	0	0	0	1	0	1	0	0	0	0	1	1
15 – 19	3	1	4	4	1	5	1	0	1	1	0	1	1	0	1
20 – 24	2	0	2	2	1	3	4	1	5	0	2	2	1	1	2
25 – 29	4	0	4	5	4	9	2	0	2	1	2	3	3	0	3
30 – 39	11	1	12	3	1	4	1	5	6	7	3	10	5	1	6
40 – 49	7	4	11	7	0	7	11	1	12	5	6	11	6	1	7
50 – 59	4	1	5	3	1	4	8	1	9	7	0	7	4	4	8
60 +	2	1	3	0	2	2	0	0	0	2	2	4	1	1	2
Not reported	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>33</b>	<b>8</b>	<b>41</b>	<b>24</b>	<b>11</b>	<b>35</b>	<b>28</b>	<b>8</b>	<b>36</b>	<b>23</b>	<b>15</b>	<b>38</b>	<b>21</b>	<b>9</b>	<b>30</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, 2012, 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 (0.0)	1 (100.0)	0 (0.0)		1
NSW	0 (0.0)	41 (97.6)	1 (2.4)		42
NT	0 (0.0)	3 (100.0)	0 (0.0)		3
QLD	0 (0.0)	25 (73.5)	9 (26.5)		34
SA	0 (0.0)	7 (100.0)	0 (0.0)		7
TAS	0 (0.0)	2 (100.0)	0 (0.0)		2
VIC	0 (0.0)	55 (88.7)	7 (11.3)		62
WA	0 (0.0)	14 (100.0)	0 (0.0)		14
<b>Total</b>	<b>0 (0.0)</b>	<b>148 (89.7)</b>	<b>17 (10.3)</b>		<b>165</b>

Source: National Notifiable Diseases Surveillance System

**Table 2.2.2** Number and rate<sup>1</sup> of diagnosis of hepatitis B infection, 2008 – 2012, 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									
		2008		2009		2010		2011		2012	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
NT	Aboriginal and Torres Strait Islander	115	281.6	79	203.0	75	181.8	75	185.8	61	143.8
	Non-Indigenous <sup>3</sup>	85	52.0	82	47.8	85	49.6	86	50.6	144	84.4
SA	Aboriginal and Torres Strait Islander	26	140.3	19	75.5	23	109.4	29	133.5	20	78.3
	Non-Indigenous <sup>3</sup>	405	26.5	439	28.7	409	26.8	383	25.3	379	24.8
TAS	Aboriginal and Torres Strait Islander	0	0.0	2	11.6	1	8.2	2	12.4	0	0.0
	Non-Indigenous <sup>3</sup>	67	15.5	83	19.3	53	12.3	48	11.2	72	16.7
WA	Aboriginal and Torres Strait Islander	55	109.4	33	71.5	42	100.3	53	91.5	43	66.8
	Non-Indigenous <sup>3</sup>	592	26.6	679	30.3	727	32.6	604	27.1	780	34.9
<b>Total</b>	<b>Aboriginal and Torres Strait Islander</b>	<b>196</b>	<b>156.1</b>	<b>133</b>	<b>105.3</b>	<b>141</b>	<b>116.3</b>	<b>159</b>	<b>119.6</b>	<b>124</b>	<b>85.6</b>
	<b>Non-Indigenous<sup>3</sup></b>	<b>1 149</b>	<b>26.3</b>	<b>1 283</b>	<b>29.3</b>	<b>1 274</b>	<b>29.2</b>	<b>1 121</b>	<b>25.7</b>	<b>1 375</b>	<b>31.5</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, 2012, by State/Territory and Aboriginal and Torres Strait Islander status**

State/ Territory	Aboriginal and Torres Strait Islander status <sup>1</sup>						Total
	Aboriginal and Torres Strait Islander		Non-Indigenous		Not reported		
ACT	0	(0.0)	104	(98.1)	2	(1.9)	106
NSW	–		–		2 147	(92.3)	2 327
NT	61	(29.8)	134	(65.4)	10	(4.9)	205
QLD	–		–		604	(70.0)	863
SA	20	(5.0)	373	(93.5)	6	(1.5)	399
TAS	0	(0.0)	52	(72.2)	20	(27.8)	72
VIC	–		–		1 139	(59.7)	1 907
WA	43	(5.2)	694	(84.3)	86	(10.4)	823
<b>Total</b>	<b>200</b>	<b>(3.0)</b>	<b>2 488</b>	<b>(37.1)</b>	<b>4 014</b>	<b>(59.9)</b>	<b>6 702</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 2.2.4 Number and rate<sup>1</sup> of diagnosis of newly acquired hepatitis B, 2008 – 2012, 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									
		2008		2009		2010		2011		2012	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
NSW	Aboriginal and Torres Strait Islander	5	3.0	4	2.8	2	1.4	3	1.8	1	0.6
	Non-Indigenous <sup>3</sup>	40	0.6	33	0.5	33	0.5	27	0.4	28	0.4
NT	Aboriginal and Torres Strait Islander	4	12.8	0	0.0	1	1.8	1	1.2	4	4.9
	Non-Indigenous <sup>3</sup>	4	2.6	4	2.3	3	1.7	3	1.6	1	0.6
QLD	Aboriginal and Torres Strait Islander	8	4.6	4	2.0	10	7.3	8	4.9	7	4.4
	Non-Indigenous <sup>3</sup>	38	0.9	47	1.1	47	1.1	38	0.9	48	1.2
SA	Aboriginal and Torres Strait Islander	0	0.0	0	0.0	0	0.0	0	0.0	2	6.8
	Non-Indigenous <sup>3</sup>	11	0.7	10	0.6	21	1.4	9	0.6	14	0.9
TAS	Aboriginal and Torres Strait Islander	0	0.0	2	11.6	0	0.0	1	6.6	0	0.0
	Non-Indigenous <sup>3</sup>	15	3.6	12	3.0	6	1.5	13	3.2	10	2.4
VIC	Aboriginal and Torres Strait Islander	1	3.0	3	8.8	4	11.9	1	3.1	3	9.1
	Non-Indigenous <sup>3</sup>	87	1.6	87	1.6	66	1.2	71	1.3	49	0.9
WA	Aboriginal and Torres Strait Islander	2	3.7	0	0.0	2	2.6	1	0.9	2	2.7
	Non-Indigenous <sup>3</sup>	46	2.1	38	1.7	30	1.3	17	0.8	22	1.0
<b>Total</b>	<b>Aboriginal and Torres Strait Islander</b>	<b>20</b>	<b>4.1</b>	<b>13</b>	<b>2.4</b>	<b>19</b>	<b>3.8</b>	<b>15</b>	<b>2.6</b>	<b>19</b>	<b>3.4</b>
	<b>Non-Indigenous<sup>3</sup></b>	<b>241</b>	<b>1.2</b>	<b>231</b>	<b>1.1</b>	<b>206</b>	<b>1.0</b>	<b>178</b>	<b>0.9</b>	<b>172</b>	<b>0.8</b>

<sup>1</sup> 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).

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

<sup>3</sup> 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 infection, 2012, by State/Territory and Aboriginal and Torres Strait Islander status**

State/ Territory	Aboriginal and Torres Strait Islander status <sup>1</sup>				Total
	Aboriginal and Torres Strait Islander	Non-Indigenous	Not reported		
ACT	0 (0.0)	2 (100.0)	0 (0.0)		2
NSW	1 (3.4)	24 (82.8)	4 (13.8)		29
NT	4 (80.0)	1 (20.0)	0 (0.0)		5
QLD	7 (12.7)	28 (50.9)	20 (36.4)		55
SA	2 (12.5)	14 (87.5)	0 (0.0)		16
TAS	0 (0.0)	10 (100.0)	0 (0.0)		10
VIC	3 (5.8)	45 (86.5)	4 (7.7)		52
WA	2 (8.3)	22 (91.7)	0 (0.0)		24
<b>Total</b>	<b>19 (9.8)</b>	<b>146 (75.6)</b>	<b>28 (14.5)</b>		<b>193</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 2.2.6 Number and rate<sup>1</sup> of diagnosis of hepatitis C infection, 2008 – 2012, 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									
		2008		2009		2010		2011		2012	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
NT	Aboriginal and Torres Strait Islander	26	51.5	27	52.3	24	47.1	44	85.5	23	42.4
	Non-Indigenous <sup>3</sup>	186	106.5	139	80.7	146	86.1	165	93.3	172	99.6
SA	Aboriginal and Torres Strait Islander	48	161.9	48	171.0	68	239.3	37	143.2	64	222.5
	Non-Indigenous <sup>3</sup>	536	34.9	508	33.0	462	30.0	423	27.5	407	26.3
TAS	Aboriginal and Torres Strait Islander	21	116.1	10	65.4	13	72.8	11	66.6	21	109.3
	Non-Indigenous <sup>3</sup>	326	75.1	273	62.5	251	56.3	218	49.5	244	55.7
WA	Aboriginal and Torres Strait Islander	130	190.3	140	194.0	134	196.9	148	206.9	187	265.6
	Non-Indigenous <sup>3</sup>	1 194	53.5	1 005	45.1	932	41.8	929	41.8	949	42.6
<b>Total</b>	<b>Aboriginal and Torres Strait Islander</b>	<b>225</b>	<b>130.2</b>	<b>225</b>	<b>128.3</b>	<b>239</b>	<b>140.2</b>	<b>240</b>	<b>140.7</b>	<b>295</b>	<b>166.2</b>
	<b>Non-Indigenous<sup>3</sup></b>	<b>2 242</b>	<b>51.1</b>	<b>1 925</b>	<b>43.8</b>	<b>1 791</b>	<b>40.8</b>	<b>1 735</b>	<b>39.5</b>	<b>1 772</b>	<b>40.3</b>

<sup>1</sup> 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).

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

<sup>3</sup> 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 infection, 2012, by State/Territory and Aboriginal and Torres Strait Islander status**

State/ Territory	Aboriginal and Torres Strait Islander status <sup>1</sup>			Total
	Aboriginal and Torres Strait Islander	Non-Indigenous	Not reported	
ACT	–	–	114 (77.6)	147
NSW	–	–	2 807 (85.3)	3 290
NT	23 (11.8)	164 (84.1)	8 (4.1)	195
QLD	–	–	1 332 (56.1)	2 376
SA	64 (13.6)	380 (80.7)	27 (5.7)	471
TAS	21 (7.9)	182 (68.7)	62 (23.4)	265
VIC	–	–	1 550 (69.4)	2 234
WA	187 (16.5)	910 (80.1)	39 (3.4)	1 136
<b>Total</b>	<b>731 (7.2)</b>	<b>3 444 (34.1)</b>	<b>5 939 (58.7)</b>	<b>10 114</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 infection, 2012, by State/Territory and Aboriginal and Torres Strait Islander status**

State/ Territory	Aboriginal and Torres Strait Islander status <sup>1</sup>			Total
	Aboriginal and Torres Strait Islander	Non-Indigenous	Not reported	
ACT	0 (0.0)	0 (0.0)	0 (0.0)	0
NSW	0 (0.0)	5 (100.0)	0 (0.0)	5
NT	0 (0.0)	0 (0.0)	0 (0.0)	0
QLD	0 (0.0)	4 (66.7)	2 (33.3)	6
SA	1 (12.5)	7 (87.5)	0 (0.0)	8
TAS	0 (0.0)	0 (0.0)	0 (0.0)	0
VIC	0 (0.0)	7 (77.8)	2 (22.2)	9
WA	1 (50.0)	1 (50.0)	0 (0.0)	2
<b>Total</b>	<b>2 (6.7)</b>	<b>24 (80.0)</b>	<b>4 (13.3)</b>	<b>30</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 – 2011, 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 – 2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012		
<b>Hepatitis B</b>	109 (7.6)	6 (5.4)	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)	164	
<b>Hepatitis C</b>	220 (15.4)	30 (26.8)	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)	653	
<b>Hepatitis B/C/D</b>	12 (0.8)	3 (2.7)	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)	34	
<b>Hepatocellular carcinoma</b>	44 (3.1)	6 (5.4)	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)	218	
<i>Hepatitis B</i>	15 (1.1)	1 (0.9)	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)	55	
<i>Hepatitis C</i>	18 (1.3)	4 (3.6)	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)	103	
<i>Hepatitis B/C/D</i>	1 (0.1)	0 (0.0)	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)	4	
<i>Hepatitis negative</i>	10 (0.7)	1 (0.9)	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)	56	
Other <sup>1</sup>	1 040 (73.0)	67 (59.8)	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)	1 885	
<b>Total</b>	<b>1 425 (100.0)</b>	<b>112 (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>2 954</b>	

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

2 Data available to 31 December 2012.

Source: Australia and New Zealand Liver Transplant Registry



## 2.4 Global comparisons of hepatitis B virus prevalence

**Table 2.4.1** Estimated HBV 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

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

**Table 3.1.1 Number and rate of diagnosis of chlamydia, 2008 – 2012, by State/Territory and year**

State/ Territory	Year of diagnosis									
	2008		2009		2010		2011		2012	
	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	988	238.2	945	222.7	1 161	267.4	1 261	289.1	1 283	290.8
NSW	13 985	197.8	14 949	207.5	18 255	251.5	20 575	283.3	21 293	291.5
NT	2 289	879.9	2 445	907.8	2 662	974.8	2 629	973.1	2 532	928.3
QLD	15 190	345.5	16 694	367.8	19 216	417.2	18 647	401.2	18 849	399.3
SA	3 656	232.5	3 758	234.5	4 335	266.7	5 132	314.5	4 848	296.8
TAS	1 475	309.4	1 470	303.3	2 014	413.2	1 777	368.4	1 787	372.5
VIC	12 202	220.6	13 906	243.1	16 486	284.3	19 226	329.6	20 312	345.8
WA	8 642	375.3	8 830	368.1	10 177	416.4	11 675	466.2	11 803	456.0
<b>Total</b>	<b>58 427</b>	<b>265.4</b>	<b>62 997</b>	<b>278.4</b>	<b>74 306</b>	<b>324.4</b>	<b>80 922</b>	<b>351.1</b>	<b>82 707</b>	<b>355.1</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, 2008 – 2012, by age group, year and sex**

Age group (years)	Year of diagnosis														
	2008			2009			2010			2011			2012		
	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	12	11	24	19	24	43	18	26	46	16	20	36	20	19	39
5 – 14	50	495	546	67	492	560	87	597	685	89	615	706	89	653	742
15 – 19	3 701	11 228	14 961	4 092	12 148	16 262	5 306	14 614	19 968	5 492	16 168	21 689	5 383	15 511	20 932
20 – 24	8 197	12 964	21 188	9 384	13 715	23 128	10 897	15 956	26 920	12 157	17 584	29 796	12 220	18 108	30 354
25 – 29	5 096	5 496	10 610	5 356	6 019	11 391	6 492	6 530	13 056	7 058	7 166	14 244	7 380	7 359	14 761
30 – 39	3 992	3 404	7 406	4 202	3 546	7 755	4 875	3 991	8 891	5 072	4 273	9 357	5 706	4 532	10 255
40 – 49	1 735	861	2 604	1 789	860	2 651	2 161	1 063	3 230	2 251	1 192	3 446	2 552	1 242	3 796
50 – 59	595	218	815	650	233	884	840	251	1 092	894	269	1 164	991	327	1 319
60 +	206	42	248	219	49	268	298	46	345	343	54	398	385	51	437
Not reported	10	10	25	16	12	55	21	34	73	33	50	86	23	44	72
<b>Total</b>	<b>23 594</b>	<b>34 729</b>	<b>58 427</b>	<b>25 794</b>	<b>37 098</b>	<b>62 997</b>	<b>30 995</b>	<b>43 108</b>	<b>74 306</b>	<b>33 405</b>	<b>47 391</b>	<b>80 922</b>	<b>34 749</b>	<b>47 846</b>	<b>82 707</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, 2008 – 2012, by State/Territory and year**

State/ Territory	Year of diagnosis				
	2008	2009	2010	2011	2012
NT	1	0	0	0	0
QLD	1	1	1	0	0
WA	0	0	0	0	1
<b>Total</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>

Source: National Notifiable Diseases Surveillance System

**Table 3.1.4** Number of diagnoses of donovanosis, 2008 – 2012, by age group, year and sex

Age group (years)	Year of diagnosis														
	2008			2009			2010			2011			2012		
	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	1	0	1
20 – 24	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
25 – 29	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
30 – 39	0	0	0	0	0	0	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 +	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>2</b>	<b>0</b>	<b>2</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>

Source: National Notifiable Diseases Surveillance System

**Table 3.1.5** Number and rate of diagnosis of gonorrhoea, 2008 – 2012, by State/Territory and year

State/ Territory	Year of diagnosis									
	2008		2009		2010		2011		2012	
	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	21	5.4	55	13.1	56	13.6	128	30.1	92	21.3
NSW	1 330	18.9	1 653	23.1	2 301	31.8	2 883	39.7	4 129	56.5
NT	1 550	601.8	1 551	579.0	1 933	712.0	1 952	726.9	1 536	568.1
QLD	1 638	37.5	1 787	39.6	2 385	52.1	2 954	64.0	2 700	57.5
SA	493	31.4	373	23.4	473	29.0	445	27.5	499	30.7
TAS	25	5.3	21	4.5	20	4.1	19	3.9	35	7.4
VIC	929	17.0	1 489	26.4	1 751	30.6	1 879	32.5	2 543	43.3
WA	1 693	74.0	1 347	56.4	1 403	57.9	1 839	73.4	2 115	82.8
<b>Total</b>	<b>7 679</b>	<b>35.1</b>	<b>8 276</b>	<b>36.9</b>	<b>10 322</b>	<b>45.4</b>	<b>12 099</b>	<b>52.8</b>	<b>13 649</b>	<b>58.9</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 3.1.6** Number of diagnoses of gonorrhoea, 2008 – 2012, by age group, year and sex

Age group (years)	Year of diagnosis														
	2008			2009			2010			2011			2012		
	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	1	2	3	6	5	11	3	4	7	4	7	11	4	5	9
5 – 14	28	150	178	27	106	134	35	150	186	43	188	231	46	193	239
15 – 19	747	843	1 591	796	838	1 640	928	1 055	1 984	1 027	1 283	2 311	1 039	1 225	2 264
20 – 24	1 144	663	1 811	1 304	803	2 110	1 625	929	2 561	1 815	1 022	2 841	2 120	1 106	3 227
25 – 29	911	383	1 295	1 071	414	1 486	1 391	487	1 882	1 569	640	2 211	1 957	598	2 556
30 – 39	1 178	415	1 594	1 271	389	1 663	1 583	443	2 028	1 822	543	2 369	2 292	594	2 890
40 – 49	639	147	787	646	121	767	933	147	1 082	1 145	186	1 331	1 376	255	1 631
50 – 59	264	48	312	289	44	333	367	49	416	493	69	564	495	105	600
60 +	84	19	103	100	15	115	139	16	155	170	24	196	190	26	216
Not reported		2	5	1	1	17	4	3	21	5	5	34	7	9	17
<b>Total</b>	<b>4 996</b>	<b>2 672</b>	<b>7 679</b>	<b>5 511</b>	<b>2 736</b>	<b>8 276</b>	<b>7 008</b>	<b>3 283</b>	<b>10 322</b>	<b>8 093</b>	<b>3 967</b>	<b>12 099</b>	<b>9 526</b>	<b>4 116</b>	<b>13 649</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 of diagnosis of infectious syphilis, 2008 – 2012, by State/Territory and year**

State/ Territory	Year of diagnosis									
	2008		2009		2010		2011		2012	
	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	4	1.0	11	2.9	14	3.8	9	2.4	15	3.8
NSW	427	6.1	530	7.5	421	5.9	419	5.8	510	7.0
NT	83	33.8	38	15.1	43	16.5	30	11.4	14	5.1
QLD	195	4.5	192	4.4	227	5.1	335	7.3	387	8.4
SA	49	3.1	56	3.5	25	1.5	56	2.9	43	2.7
TAS	8	1.7	10	2.1	6	1.2	6	1.3	14	2.9
VIC	380	7.0	388	6.9	299	5.2	332	5.8	474	8.2
WA	176	7.8	89	3.8	85	3.6	125	5.1	77	3.1
<b>Total</b>	<b>1 322</b>	<b>6.1</b>	<b>1 314</b>	<b>5.9</b>	<b>1 120</b>	<b>5.0</b>	<b>1 312</b>	<b>5.8</b>	<b>1 534</b>	<b>6.7</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 3.1.8 Number of diagnoses of infectious syphilis, 2008 – 2012, by age group, year and sex**

Age group (years)	Year of diagnosis														
	2008			2009			2010			2011			2012		
	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	8	8	0	3	3	0	1	1	7	8	15	2	6	8
15 – 19	42	35	77	29	11	40	32	14	46	47	43	90	38	34	72
20 – 24	100	29	129	124	24	148	117	25	142	123	37	161	161	29	191
25 – 29	175	21	196	162	22	184	140	18	158	154	24	178	188	22	212
30 – 39	372	29	401	336	34	370	280	31	313	303	27	330	356	32	388
40 – 49	328	10	339	365	10	375	267	19	286	325	18	343	363	16	379
50 – 59	116	11	127	132	8	140	112	8	120	120	6	126	203	5	208
60 +	42	3	45	46	4	50	47	2	49	53	4	57	72	4	76
Not reported	0	0	0	0	0	4	0	0	5	0	0	12	0	0	0
<b>Total</b>	<b>1 175</b>	<b>146</b>	<b>1 322</b>	<b>1 194</b>	<b>116</b>	<b>1 314</b>	<b>995</b>	<b>118</b>	<b>1 120</b>	<b>1 132</b>	<b>167</b>	<b>1 312</b>	<b>1 383</b>	<b>148</b>	<b>1 534</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, 2008 – 2012, by sexual exposure, sex worker status, facility of diagnosis, year and sex

Characteristic	Year of diagnosis														
	2008			2009			2010			2011			2012		
	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	82	67	149	92	53	145	94	73	167	134	105	239	114	90	205
Men who have sex with men	470		470	525	-	525	434	-	434	546	-	546	684	-	684
Other/undetermined <sup>2</sup>	170	19	190	38	9	51	49	13	68	56	21	90	72	31	104
Not reported <sup>2</sup>	453	60	513	539	54	593	418	32	451	396	41	437	513	27	541
<b>Sex work in the past 12 months</b>															
Current sex work	4	3	7	0	1	1	3	5	8	0	3	3	1	2	3
No sex work	125	28	153	67	16	83	59	12	71	102	24	126	72	8	80
Undetermined <sup>2</sup>	591	55	647	528	41	573	482	68	556	449	82	543	476	89	567
Not reported <sup>2</sup>	455	60	515	599	58	657	451	33	485	581	58	640	834	49	884
<b>Place of diagnosis</b>															
Public hospital	27	17	44	24	8	32	56	23	79	58	34	92	55	30	85
Sexual health clinic	95	6	101	69	5	74	177	18	195	201	25	226	181	20	201
Family planning clinic	0	0	0	0	0	0	1	0	1	1	0	1	3	0	3
General practice	61	2	63	46	5	51	170	6	176	180	7	187	86	8	94
Other	54	30	84	42	16	58	66	11	77	64	15	80	66	5	71
Undetermined <sup>2</sup>	317	25	343	441	24	469	342	34	382	423	50	485	474	53	528
Not reported <sup>2</sup>	621	66	687	572	58	630	183	26	210	205	36	241	518	32	552
<b>Total</b>	<b>1 175</b>	<b>146</b>	<b>1 322</b>	<b>1 194</b>	<b>116</b>	<b>1 314</b>	<b>995</b>	<b>118</b>	<b>1 120</b>	<b>1 132</b>	<b>167</b>	<b>1 312</b>	<b>1 383</b>	<b>148</b>	<b>1 534</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 the 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, 2008 – 2012, 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									
		2008		2009		2010		2011		2012	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
NT	Aboriginal and Torres Strait Islander	1 397	1 917	1 356	1 860	1 475	2 045	1 555	2 129	1 386	1 899
	Non-Indigenous <sup>3</sup>	892	524	1 089	646	1 187	702	1 074	639	1 146	672
QLD	Aboriginal and Torres Strait Islander	2 316	1 151	2 314	1 144	3 059	1 501	3 201	1 575	3 066	1 540
	Non-Indigenous <sup>3</sup>	12 874	308	14 380	344	16 157	387	15 446	370	15 783	378
SA	Aboriginal and Torres Strait Islander	220	584	190	495	286	763	302	793	319	788
	Non-Indigenous <sup>3</sup>	3 436	229	3 568	238	4 049	269	4 830	321	4 529	301
TAS	Aboriginal and Torres Strait Islander	24	84	30	105	34	133	45	164	39	156
	Non-Indigenous <sup>3</sup>	1 451	337	1 440	333	1 980	459	1 732	405	1 748	407
VIC	Aboriginal and Torres Strait Islander	73	152	66	138	111	223	146	298	141	298
	Non-Indigenous <sup>3</sup>	12 129	223	13 840	255	16 375	302	19 080	352	20 171	372
WA	Aboriginal and Torres Strait Islander	1 297	1 432	1 228	1 312	1 572	1 693	1 643	1 753	1 622	1 745
	Non-Indigenous <sup>3</sup>	7 345	329	7 602	340	8 605	385	10 032	449	10 181	455
<b>Total</b>	<b>Aboriginal and Torres Strait Islander</b>	<b>5 327</b>	<b>1 126</b>	<b>5 184</b>	<b>1 085</b>	<b>6 537</b>	<b>1 367</b>	<b>6 892</b>	<b>1 434</b>	<b>6 573</b>	<b>1 378</b>
	<b>Non-Indigenous<sup>3</sup></b>	<b>38 127</b>	<b>274</b>	<b>41 919</b>	<b>301</b>	<b>48 353</b>	<b>347</b>	<b>52 194</b>	<b>375</b>	<b>53 558</b>	<b>384</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>, 2008 – 2012, by age group, Aboriginal and Torres Strait Islander status and year**

Age group (years)	Aboriginal and Torres Strait Islander status	Year				
		2008	2009	2010	2011	2012
0 – 4	Aboriginal and Torres Strait Islander	6	5	5	3	2
	Non-Indigenous <sup>2</sup>	17	31	35	23	36
5 – 14	Aboriginal and Torres Strait Islander	245	202	289	287	309
	Non-Indigenous <sup>2</sup>	207	256	295	283	307
15 – 19	Aboriginal and Torres Strait Islander	2 193	2 168	2 757	2 902	2 673
	Non-Indigenous <sup>2</sup>	9 338	10 388	12 552	13 575	13 038
20 – 29	Aboriginal and Torres Strait Islander	2 138	2 162	2 668	2 906	2 725
	Non-Indigenous <sup>2</sup>	21 632	23 902	26 855	29 327	30 221
30 – 39	Aboriginal and Torres Strait Islander	540	499	622	585	629
	Non-Indigenous <sup>2</sup>	4 661	4 930	5 634	5 838	6 418
40 – 49	Aboriginal and Torres Strait Islander	152	113	150	170	186
	Non-Indigenous <sup>2</sup>	1 600	1 628	2 000	2 081	2 356
50 – 59	Aboriginal and Torres Strait Islander	38	26	33	35	41
	Non-Indigenous <sup>2</sup>	492	562	704	732	845
60 +	Aboriginal and Torres Strait Islander	15	9	13	4	8
	Non-Indigenous <sup>2</sup>	155	170	216	254	270
<b>Total<sup>3</sup></b>	<b>Aboriginal and Torres Strait Islander</b>	<b>5 327</b>	<b>5 184</b>	<b>6 537</b>	<b>6 892</b>	<b>6 573</b>
	<b>Non-Indigenous<sup>2</sup></b>	<b>38 127</b>	<b>41 919</b>	<b>48 353</b>	<b>52 194</b>	<b>53 558</b>

1 In 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 3.2.3 Number of diagnoses of chlamydia<sup>1</sup>, 2012, by Aboriginal and Torres Strait Islander status, sex and age group**

Aboriginal and Torres Strait Islander status	Sex	Age group (years)								Total <sup>4</sup>
		0 – 4	5 – 14	15 – 19	20 – 29	30 – 39	40 – 49	50 – 59	60 +	
Aboriginal and Torres Strait Islander	Male	1	49	843	1 027	271	86	24	5	2 306
	Female	1	260	1 828	1 696	358	100	17	3	4 263
	<b>Total<sup>3</sup></b>	<b>2</b>	<b>309</b>	<b>2 673</b>	<b>2 725</b>	<b>629</b>	<b>186</b>	<b>41</b>	<b>8</b>	<b>6 573</b>
Non-Indigenous <sup>2</sup>	Male	18	28	3 227	13 094	3 525	1 531	637	237	22 317
	Female	18	279	9 789	17 093	2 882	824	207	32	31 166
	<b>Total<sup>3</sup></b>	<b>36</b>	<b>307</b>	<b>13 038</b>	<b>30 221</b>	<b>6 418</b>	<b>2 356</b>	<b>845</b>	<b>270</b>	<b>53 558</b>
<b>Total</b>	Male	19	77	4 070	14 121	3 796	1 617	661	242	24 623
	Female	19	539	11 617	18 789	3 240	924	224	35	35 429
	<b>Total<sup>3</sup></b>	<b>38</b>	<b>616</b>	<b>15 711</b>	<b>32 946</b>	<b>7 047</b>	<b>2 542</b>	<b>886</b>	<b>278</b>	<b>60 131</b>

1 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 sex was not reported.

4 Includes diagnoses in people whose age was not reported.

Source: National Notifiable Diseases Surveillance System

**Table 3.2.4 Number (percent) of diagnoses of chlamydia, 2012, 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	–	–	1 256 (97.9)		1 283
NSW	–	–	20 626 (96.9)		21 293
NT	1 386 (54.7)	968 (38.2)	178 (7.0)		2 532
QLD	3 066 (16.3)	8 184 (43.4)	7 599 (40.3)		18 849
SA	319 (6.6)	4 191 (86.4)	338 (7.0)		4 848
TAS	39 (2.2)	1 144 (64.0)	604 (33.8)		1 787
VIC	141 (0.7)	10 497 (51.7)	9 674 (47.6)		20 312
WA	1 622 (13.7)	9 303 (78.8)	878 (7.4)		11 803
<b>Total</b>	<b>6 792 (8.2)</b>	<b>34 762 (42.0)</b>	<b>41 153 (49.8)</b>		<b>82 707</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 3.2.5 Rate<sup>1</sup> of diagnosis of chlamydia, 2008 – 2012, by year, Aboriginal and Torres Strait Islander status and area of residence**

Area of residence	Aboriginal and Torres Strait Islander status	Year of diagnosis				
		2008	2009	2010	2011	2012
Major cities	Aboriginal and Torres Strait Islander	610	658	877	970	1 039
	Non-Indigenous <sup>2</sup>	276	305	349	378	387
Inner regional	Aboriginal and Torres Strait Islander	417	387	496	679	692
	Non-Indigenous <sup>2</sup>	226	261	318	335	340
Outer regional	Aboriginal and Torres Strait Islander	1 756	1 657	2 175	2 485	2 488
	Non-Indigenous <sup>2</sup>	305	328	371	396	405
Remote	Aboriginal and Torres Strait Islander	2 464	2 269	3 123	3 072	2 897
	Non-Indigenous <sup>2</sup>	333	324	361	380	406
Very remote	Aboriginal and Torres Strait Islander	2 648	2 629	2 982	2 823	2 398
	Non-Indigenous <sup>2</sup>	318	264	335	329	383
<b>Total</b>	<b>Aboriginal and Torres Strait Islander</b>	<b>1 438</b>	<b>1 400</b>	<b>1 765</b>	<b>1 861</b>	<b>1 775</b>
	<b>Non-Indigenous<sup>2</sup></b>	<b>275</b>	<b>302</b>	<b>349</b>	<b>377</b>	<b>386</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<sup>1</sup> of diagnosis of gonorrhoea, 2008 – 2012, 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									
		2008		2009		2010		2011		2012	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
NT	Aboriginal and Torres Strait Islander	1 382	1 934.5	1 412	1 962.5	1 770	2 457.2	1 798	2 476.2	1 323	1 862.2
	Non-Indigenous <sup>3</sup>	168	98.5	139	82.6	163	97.2	154	96.5	213	124.9
QLD	Aboriginal and Torres Strait Islander	691	358.5	669	333.7	976	479.5	1 329	661.8	1 113	562.5
	Non-Indigenous <sup>3</sup>	947	22.7	1 118	26.8	1 409	33.8	1 625	38.8	1 587	37.8
SA	Aboriginal and Torres Strait Islander	141	388.9	164	463.2	234	661.8	214	592.8	198	546.6
	Non-Indigenous <sup>3</sup>	352	23.2	209	13.7	239	15.4	231	15.2	301	20.1
TAS	Aboriginal and Torres Strait Islander	0	0.0	0	0.0	1	4.1	0	0.0	0	0.0
	Non-Indigenous <sup>3</sup>	25	5.8	21	5.0	19	4.4	19	4.3	35	8.2
VIC	Aboriginal and Torres Strait Islander	10	19.5	11	25.7	13	31.3	12	29.0	25	64.7
	Non-Indigenous <sup>3</sup>	919	17.0	1 478	27.3	1 738	32.0	1 867	34.4	2 518	46.4
WA	Aboriginal and Torres Strait Islander	1 223	1 448.1	913	1 046.1	839	956.6	1 153	1 304.9	1 145	1 264.5
	Non-Indigenous <sup>3</sup>	470	21.1	434	19.0	564	24.9	686	29.7	970	43.3
<b>Total</b>	<b>Aboriginal and Torres Strait Islander</b>	<b>3 447</b>	<b>772.4</b>	<b>3 169</b>	<b>699.7</b>	<b>3 833</b>	<b>841.6</b>	<b>4 506</b>	<b>979.4</b>	<b>3 804</b>	<b>828.5</b>
	<b>Non-Indigenous<sup>3</sup></b>	<b>2 881</b>	<b>20.7</b>	<b>3 399</b>	<b>24.3</b>	<b>4 132</b>	<b>29.5</b>	<b>4 582</b>	<b>32.7</b>	<b>5 624</b>	<b>40.3</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 3.2.7 Number of diagnoses of gonorrhoea<sup>1</sup>, 2008 – 2012, by age group, Aboriginal and Torres Strait Islander status and year**

Age group (years)	Aboriginal and Torres Strait Islander status	Year of diagnosis				
		2008	2009	2010	2011	2012
0 – 4	Aboriginal and Torres Strait Islander	3	4	1	7	4
	Non-Indigenous <sup>2</sup>	4	4	2	2	4
5 – 14	Aboriginal and Torres Strait Islander	166	117	155	208	199
	Non-Indigenous <sup>2</sup>	11	15	26	21	29
15 – 19	Aboriginal and Torres Strait Islander	1 147	1 064	1 315	1 619	1 358
	Non-Indigenous <sup>2</sup>	350	444	509	449	604
20 – 29	Aboriginal and Torres Strait Islander	1 387	1 382	1 637	1 881	1 550
	Non-Indigenous <sup>2</sup>	1 177	1 489	1 788	1 971	2 574
30 – 39	Aboriginal and Torres Strait Islander	519	468	558	608	503
	Non-Indigenous <sup>2</sup>	685	757	872	993	1 243
40 – 49	Aboriginal and Torres Strait Islander	169	109	140	152	147
	Non-Indigenous <sup>2</sup>	416	393	568	677	723
50 – 59	Aboriginal and Torres Strait Islander	44	17	23	30	39
	Non-Indigenous <sup>2</sup>	182	210	239	320	305
60 +	Aboriginal and Torres Strait Islander	12	8	4	1	4
	Non-Indigenous <sup>2</sup>	56	70	107	116	126
<b>Total<sup>3</sup></b>	<b>Aboriginal and Torres Strait Islander</b>	<b>3 447</b>	<b>3 169</b>	<b>3 833</b>	<b>4 506</b>	<b>3 804</b>
	<b>Non-Indigenous<sup>2</sup></b>	<b>2 881</b>	<b>3 399</b>	<b>4 132</b>	<b>4 582</b>	<b>5 624</b>

1 In 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 3.2.8 Number of diagnoses of gonorrhoea<sup>1</sup>, 2012, by Aboriginal and Torres Strait Islander status, sex and age group**

Aboriginal and Torres Strait Islander status	Sex	Age group (years)								Total <sup>4</sup>
		0 – 4	5 – 14	15 – 19	20 – 29	30 – 39	40 – 49	50 – 59	60 +	
Aboriginal and Torres Strait Islander	Male	2	37	513	758	269	96	27	4	1 706
	Female	2	162	845	792	234	51	12	0	2 098
	<b>Total</b>	<b>4</b>	<b>199</b>	<b>1 358</b>	<b>1 550</b>	<b>503</b>	<b>147</b>	<b>39</b>	<b>4</b>	<b>3 804</b>
Non-Indigenous <sup>2</sup>	Male	2	6	350	1 992	1 047	615	255	111	4 385
	Female	2	23	254	581	193	108	50	15	1 234
	<b>Total<sup>3</sup></b>	<b>4</b>	<b>29</b>	<b>604</b>	<b>2 574</b>	<b>1 243</b>	<b>723</b>	<b>305</b>	<b>126</b>	<b>5 624</b>
<b>Total</b>	Male	4	43	863	2 750	1 316	711	282	115	6 091
	Female	4	185	1 099	1 373	427	159	62	15	3 332
	<b>Total<sup>3</sup></b>	<b>8</b>	<b>228</b>	<b>1 962</b>	<b>4 124</b>	<b>1 746</b>	<b>870</b>	<b>344</b>	<b>130</b>	<b>9 428</b>

1 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 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, 2012, 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	1 (1.1)	91 (98.9)	0 (0.0)	92
NSW	–	–	3 049 (73.8)	4 129
NT	1 323 (86.1)	168 (10.9)	45 (2.9)	1 536
QLD	1 113 (41.2)	800 (29.6)	787 (29.1)	2 700
SA	198 (39.7)	284 (56.9)	17 (3.4)	499
TAS	0 (0.0)	32 (91.4)	3 (8.6)	35
VIC	25 (1.0)	1 607 (63.2)	911 (35.8)	2 543
WA	1 145 (54.1)	967 (45.7)	3 (0.1)	2 115
<b>Total</b>	<b>3 904 (28.6)</b>	<b>4 930 (36.1)</b>	<b>4 815 (35.3)</b>	<b>13 649</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 3.2.10 Rate<sup>1</sup> of diagnosis of gonorrhoea, 2008 – 2012, by year, Aboriginal and Torres Strait Islander status and area of residence**

Area of residence	Aboriginal and Torres Strait Islander status	Year of diagnosis				
		2008	2009	2010	2011	2012
Major cities	Aboriginal and Torres Strait Islander	146	109	124	192	240
	Non-Indigenous <sup>2</sup>	22	27	33	36	45
Inner regional	Aboriginal and Torres Strait Islander	37	54	64	107	165
	Non-Indigenous <sup>2</sup>	6	10	10	12	15
Outer regional	Aboriginal and Torres Strait Islander	719	630	854	1 225	1 089
	Non-Indigenous <sup>2</sup>	23	22	26	31	30
Remote	Aboriginal and Torres Strait Islander	2 290	2 043	2 659	2 610	2 384
	Non-Indigenous <sup>2</sup>	31	36	39	41	55
Very remote	Aboriginal and Torres Strait Islander	2 436	2 332	2 628	2 982	2 193
	Non-Indigenous <sup>2</sup>	51	40	79	77	91
<b>Total</b>	<b>Aboriginal and Torres Strait Islander</b>	<b>931</b>	<b>856</b>	<b>1 035</b>	<b>1 217</b>	<b>1 027</b>
	<b>Non-Indigenous<sup>2</sup></b>	<b>21</b>	<b>25</b>	<b>30</b>	<b>33</b>	<b>41</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 3.2.11 Number and rate<sup>1</sup> of diagnosis of infectious syphilis, 2008 – 2012, 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									
		2008		2009		2010		2011		2012	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	Aboriginal and Torres Strait Islander	0	0	1	11.3	0	0.0	0	0.0	1	20.9
	Non-Indigenous <sup>3</sup>	4	1.0	10	2.6	14	3.9	9	2.5	14	3.8
NSW	Aboriginal and Torres Strait Islander	7	4.5	11	7.4	8	5.1	4	3.0	8	5.5
	Non-Indigenous <sup>3</sup>	420	6.3	519	7.8	413	6.2	415	6.2	502	7.5
NT	Aboriginal and Torres Strait Islander	66	115.6	37	71.7	40	73.8	28	42.1	13	20.3
	Non-Indigenous <sup>3</sup>	17	9.7	1	0.6	3	1.6	2	1.3	1	0.7
QLD	Aboriginal and Torres Strait Islander	22	11.8	29	18.0	70	38.6	119	59.5	117	61.4
	Non-Indigenous <sup>3</sup>	173	4.1	163	3.9	157	3.8	216	5.2	270	6.5
SA	Aboriginal and Torres Strait Islander	5	17.9	8	30.3	4	13.1	14	62.7	9	34.6
	Non-Indigenous <sup>3</sup>	44	2.9	48	3.1	21	1.4	42	2.1	34	2.2
TAS	Aboriginal and Torres Strait Islander	0	0.0	0	0.0	0	0.0	1	6.6	0	0.0
	Non-Indigenous <sup>3</sup>	8	1.8	10	2.3	6	1.3	5	1.2	14	3.2
VIC	Aboriginal and Torres Strait Islander	3	9.1	1	3.1	1	3.0	5	15.7	6	16.2
	Non-Indigenous <sup>3</sup>	377	7.0	387	7.1	298	5.4	327	6.0	468	8.7
WA	Aboriginal and Torres Strait Islander	77	86.5	33	39.0	19	25.8	29	40.7	13	21.5
	Non-Indigenous <sup>3</sup>	99	4.5	56	2.5	66	3.0	96	4.3	64	2.9
<b>Total</b>	<b>Aboriginal and Torres Strait Islander</b>	<b>180</b>	<b>30.0</b>	<b>120</b>	<b>22.3</b>	<b>142</b>	<b>25.0</b>	<b>200</b>	<b>32.4</b>	<b>167</b>	<b>27.2</b>
	<b>Non-Indigenous<sup>3</sup></b>	<b>1 142</b>	<b>5.4</b>	<b>1 194</b>	<b>5.7</b>	<b>978</b>	<b>4.6</b>	<b>1 112</b>	<b>5.2</b>	<b>1 367</b>	<b>6.5</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 3.2.12 Number of diagnoses of infectious syphilis<sup>1</sup>, 2008 – 2012, by age group, Aboriginal and Torres Strait Islander status and year**

Age group (years)	Aboriginal and Torres Strait Islander status	Year of diagnosis				
		2008	2009	2010	2011	2012
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	8	3	1	12	7
	Non-Indigenous <sup>2</sup>	0	0	0	3	1
15 – 19	Aboriginal and Torres Strait Islander	51	18	26	67	46
	Non-Indigenous <sup>2</sup>	26	22	20	23	26
20 – 29	Aboriginal and Torres Strait Islander	58	39	56	59	62
	Non-Indigenous <sup>2</sup>	267	293	244	280	341
30 – 39	Aboriginal and Torres Strait Islander	29	37	33	32	29
	Non-Indigenous <sup>2</sup>	372	333	280	298	359
40 – 49	Aboriginal and Torres Strait Islander	25	14	18	20	16
	Non-Indigenous <sup>2</sup>	314	361	268	323	363
50 – 59	Aboriginal and Torres Strait Islander	8	8	8	8	6
	Non-Indigenous <sup>2</sup>	119	132	112	118	202
60 +	Aboriginal and Torres Strait Islander	1	1	0	2	1
	Non-Indigenous <sup>2</sup>	44	49	49	55	75
<b>Total<sup>3</sup></b>	<b>Aboriginal and Torres Strait Islander</b>	<b>180</b>	<b>120</b>	<b>142</b>	<b>200</b>	<b>167</b>
	<b>Non-Indigenous<sup>2</sup></b>	<b>1 142</b>	<b>1 194</b>	<b>978</b>	<b>1 112</b>	<b>1 367</b>

1 In 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>, 2012, by Aboriginal and Torres Strait Islander status, sex and age group**

		Age group (years)								Total
Aboriginal and Torres Strait Islander status	Sex	0 – 4	5 – 14	15 – 19	20 – 29	30 – 39	40 – 49	50 – 59	60 +	
Aboriginal and Torres Strait Islander	Male	0	2	17	34	19	11	4	0	87
	Female	0	5	29	28	10	5	2	1	80
	<b>Total</b>	<b>0</b>	<b>7</b>	<b>46</b>	<b>62</b>	<b>29</b>	<b>16</b>	<b>6</b>	<b>1</b>	<b>167</b>
Non-Indigenous <sup>2</sup>	Male	0	0	21	315	337	352	199	72	1 296
	Female	0	1	5	23	22	11	3	3	68
	<b>Total<sup>3</sup></b>	<b>0</b>	<b>1</b>	<b>26</b>	<b>341</b>	<b>359</b>	<b>363</b>	<b>202</b>	<b>75</b>	<b>1 367</b>
<b>Total</b>	Male	0	2	38	349	356	363	203	72	1 383
	Female	0	6	34	51	32	16	5	4	148
	<b>Total<sup>3</sup></b>	<b>0</b>	<b>8</b>	<b>72</b>	<b>403</b>	<b>388</b>	<b>379</b>	<b>208</b>	<b>76</b>	<b>1 534</b>

1 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 sex was not reported.

Source: National Notifiable Diseases Surveillance System



**Table 3.2.14** Number (percent) of diagnoses of infectious syphilis, 2012, 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	1 (6.7)	14 (93.3)	0	(0.0)	15
NSW	8 (1.6)	457 (89.6)	45	(8.8)	510
NT	13 (92.9)	1 (7.1)	0	(0.0)	14
QLD	117 (30.2)	256 (66.1)	14	(3.6)	387
SA	9 (20.9)	34 (79.1)	0	(0.0)	43
TAS	0 (0.0)	14 (100.0)	0	(0.0)	14
VIC	6 (1.3)	417 (88.0)	51	(10.8)	474
WA	13 (16.9)	64 (83.1)	0	(0.0)	77
<b>Total</b>	<b>167 (10.9)</b>	<b>1 257 (81.9)</b>	<b>110</b>	<b>(7.2)</b>	<b>1 534</b>

Source: National Notifiable Diseases Surveillance System

**Table 3.2.15** Rate<sup>1</sup> of diagnosis of infectious syphilis, 2008 – 2012, by year, Aboriginal and Torres Strait Islander status and area of residence

Area of residence	Aboriginal and Torres Strait Islander status	Year of diagnosis				
		2008	2009	2010	2011	2012
Major cities	Aboriginal and Torres Strait Islander	8	8	5	15	15
	Non-Indigenous <sup>2</sup>	7	7	6	6	8
Inner regional	Aboriginal and Torres Strait Islander	7	3	2	7	6
	Non-Indigenous <sup>2</sup>	1	2	1	2	2
Outer regional	Aboriginal and Torres Strait Islander	14	24	36	30	40
	Non-Indigenous <sup>2</sup>	3	2	3	1	1
Remote	Aboriginal and Torres Strait Islander	101	53	86	116	96
	Non-Indigenous <sup>2</sup>	1		1	1	1
Very remote	Aboriginal and Torres Strait Islander	129	66	68	101	58
	Non-Indigenous <sup>2</sup>	5	6	6	5	1
<b>Total</b>	<b>Aboriginal and Torres Strait Islander</b>	<b>33</b>	<b>22</b>	<b>26</b>	<b>36</b>	<b>30</b>
	<b>Non-Indigenous<sup>2</sup></b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>7</b>

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

2 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 2012 by State/Territory, sex and site and antibiotic resistance**

Sex and Site	State/Territory								Total
	ACT	NSW	NT	QLD	SA	TAS	VIC	WA	
<b>Males</b>									
Urethra	26	877	214	392	83	9	547	313	2 461
Rectal	18	282	1	68	34	2	340	31	776
Pharynx	10	279	0	37	12	2	197	25	562
DGI <sup>1</sup>	0	1	4	2	0	0	1	6	14
Other/Not specified	0	10	2	3	0	0	31	1	47
<b>Total</b>	<b>54</b>	<b>1 449</b>	<b>221</b>	<b>502</b>	<b>129</b>	<b>13</b>	<b>1 116</b>	<b>376</b>	<b>3 860</b>
<b>Females</b>									
Cervix	2	187	108	195	19	1	112	162	786
Rectal	0	3	0	3	0	0	2	2	10
Pharynx	0	66	0	4	2	0	16	4	92
DGI <sup>1</sup>	0	0	6	11	0	0	0	3	20
Other/Not specified	0	7	0	4	1	0	3	1	16
<b>Total</b>	<b>2</b>	<b>263</b>	<b>114</b>	<b>217</b>	<b>22</b>	<b>1</b>	<b>133</b>	<b>172</b>	<b>924</b>
<b>Antibiotic Resistance (%)</b>									
Ceftriaxone <sup>2</sup>	3.6	4.5	0	2.4	0.7	0	8.4	1.2	4.4
Ciprofloxacin	33.9	31.7	2.8	16.9	32.7	35.7	45.8	23.8	30.3
Azithromycin	0	0.5	0.3	2.1	0.7	0	2.7	0.6	1.3
Penicillin	14.3	28.3	3.1	25.8	35.3	35.7	53.3	20.5	32.1
<b>Total</b>	<b>56</b>	<b>1 712</b>	<b>335</b>	<b>719</b>	<b>151</b>	<b>14</b>	<b>1 249</b>	<b>548</b>	<b>4 784</b>

1 Disseminated gonococcal infection.

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, 2008 – 2012, by sex, site and year**

Sex and Site	Year of diagnosis				
	2008	2009	2010	2011	2012
<b>Males</b>					
Urethra	457	523	644	689	877
Rectal	181	193	328	248	282
Pharynx	99	101	184	201	279
Other/Not specified	3	8	39	7	11
<b>Total</b>	<b>740</b>	<b>825</b>	<b>1 195</b>	<b>1 145</b>	<b>1 449</b>
<b>Females</b>					
Cervix	102	100	113	135	187
Rectal	1	4	2	8	3
Pharynx	11	15	11	41	66
Other/Not specified	3	5	7	3	7
<b>Total</b>	<b>117</b>	<b>124</b>	<b>133</b>	<b>187</b>	<b>263</b>
<b>Total</b>	<b>857</b>	<b>949</b>	<b>1 328</b>	<b>1 322</b>	<b>1 712</b>

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, 2008 – 2012, 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	Gold Coast Sexual Health Service, QLD	Clinic 275 Adelaide, SA		Melbourne Sexual Health Centre, VIC
2008	Men seen	4 615	–	3 795	1 799	4 086	8 335	22 630
	Tested	2 297	–	1 582	767	3 420	3 738	11 804
	Newly diagnosed (%)	25 (1.1)	–	7 (0.4)	7 (0.9)	9 (0.3)	47 (1.3)	95 (0.8)
	Previously negative (%)	20 (1.1)	–	5 (0.5)	0 (0.0)	7 (0.3)	42 (1.7)	74 (1.0)
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)

		Sexual health clinic						
Year		Sydney Sexual Health Centre, NSW	RPA Sexual Health Clinic, NSW <sup>1</sup>	Brisbane Sexual Health Clinic, QLD	Gold Coast Sexual Health Service, QLD	Clinic 275 Adelaide, SA	Melbourne Sexual Health Centre, VIC	Total
2008	Women seen	2 761	–	2 490	1 375	2 407	6 683	15 716
	Tested	1 193	–	669	496	1 947	2 187	6 492
	Newly diagnosed (%)	3 (0.3)	–	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.1)	5 (0.08)
	Previously negative (%)	1 (0.1)	–	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.07)	2 (0.05)
2009	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)
2010	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)
2011	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)
2012	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)

<sup>1</sup> RPA Sexual Health Clinic, NSW, opened in 2009.

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, 2008 – 2012, 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					Other men	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		
2008	Men seen	8 410	1 845	507	3 632	9 306	775	22 630
	Tested	5 153	1 228	314	1 981	4 259	97	11 804
	Newly diagnosed (%)	85 (1.6)	14 (1.2)	1 (0.3)	6 (0.3)	2 (0.05)	1 (1.0)	95 (0.8)
	Previously negative (%)	70 (1.8)	13 (1.4)	1 (0.4)	2 (0.2)	1 (0.04)	0 (0.0)	74 (1.0)
2009	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)
2010	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)
2011	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)
2012	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)

		HIV exposure category					
Year		Sex worker <sup>2</sup>	Injecting drug use	Heterosexual contact overseas	Heterosexual contact in Australia	Other women	Total
<b>2008</b>	Women seen	3 783	360	2 447	8 278	848	15 716
	Tested	1 656	207	1 125	3 274	230	6 492
	Newly diagnosed (%)	1 (0.06)	0 (0.0)	1 (0.09)	3 (0.09)	0 (0.0)	5 (0.08)
	Previously negative (%)	0 (0.0)	0 (0.0)	1 (0.2)	1 (0.06)	0 (0.0)	2 (0.05)
<b>2009</b>	Women seen	4 245	338	2 571	8 168	965	16 287
	Tested	2 459	193	954	2 903	259	6 768
	Newly diagnosed (%)	1 (0.04)	0 (0.0)	0 (0.0)	3 (0.1)	0 (0.0)	4 (0.06)
	Previously negative (%)	1 (0.04)	0 (0.0)	0 (0.0)	3 (0.17)	0 (0.0)	4 (0.08)
<b>2010</b>	Women seen	5 413	292	2 873	8 782	1 084	18 444
	Tested	3 225	192	1 511	3 949	247	9 124
	Newly diagnosed (%)	0 (0.0)	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)	0 (0.0)
<b>2011</b>	Women seen	4 719	356	3 101	8 934	1 422	18 532
	Tested	2 799	208	1 577	3 942	227	8 753
	Newly diagnosed (%)	2 (0.1)	0 (0.0)	3 (0.2)	1 (0.03)	0 (0.0)	6 (0.1)
	Previously negative (%)	2 (0.1)	0 (0.0)	1 (0.1)	1 (0.05)	0 (0.0)	4 (0.1)
<b>2012</b>	Women seen	4 186	286	3 903	9 589	1 605	19 569
	Tested	2 619	154	1 870	3 852	281	8 776
	Newly diagnosed (%)	1 (0.04)	0 (0.0)	1 (0.05)	2 (0.05)	0 (0.0)	4 (0.05)
	Previously negative (%)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.05)	0 (0.0)	1 (0.02)

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, 2008 – 2012, 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	Total
		13 – 19	20 – 29	30 – 39	40 – 49	50 – 59	60+		
2008	Men seen	846	10 483	6 130	3 054	1 394	723	22 630	22 630
	Tested	464	5 554	3 188	1 511	707	380	11 804	11 804
	Newly diagnosed (%)	0 (0.0)	31 (0.6)	35 (1.1)	20 (1.3)	4 (0.6)	5 (1.3)	95 (0.8)	95 (0.8)
	Previously negative (%)	0 (0.0)	27 (0.8)	25 (1.0)	16 (1.4)	3 (0.6)	3 (1.1)	74 (1.0)	74 (1.0)
2009	Men seen	981	11 315	6 315	3 254	1 465	703	24 033	24 033
	Tested	515	6 574	3 635	1 777	783	365	13 649	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)	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)	96 (1.0)
2010	Men seen	1 153	12 761	7 078	3 974	1 715	882	27 563	27 563
	Tested	690	7 723	4 247	2 305	992	473	16 430	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)	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)	74 (0.7)
2011	Men seen	1 283	13 997	7 869	3 990	1 799	918	29 856	29 856
	Tested	722	7 833	4 453	2 091	966	503	16 568	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)	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)	96 (0.7)
2012	Men seen	1 516	16 434	9 057	4 641	2 020	1 099	34 768	34 768
	Tested	720	8 633	4 923	2 385	1 029	633	18 323	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)	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)	95 (0.7)



Year		Age group (years)						Total	Total
		13 – 19	20 – 29	30 – 39	40 – 49	50 – 59	60+		
2008	Women seen	1 520	8 379	3 804	1 507	415	91	15 716	22 630
	Tested	548	3 475	1 650	630	162	27	6 492	11 804
	Newly diagnosed (%)	0 (0.0)	2 (0.06)	1 (0.06)	1 (0.2)	0 (0.0)	1 (3.8)	5 (0.08)	95 (0.8)
	Previously negative (%)	0 (0.0)	1 (0.05)	1 (0.08)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.05)	74 (1.0)
2009	Women seen	1 490	8 744	3 990	1 562	409	92	16 287	24 033
	Tested	515	3 390	1 910	772	149	32	6 768	13 649
	Newly diagnosed (%)	0 (0.0)	3 (0.09)	0 (0.0)	1 (0.1)	0 (0.0)	0 (0.0)	4 (0.06)	114 (0.8)
	Previously negative (%)	0 (0.0)	3 (0.1)	0 (0.0)	1 (0.1)	0 (0.0)	0 (0.0)	4 (0.08)	96 (1.0)
2010	Women seen	1 557	9 795	4 739	1 735	491	127	18 444	27 563
	Tested	675	4 661	2 540	934	248	66	9 124	16 430
	Newly diagnosed (%)	0 (0.0)	1 (0.02)	1 (0.04)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.02)	94 (0.6)
	Previously negative (%)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	74 (0.7)
2011	Women seen	1 663	10 129	4 622	1 553	445	120	18 532	29 856
	Tested	659	4 581	2 386	859	230	38	8 753	16 568
	Newly diagnosed (%)	0 (0.0)	3 (0.1)	2 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	6 (0.1)	134 (0.8)
	Previously negative (%)	0 (0.0)	2 (0.1)	1 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	4 (0.1)	96 (0.7)
2012	Women seen	1 876	10 873	4 556	1 631	517	116	19 569	34 768
	Tested	574	4 697	2 343	947	263	32	8 856	18 323
	Newly diagnosed (%)	0 (0.0)	2 (0.04)	1 (0.04)	1 (0.1)	0 (0.0)	0 (0.0)	4 (0.05)	134 (0.7)
	Previously negative (%)	0 (0.0)	0 (0.0)	1 (0.4)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.02)	95 (0.7)

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), 2008 – 2012, 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

### 2008

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 <sup>4</sup>	1	18	8	26 (–)	0 (0.0)	0 (0.0)	0 (0.0)	12 (67)	6 (75)	18 (69)
NSW	22	563	297	867 (33)	15 (2.7)	3 (1.0)	19 (2.2)	379 (70)	208 (74)	591 (71)
NT	2	46	27	73 (40)	1 (2.2)	0 (0.0)	1 (1.4)	23 (50)	15 (58)	38 (53)
QLD	8	335	161	498 (35)	9 (2.7)	0 (0.0)	9 (1.8)	182 (55)	91 (57)	275 (56)
SA	7	96	92	189 (45)	0 (0.0)	0 (0.0)	0 (0.0)	30 (32)	24 (27)	54 (29)
TAS	4	33	24	57 (25)	0 (0.0)	0 (0.0)	0 (0.0)	26 (81)	19 (79)	45 (80)
VIC	6	199	93	292 (36)	2 (1.0)	0 (0.0)	2 (0.7)	141 (75)	58 (64)	199 (72)
WA	2	106	62	168 (73)	2 (1.9)	0 (0.0)	2 (1.2)	59 (58)	32 (54)	91 (57)
<b>Total</b>	<b>52</b>	<b>1396</b>	<b>764</b>	<b>2170 (36)</b>	<b>29 (2.1)</b>	<b>3 (0.4)</b>	<b>33 (1.5)</b>	<b>852 (63)</b>	<b>453 (61)</b>	<b>1311 (62)</b>

### 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>1725</b>	<b>915</b>	<b>2657 (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>1318 (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>1580</b>	<b>759</b>	<b>2353 (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>1244 (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>1560</b>	<b>764</b>	<b>2337 (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>1216 (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>1546</b>	<b>718</b>	<b>2279 (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>1184 (53)</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, 2008 – 2012, 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

2008									
	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	21	16	37	0.0	0.0	0.0	29	44	35
20 to 24 years	86	73	159	0.0	0.0	0.0	30	47	38
25 to 34 years	468	297	767	1.5	1.0	1.4	55	59	57
35 to 44 years	529	241	773	2.7	0.0	1.8	67	64	66
45+ years	287	136	428	2.8	0.0	1.9	81	72	78
Not reported	5	1	6	0.0	0.0	0.0	60	0	50
<i>Time since first injection</i>									
Less than 5 years	141	84	225	5.7	0.0	3.6	22	37	28
5 to 9 years	175	126	302	0.6	0.0	0.3	41	50	45
10 to 14 years	265	189	455	1.1	1.1	1.3	61	57	59
15 to 19 years	241	130	372	3.3	0.0	2.2	60	70	64
20+ years	539	224	769	1.5	0.5	1.2	83	79	82
Not reported	35	11	47	2.9	0.0	2.1	58	30	52
<b>Total</b>	<b>1 396</b>	<b>764</b>	<b>2 170</b>	<b>2.1</b>	<b>0.4</b>	<b>1.5</b>	<b>63</b>	<b>61</b>	<b>62</b>
<i>Last drug injected among those reporting less than 3 years since first injection</i>									
Amphetamines	28	14	42	14.3	0.0	9.5	14	21	17
Heroin	8	15	23	12.5	0.0	4.4	25	50	41
Other opiates	10	10	20	0.0	0.0	0.0	30	30	30
All other drugs	19	4	23	0.0	0.0	0.0	16	75	26
Not reported	2	0	2	0.0	0.0	0.0	0	0	0
<b>Total</b>	<b>67</b>	<b>43</b>	<b>110</b>	<b>7.5</b>	<b>0.0</b>	<b>4.6</b>	<b>18</b>	<b>38</b>	<b>26</b>
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	0.0	0.0	8	17	11
20 to 24 years	118	88	207	0.9	0.0	0.5	24	43	32
25 to 34 years	577	349	930	1.2	0.0	0.8	43	53	47
35 to 44 years	624	310	939	2.1	0.0	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	0	0	0
<i>Time since first injection</i>									
Less than 5 years	145	113	260	1.4	0.0	0.8	17	25	20
5 to 9 years	195	145	342	1.6	0.0	0.9	30	43	36
10 to 14 years	346	234	583	1.7	0.0	1.0	46	56	50
15 to 19 years	378	171	551	2.1	0.0	1.7	51	60	54
20+ years	622	226	855	1.5	0.5	1.2	64	62	63
Not reported	39	26	66	0.0	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	0.0	2.0	0	22	8
Heroin	12	21	33	0.0	0.0	0.0	25	30	28
Other opiates	14	24	39	0.0	0.0	0.0	7	17	13
All other drugs	30	2	32	3.3	0.0	3.1	7	50	9
Not reported	1	2	3	0.0	0.0	0.0	0	0	0
<b>Total</b>	<b>90</b>	<b>67</b>	<b>158</b>	<b>2.2</b>	<b>0.0</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	0.0	0.0	11	40	24
20 to 24 years	86	75	163	1.2	0.0	0.6	18	36	26
25 to 34 years	502	263	766	0.6	0.0	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	0	0	0
<i>Time since first injection</i>									
Less than 5 years	132	71	204	1.5	0.0	1.0	14	27	19
5 to 9 years	158	122	281	0.0	0.0	0.0	35	43	38
10 to 14 years	298	170	472	2.0	0.0	1.3	47	52	49
15 to 19 years	323	154	480	2.2	0.0	1.5	57	55	56
20+ years	633	228	865	1.0	0.9	0.9	68	66	67
Not reported	36	14	51	0.0	0.0	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>1.0</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	0.0	3.0	6	13	9
Heroin	18	11	29	5.6	0.0	3.5	22	45	31
Other opiates	19	7	26	0.0	0.0	0.0	21	0	15
All other drugs	33	4	37	0.0	0.0	0.0	7	75	8
Not reported	0	0	0	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>0.0</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	0.0	0.0	5	17	9
20 to 24 years	96	44	142	1.0	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	0.0	0.0	50	0	44
<i>Time since first injection</i>									
Less than 5 years	174	85	261	2.3	0.0	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	0.0	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	0.0	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	0.0	3.5	11	27	17
Heroin	10	18	28	0.0	0.0	0.0	20	35	30
Other opiates	11	12	24	9.1	0.0	4.2	27	25	25
All other drugs	74	7	81	0.0	0.0	0.0	7	14	7
Not reported	1	0	1	0.0	0.0	0.0	0	0	0
<b>Total</b>	<b>114</b>	<b>48</b>	<b>163</b>	<b>1.8</b>	<b>0.0</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	0.0	0.0	5	0	4
20 to 24 years	108	32	141	0.0	0.0	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	0.0	0.0	100	100	100
<i>Time since first injection</i>									
Less than 5 years	200	55	257	1.5	0.0	1.2	13	31	17
5 to 9 years	123	88	212	0.0	2.3	0.9	36	41	38
10 to 14 years	206	152	361	1.0	0.7	0.8	47	54	50
15 to 19 years	278	143	425	0.7	0.0	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	0.0	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	0.0	3.7	20	41	33
Heroin	15	10	26	0.0	0.0	0.0	21	20	24
Other opiates	8	6	14	0.0	0.0	0.0	50	33	43
All other drugs	92	3	95	0.0	0.0	0.0	3	0	3
Not reported	1	0	1	0.0	0.0	0.0	0	0	0
<b>Total</b>	<b>126</b>	<b>36</b>	<b>163</b>	<b>0.8</b>	<b>0.0</b>	<b>0.6</b>	<b>10</b>	<b>31</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 4.2.3** Number of people who inject drugs seen at needle and syringe programs who were tested for HIV or hepatitis C antibody, 2008 – 2012, 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

2008									
	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	1 228	537	1 767	0.2	0.2	0.2	64	61	63
Bisexual	56	152	209	5.4	1.3	2.9	59	63	62
Homosexual	62	48	112	37.1	0.0	20.6	43	62	51
Not reported	50	27	82	0.0	0.0	0.0	73	54	67
<i>Sex work last month</i>									
No	1 264	633	1 905	2.1	0.5	1.6	63	60	62
Yes	39	91	131	5.1	0.0	2.3	73	66	67
Not reported	93	40	134	0.0	0.0	0.0	55	81	63
<i>Country/region of birth</i>									
Australia	1 181	650	1 836	2.0	0.5	1.5	63	60	62
Overseas born	194	102	300	2.6	0.0	2.0	63	65	63
<i>Other Oceania</i>	34	27	63	8.8	0.0	6.4	41	50	44
<i>Asia</i>	21	7	28	4.8	0.0	3.6	89	50	80
<i>United Kingdom and Ireland</i>	68	43	113	0.0	0.0	0.0	61	72	65
<i>Other</i>	71	25	96	1.4	0.0	1.0	68	72	69
Not reported	21	12	34	0.0	0.0	0.0	70	91	78
<i>Main language spoken at home by parents</i>									
English	1 299	728	2 037	2.2	0.4	1.6	62	62	62
Other language	73	28	101	1.4	0.0	1.0	75	54	69
Not reported	24	8	32	0.0	0.0	0.0	59	86	66
<b>Total</b>	<b>1 396</b>	<b>764</b>	<b>2 170</b>	<b>2.1</b>	<b>0.4</b>	<b>1.5</b>	<b>63</b>	<b>61</b>	<b>62</b>
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	0.0	1.3	46	66	58
Homosexual	48	37	87	39.1	0.0	21.2	27	41	32
Not reported	80	48	134	1.3	0.0	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	0.0	1.6	44	68	61
Not reported	68	35	103	0.0	0.0	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	0.3	46	55	48
<i>Other Oceania</i>	54	30	84	0.0	0.0	0.0	43	57	48
<i>Asia</i>	24	7	32	4.2	0.0	3.1	42	43	41
<i>United Kingdom and Ireland</i>	82	37	120	0.0	0.0	0.0	51	57	53
<i>Other</i>	64	30	96	0.0	0.0	0.0	42	53	46
Not reported	21	5	26	0.0	0.0	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	0.9	54	45	50
Not reported	25	8	33	0.0	1.0	0.0	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	0.0	1.6	55	56	56
Homosexual	49	36	86	29.2	0.0	16.5	22	28	24
Not reported	80	41	125	0.0	0.0	0.0	49	63	54
<i>Sex work last month</i>									
No	1 428	619	2 058	1.3	0.3	1.0	53	52	53
Yes	42	84	127	4.8	0.0	1.6	26	54	45
Not reported	110	56	168	0.9	0.0	0.6	65	55	61
<i>Country/region of birth</i>									
Australia	1 367	673	2 051	1.4	0.3	1.0	53	51	53
Overseas born	187	78	266	1.1	0.0	0.8	55	62	56
<i>Other Oceania</i>	47	28	76	2.1	0.0	1.3	52	68	57
<i>Asia</i>	23	6	29	0.0	0.0	0.0	57	83	62
<i>United Kingdom and Ireland</i>	64	29	93	0.0	0.0	0.0	64	48	59
<i>Other</i>	53	15	68	1.9	0.0	1.5	47	67	52
Not reported	26	8	36	0.0	0.0	0.0	46	75	53
<i>Main language spoken at home by parents</i>									
English	1 486	736	2 235	1.4	0.3	1.0	53	52	53
Other language	75	15	90	0.0	0.0	0.0	49	57	51
Not reported	19	8	28	0.0	1.0	0.0	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>1.0</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	3.0	44	51	48
Homosexual	51	38	91	23.5	0.0	13.2	39	41	40
Not reported	59	38	100	0.0	0.0	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	0.0	1.3	1.9	64	56	58
Not reported	79	23	104	2.5	0.0	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	0.3	55	47	53
<i>Other Oceania</i>	46	34	80	0.0	0.0	0.0	50	58	53
<i>Asia</i>	24	7	31	4.2	0.0	3.2	67	14	55
<i>United Kingdom and Ireland</i>	73	34	108	0.0	0.0	0.0	58	50	55
<i>Other</i>	77	20	97	0.0	0.0	0.0	55	45	53
Not reported	18	4	22	0.0	0.0	0.0	76	50	71
<i>Main language spoken at home by parents</i>									
English	1 444	731	2 187	1.4	1.0	1.3	53	52	52
Other language	100	28	129	1.0	0.0	0.8	68	41	62
Not reported	16	5	21	0.0	1.0	0.0	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	0.0	1.5	47	56	52
Homosexual	42	31	77	21.4	0.0	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	0.0	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	0.0	2.1	57	63	58
<i>Other Oceania</i>	49	32	81	4.1	0.0	2.5	44	65	52
<i>Asia</i>	22	3	26	0.0	0.0	0.0	86	100	84
<i>United Kingdom and Ireland</i>	73	26	99	1.4	0.0	1.0	57	65	59
<i>Other</i>	58	24	82	5.2	0.0	3.7	56	54	55
Not reported	16	3	19	0.0	0.0	0.0	50	67	53
<i>Main language spoken at home by parents</i>									
English	1 446	685	2 143	1.0	1.3	1.2	52	54	52
Other language	96	27	126	3.1	0.0	2.4	58	52	56
Not reported	4	6	10	0.0	0.0	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>

1 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 Kirketon Road Centre, Sydney, 2008 – 2012**

Year/ Age group	Person years at risk	Number newly diagnosed	Incidence per 100 person years
<b>2008</b>			
Less than 20 years	3.1	0	0
20 – 29 years	18.8	1	5.3
30+ years	43.9	5	11.4
<b>Total</b>	<b>65.7</b>	<b>6</b>	<b>9.1</b>
<b>2009</b>			
Less than 20 years	2.3	1	42.7
20 – 29 years	19.3	2	10.4
30+ years	45.5	1	2.2
<b>Total</b>	<b>67.2</b>	<b>4</b>	<b>6</b>
<b>2010</b>			
Less than 20 years	0.8	0	0
20 – 29 years	16.8	4	23.8
30+ years	43.1	2	4.6
<b>Total</b>	<b>60.7</b>	<b>6</b>	<b>9.9</b>
<b>2011</b>			
Less than 20 years	0.7	2	285.7
20 – 29 years	11.9	4	33.7
30+ years	34.8	1	2.9
<b>Total</b>	<b>47.4</b>	<b>7</b>	<b>14.8</b>
<b>2012</b>			
Less than 20 years	0.4	1	251.9
20 – 29 years	7.7	1	13
30+ years	19.3	0	0
<b>Total</b>	<b>27.4</b>	<b>2</b>	<b>7.3</b>

Source: Kirketon 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 – 2012**

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	4	11.4
30+ years	19.7	1	5.1
<b>Total</b>	<b>58.9</b>	<b>6</b>	<b>10.2</b>
<b>2010</b>			
Less than 20 years	3.7	0	0
20 – 29 years	46.6	5	10.7
30+ years	37.5	1	2.7
<b>Total</b>	<b>87.7</b>	<b>6</b>	<b>6.8</b>
<b>2011</b>			
Less than 20 years	1.8	1	57
20 – 29 years	57.4	3	5.2
30+ years	46.8	5	10.7
<b>Total</b>	<b>106</b>	<b>9</b>	<b>8.5</b>
<b>2012</b>			
Less than 20 years	0.7	0	0
20 – 29 years	44.7	5	11.2
30+ years	48.6	3	6.2
<b>Total</b>	<b>94</b>	<b>8</b>	<b>8.5</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 and prevalence of HIV antibody<sup>1</sup>, 1985 – 2012, by State/Territory and years of donation

State/ Territory	1985 <sup>2</sup> – 2002			2003 – 2004			2005 – 2006			All years		
	Tests	Positive	Prevalence	Tests	Positive	Prevalence	Tests	Positive	Prevalence	Tests	Positive	Prevalence
ACT <sup>3</sup>	195 633	1	0.5	–	–	–	–	–	–	195 633	1	0.5
NSW	5 164 642	40	0.8	660 010	5	0.8	731 741	2	0.3	9 047 416	53	0.6
NT	153 591	1	0.7	20 039	0	0.0	19 322	0	0.0	261 462	2	0.8
QLD	3 122 219	31	1.0	462 505	3	0.6	476 755	1	0.2	5 635 952	49	0.9
SA	1 641 783	6	0.4	189 913	1	0.5	222 315	1	0.4	2 849 008	10	0.4
TAS	408 695	1	0.2	50 328	0	0.0	59 686	0	0.0	770 801	1	0.1
VIC	4 406 731	17	0.4	536 706	0	0.0	505 378	1	0.2	7 261 607	28	0.4
WA	1 486 492	13	0.9	233 840	0	0.0	220 642	0	0.0	2 708 483	15	0.6
<b>Total</b>	<b>16 579 786</b>	<b>110</b>	<b>0.7</b>	<b>2 153 341</b>	<b>9</b>	<b>0.4</b>	<b>2 235 839</b>	<b>5</b>	<b>0.2</b>	<b>28 730 362</b>	<b>159</b>	<b>0.6</b>

State/ Territory	2007 – 2008			2009 – 2010			2011 – 2012			All years		
	Tests	Positive	Prevalence	Tests	Positive	Prevalence	Tests	Positive	Prevalence	Tests	Positive	Prevalence
ACT <sup>3</sup>	–	–	–	–	–	–	–	–	–	195 633	1	0.5
NSW	777 269	3	0.4	852 771	2	0.2	860 983	1	0.1	9 047 416	53	0.6
NT	22 954	0	0.0	23 392	0	0.0	22 164	1	4.5	261 462	2	0.8
QLD	494 355	5	1.0	542 824	6	1.1	537 294	3	0.6	5 635 952	49	0.9
SA	259 888	1	0.4	271 126	0	0.0	263 983	1	0.4	2 849 008	10	0.4
TAS	67 926	0	0.0	85 716	0	0.0	98 450	0	0.0	770 801	1	0.1
VIC	564 850	5	0.9	615 685	2	0.3	632 257	3	0.5	7 261 607	28	0.4
WA	245 298	1	0.4	262 509	0	0.0	259 702	1	0.4	2 708 483	15	0.6
<b>Total</b>	<b>2 432 540</b>	<b>15</b>	<b>0.6</b>	<b>2 654 023</b>	<b>10</b>	<b>0.4</b>	<b>2 674 833</b>	<b>10</b>	<b>0.4</b>	<b>28 730 362</b>	<b>159</b>	<b>0.6</b>

1 Prevalence per 100 000 donations.

2 From 1 May 1985.

3 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 – 2012, 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 – 2002		2003 – 2004		2005 – 2006		2007 – 2008		2009 – 2010		2011 – 2012		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>	20	–	4	–	1	–	5	–	2	–	2	–	34	–	34
Injecting drug use	4	0	1	0	0	0	1	0	0	0	0	0	6	0	6
Heterosexual contact	24	25	1	1	1	3	4	2	5	3	5	1	40	35	75
Person from a high prevalence country	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
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	5	5
Undetermined	26	3	2	0	0	0	3	0	0	0	1	1	32	4	36
<b>Total</b>	<b>75</b>	<b>35</b>	<b>8</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>13</b>	<b>2</b>	<b>7</b>	<b>3</b>	<b>8</b>	<b>2</b>	<b>113</b>	<b>46</b>	<b>159</b>
<b>New HIV infection<sup>2</sup></b>	<b>30</b>	<b>16</b>	<b>5</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>45</b>	<b>23</b>	<b>68</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	2008			2009			2010		
	Tests	Positive	Prevalence	Tests	Positive	Prevalence	Tests	Positive	Prevalence
NSW/ACT	387 669	46	11.9	424 627	46	10.8	428 144	44	10.3
NT	11 981	0	0.0	12 123	2	16.5	11 269	1	8.9
QLD	256 224	16	6.2	270 890	13	4.8	271 934	22	8.1
SA	134 384	9	6.7	138 255	9	6.5	132 871	6	4.5
TAS	37 257	1	2.7	41 010	0	0.0	44 706	1	2.2
VIC	289 338	44	15.2	310 968	35	11.3	304 717	38	12.5
WA	124 581	8	6.4	130 714	20	15.3	131 795	11	8.3
<b>Total</b>	<b>1 241 434</b>	<b>124</b>	<b>10.0</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>

State/ Territory	2011			2012		
	Tests	Positive	Prevalence	Tests	Positive	Prevalence
NSW/ACT	441 983	46	10.4	419 000	40	9.5
NT	11 554	3	26.0	10 610	1	9.4
QLD	274 814	16	5.8	262 480	20	7.6
SA	134 363	6	4.5	129 620	7	5.4
TAS	48 248	1	2.1	50 202	3	6.0
VIC	319 371	31	9.7	312 886	24	7.7
WA	132 049	15	11.4	127 653	18	14.1
<b>Total</b>	<b>1 362 382</b>	<b>118</b>	<b>8.7</b>	<b>1 312 451</b>	<b>113</b>	<b>8.6</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	2008			2009			2010		
	Tests	Positive	Prevalence	Tests	Positive	Prevalence	Tests	Positive	Prevalence
NSW/ACT	387 669	61	15.7	424 627	52	12.2	428 144	40	9.3
NT	11 981	0	0.0	12 123	1	8.2	11 269	1	8.9
QLD	256 224	31	12.1	270 890	22	8.1	271 934	16	5.9
SA	134 384	9	6.7	138 255	14	10.1	132 871	7	5.3
TAS	37 257	4	10.7	41 010	5	12.2	44 706	1	2.2
VIC	289 338	20	6.9	310 968	24	7.7	304 717	16	5.3
WA	124 581	5	4.0	130 714	10	7.7	131 795	4	3.0
<b>Total</b>	<b>1 241 434</b>	<b>130</b>	<b>10.5</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>

State/ Territory	2011			2012		
	Tests	Positive	Prevalence	Tests	Positive	Prevalence
NSW/ACT	441 983	33	7.5	419 000	31	7.4
NT	11 554	1	8.7	10 610	1	9.4
QLD	274 814	16	5.8	262 480	26	9.9
SA	134 363	5	3.7	129 620	5	3.9
TAS	48 248	1	2.1	50 202	2	4.0
VIC	319 371	14	4.4	312 886	19	6.1
WA	132 049	11	8.3	127 653	7	5.5
<b>Total</b>	<b>1 362 382</b>	<b>81</b>	<b>5.9</b>	<b>1 312 451</b>	<b>91</b>	<b>6.9</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 Wart Surveillance Network, 2004 – 2012, 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	981	1 919	1 326
No. with warts (%)	86 (8.8)	240 (12.5)	51 (3.8)
<b>2005</b>			
Seen	908	1 809	1 250
No. with warts (%)	92 (10.1)	235 (13.0)	59 (4.7)
<b>2006</b>			
Seen	956	1 927	1 226
No. with warts (%)	100 (10.5)	238 (12.3)	66 (5.4)
<b>2007</b>			
Seen	1 104	2 028	1 368
No. with warts (%)	127 (11.5)	229 (11.3)	77 (5.6)
<b>2008</b>			
Seen	1 192	1 810	1 259
No. with warts (%)	70 (5.9)	128 (7.1)	49 (3.9)
<b>2009</b>			
Seen	1 288	1 924	1 330
No. with warts (%)	36 (2.8)	130 (6.8)	67 (5.0)
<b>2010</b>			
Seen	1 451	1 971	1 270
No. with warts (%)	17 (1.2)	92 (4.7)	80 (6.3)
<b>2011</b>			
Seen	1 525	1 840	1 217
No. with warts (%)	13 (0.8)	57 (3.1)	54 (4.4)
<b>2012</b>			
Seen	1 447	2 038	1 255
No. with warts (%)	16 (1.1)	64 (3.1)	67 (5.3)

1 Data from 8 services from NSW, NT, QLD, TAS, 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 – 2012, number (percent) diagnosed with genital warts, by age group, gender of sexual partners, 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 21 – 30 years	Australian born homosexual men	Australian born bisexual men
<b>2004</b>					
Seen	321	1 627	1 765	1 102	292
No. with warts (%)	23 (7.2)	275 (16.9)	256 (14.5)	100 (9.1)	26 (8.9)
<b>2005</b>					
Seen	280	1 664	1 646	1 149	314
No. with warts (%)	20 (7.1)	311 (18.7)	217 (13.2)	114 (9.9)	26 (8.3)
<b>2006</b>					
Seen	301	1 582	1 544	1 189	301
No. with warts (%)	42 (13.9)	291 (18.4)	197 (12.8)	86 (7.2)	23 (7.6)
<b>2007</b>					
Seen	387	1 744	1 641	1 234	334
No. with warts (%)	47 (12.1)	318 (18.2)	182 (11.1)	115 (9.3)	19 (5.7)
<b>2008</b>					
Seen	492	1 892	1 628	1 214	324
No. with warts (%)	30 (6.1)	285 (15.1)	148 (9.1)	92 (7.6)	22 (6.8)
<b>2009</b>					
Seen	686	2 151	1 821	1 493	314
No. with warts (%)	33 (4.8)	301 (14.0)	185 (10.2)	101 (6.8)	19 (6.0)
<b>2010</b>					
Seen	784	2 297	1 853	1 589	397
No. with warts (%)	14 (1.8)	254 (11.1)	195 (10.5)	121 (7.6)	25 (6.3)
<b>2011</b>					
Seen	731	2 190	1 749	1 489	337
No. with warts (%)	16 (2.2)	194 (8.9)	165 (9.4)	93 (6.2)	24 (7.1)
<b>2012</b>					
Seen	663	2 319	1 872	1 661	325
No. with warts (%)	10 (1.5)	179 (7.7)	182 (9.7)	96 (5.8)	20 (6.1)

<sup>1</sup> Data from 8 services from NSW, NT, QLD, TAS, VIC, WA.

Source: Genital Warts Surveillance Network



## Tables

### 5 Risk behaviour

5.1	Sexual, injecting and HIV antibody testing behaviour among men who have sex with men	
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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 Periodic Surveys, 2008 – 2012, 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>						
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
<b>Sample size</b>	2 186	2 240	2 707	3 176	2 828	1 223	1 257	1 641	1 660	1 317	2 002	2 061	2 425	1 919	2 034
Unprotected anal intercourse with regular partners <sup>1</sup>	31.2	32.6	34	27.6	29.5	33.3	33.9	30.1	28.5	39.1	33.6	32.5	35	34.8	28.6
Unprotected anal intercourse with casual partners <sup>1</sup>	23.1	27.6	25.6	22.4	23.8	24.9	24.2	24.5	23.4	30	24.3	24.8	27.1	26.3	23.3
Injecting drug use <sup>1,3</sup>	8.1	7.8	6.9	5.2	5.9	5.1	6.1	5.3	5.9	3	6.2	6.7	4.5	4.9	9.5
<b>Sample size</b>	1 888	1 973	2 421	2 825	2 515	1 138	1 183	1 518	1 535	1 222	1 850	1 916	2 211	1 757	1 877
HIV antibody testing <sup>4</sup>	71	70.4	59.3	62.3	58.2	65.8	59.9	58	58.5	63.4	63.9	67.8	62.4	61.5	68.2

	Adelaide			Canberra			Perth		
	2009	2010	2011	2009	2011	2012	2009	2010	2012
<b>Sample size</b>	896	1 031	697	289	269	790	717	912	815
Unprotected anal intercourse with regular partners <sup>1</sup>	27.5	30.9	29.5	38.9	42.2	27.3	34.6	34.8	35.9
Unprotected anal intercourse with casual partners <sup>1</sup>	22.5	16.4	22.1	34.7	17.7	25.2	26.9	31.4	26.5
Injecting drug use <sup>5</sup>	—	—	—	—	—	—	—	—	—
<b>Sample size</b>	858	965	654	281	259	755	686	882	787
HIV antibody testing <sup>4</sup>	66.3	50.5	51.9	67.1	67.3	59.4	57.3	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, 2008 – 2012, percent reporting HIV and hepatitis C tests within the last twelve months, number reporting sexual intercourse in the last month, and percent reporting condom use at last intercourse by year, age group, sexual identity and sex

2008

	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	141	84	225	48	55	50	57	62	59	117	73	190	7	25	14
5 to 9 years	175	126	302	57	50	54	65	57	62	160	113	274	14	17	16
10 to 14 years	265	189	455	52	52	52	58	52	56	244	161	406	17	15	16
15 to 19 years	241	130	372	50	46	49	59	48	55	223	121	345	16	18	17
20+ years	539	224	769	48	45	47	55	47	52	474	198	677	14	11	13
Not reported	35	11	47	54	9	43	51	36	49	30	6	37	6	18	9
<i>Last drug injected</i>															
Amphetamine	362	238	604	49	45	47	56	50	53	313	200	516	11	15	13
Heroin	494	253	749	51	52	52	58	54	57	438	230	670	16	15	16
Other opiates	401	218	621	51	46	49	60	50	57	381	201	584	14	17	15
All other drugs	113	43	158	48	51	49	51	53	52	95	32	129	16	19	17
Not reported	26	12	38	42	58	47	50	75	58	21	9	30	15	0	11
<b>Total</b>	<b>1 396</b>	<b>764</b>	<b>2 170</b>	<b>50</b>	<b>48</b>	<b>50</b>	<b>58</b>	<b>52</b>	<b>55</b>	<b>1 248</b>	<b>672</b>	<b>1 929</b>	<b>14</b>	<b>16</b>	<b>15</b>

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>1580</b>	<b>759</b>	<b>2353</b>	<b>46</b>	<b>51</b>	<b>48</b>	<b>52</b>	<b>56</b>	<b>54</b>	<b>1403</b>	<b>660</b>	<b>2073</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>1560</b>	<b>764</b>	<b>2337</b>	<b>48</b>	<b>51</b>	<b>49</b>	<b>51</b>	<b>58</b>	<b>54</b>	<b>1371</b>	<b>675</b>	<b>2056</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>

1 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, 2008 – 2012, percent reporting HIV and hepatitis C tests within the last twelve months, number reporting sexual intercourse in the last month, and percent reporting condom use at last intercourse by year, age group, sexual identity and sex

2008

	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	21	16	37	48	63	54	57	75	65	13	14	27	46	57	52
20 to 24 years	86	73	159	50	48	49	63	64	64	64	58	122	56	38	48
25 to 34 years	468	297	767	56	54	55	64	52	60	312	218	531	38	36	38
35 to 44 years	529	241	773	50	48	49	55	51	53	279	153	433	27	27	27
45+ years	287	136	428	42	35	40	51	42	48	113	64	180	27	25	26
Not reported	5	1	6	40	0	33	60	0	50	2	0	2	50	0	50
<i>Sexual identity</i>															
Heterosexual	1 228	537	1 767	49	46	48	56	50	54	686	348	1 035	31	28	30
Bisexual	56	152	209	63	57	58	70	60	62	33	116	150	48	48	48
Homosexual	62	48	112	69	48	60	69	48	60	39	27	68	62	26	47
Not reported	50	27	82	44	44	44	56	52	55	25	16	42	44	31	38
<b>Total</b>	<b>1 396</b>	<b>764</b>	<b>2 170</b>	<b>50</b>	<b>48</b>	<b>50</b>	<b>58</b>	<b>52</b>	<b>55</b>	<b>783</b>	<b>507</b>	<b>1 295</b>	<b>34</b>	<b>33</b>	<b>34</b>

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>

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



## Tables

<b>6</b>	<b>Estimates of the number of people living with HIV infection and viral hepatitis</b>	
6.1	Estimates of the number of people living with diagnosed HIV infection	
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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 diagnosed HIV infection

**Table 6.1.1** Estimated number of people living with diagnosed HIV infection in 2012 by State/Territory of HIV diagnosis and sex

State/Territory	Male	Female	Total	%
ACT	236	38	274	1.1
NSW	11 583	1 101	12 684	49.3
NT	157	40	197	0.8
QLD	3 257	439	3 696	14.4
SA	946	147	1 093	4.3
TAS	145	25	170	0.7
VIC	5 425	534	5 959	23.2
WA	1 288	347	1 635	6.4
<b>Total</b>	<b>23 037</b>	<b>2 671</b>	<b>25 708</b>	<b>100.0</b>

Source: State/Territory health authorities; The Kirby Institute

### 6.2 Estimates of the number of people living with viral hepatitis

**Table 6.2.1** Estimated number of people living with hepatitis B virus infection in 2012

Characteristic	Number	Plausible range
Hepatitis B prevalence in 2012	207 000	170 000 – 245 000
<b>During 2012</b>		
Deaths attributable to chronic hepatitis B	383	295 – 624

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

**Table 6.2.2** Estimated number of people living with hepatitis C virus infection in 2012 by stage of liver disease

Characteristic	Number	Plausible range
Total hepatitis C prevalence	310 000	239 000 – 391 000
<i>Exposed to hepatitis C but not chronically infected</i>	<i>80 000</i>	<i>60 800 – 99 200</i>
<i>Chronic hepatitis C infection with stage F0/1 liver disease</i>	<i>173 500</i>	<i>132 000 – 215 000</i>
<i>Chronic hepatitis C infection with stage F2/3 liver disease</i>	<i>51 500</i>	<i>39 100 – 63 700</i>
<i>Living with hepatitis C-related cirrhosis</i>	<i>6 500</i>	<i>4 550 – 8 450</i>
<b>During 2012</b>		
Hepatitis C-related liver failure	260	182 – 338
Hepatitis C-related hepatocellular carcinoma	132	92 – 172

Source: Linear extrapolations of estimates from Hepatitis C Virus Projections Working Group

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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 2012**

Characteristic	Current antiretroviral treatment <sup>1</sup>						Total
	None	Mono and Double therapy	3+ NRTI±PI (not NNRTI, not II)	3+ NwRTI +NNRTI (not PI, not II)	3+ NNRTI+PI, ±NRTI (not II)	3+ II, ±NRTI, ±NNRTI, ±PI	
<b>Total number</b>	<b>163</b>	<b>114</b>	<b>575</b>	<b>950</b>	<b>99</b>	<b>441</b>	<b>2 342</b>
<b>Sex</b>							
Male	150 (92)	109 (96)	507 (88)	872 (92)	96 (97)	419 (95)	2 153
Female	13 (8)	5 (4)	68 (12)	78 (8)	3 (3)	22 (5)	189
<b>Age at enrolment (years)</b>							
Less than 30	24 (15)	4 (4)	63 (11)	103 (11)	9 (9)	35 (8)	238
30 – 39	85 (52)	29 (25)	204 (35)	315 (33)	29 (29)	119 (27)	781
40 – 49	31 (19)	49 (43)	198 (34)	320 (34)	39 (39)	169 (38)	806
50+	23 (14)	32 (28)	110 (19)	212 (22)	22 (22)	118 (27)	517
<b>Exposure category</b>							
Men who have sex with men	131 (80)	97 (85)	424 (74)	680 (72)	79 (80)	362 (82)	1 773
Other/not reported	32 (20)	17 (15)	151 (26)	270 (28)	20 (20)	79 (18)	569
<b>Viral load at enrolment (copies/ml)</b>							
Less than 400	42 (28)	24 (23)	92 (17)	97 (11)	24 (24)	68 (16)	347
400 – 10,000	57 (39)	69 (66)	357 (65)	610 (69)	56 (57)	265 (63)	1 414
10,000+	49 (33)	12 (11)	100 (18)	173 (20)	19 (19)	85 (20)	438
Not reported	15	9	26	70	0	23	143
<b>CD4+ count at enrolment (cells/µl)</b>							
Less than 200	4 (3)	11 (11)	52 (10)	74 (8)	10 (12)	54 (13)	205
200 – 500	53 (35)	42 (40)	237 (44)	365 (41)	41 (48)	179 (44)	917
500+	95 (63)	51 (49)	246 (46)	446 (50)	35 (41)	173 (43)	1 046
Not reported	11	10	40	65	13	35	174
<b>AIDS prior to enrolment</b>							
No	160 (98)	86 (75)	492 (86)	820 (86)	75 (76)	329 (75)	1 962
Yes	3 (2)	28 (25)	83 (14)	129 (14)	24 (24)	112 (25)	379
<b>Hepatitis C antibody positive</b>							
No	136 (83)	95 (83)	449 (78)	783 (82)	90 (91)	357 (81)	1 910
Yes	13 (8)	9 (8)	67 (12)	59 (6)	7 (7)	56 (13)	211
No test done	14 (9)	10 (9)	59 (10)	108 (11)	2 (2)	28 (6)	221
<b>Regimen of longest duration in 2011</b>							
None	152 (93)	7 (6)	29 (5)	73 (8)	2 (2)	22 (5)	285
Mono and Double therapy	1 (1)	102 (89)	4 (1)	3 (0)	0 (0)	5 (1)	115
3+ NRTI±PI (not NNRTI, not II)	3 (2)	2 (2)	529 (92)	6 (1)	3 (3)	22 (5)	565
3+ NRTI+NNRTI (not PI,not II)	3 (2)	1 (1)	10 (2)	866 (91)	4 (4)	19 (4)	903
3+ NNRTI+PI, ±NRTI (not II)	1 (1)	0 (0)	0 (0)	0 (0)	90 (91)	5 (1)	96
3+ II, ±NRTI, ±NNRTI, ±PI	3 (2)	2 (2)	3 (1)	2 (0)	0 (0)	368 (83)	378

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

**Source:** Australian HIV Observational Database

**Table 7.1.2** Number of men with diagnosed HIV infection participating in the Gay Community Periodic Surveys, 2008 – 2012 and proportion<sup>1</sup> reporting use of antiretroviral treatment for HIV infection, by city and year

City	Year of survey				
	2008	2009	2010	2011	2012
<b>Melbourne</b>					
Sample size	152	145	214	162	157
Proportion reporting use of antiretroviral therapy	63.3	61.3	69.7	72.6	77.7
<b>Queensland</b>					
Sample size	85	74	123	125	95
Proportion reporting use of antiretroviral therapy	66.1	61.5	68.5	69.7	69.8
<b>Sydney<sup>2</sup></b>					
Sample size	298	267	286	351	313
Proportion reporting use of antiretroviral therapy	70.6	73.5	68.9	70.6	80.2
<b>Adelaide, Canberra &amp; Perth (combined)<sup>3</sup></b>					
Sample size	31	46	96	53	63
Proportion reporting use of antiretroviral therapy	72.7	62.9	76.4	89.1	83.3

1 Age standardised and venue adjusted prevalence.

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

3 Adelaide, Canberra and Perth (combined) includes data from Perth only in 2008, from Adelaide and Canberra in 2009, from Adelaide and Perth in 2010, from Adelaide and Canberra in 2011 and from Adelaide and Perth in 2012.

**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 through the Highly Specialised Drugs (S100) Program by antiretroviral agent and year**

Antiretroviral agent	Year of prescription <sup>1,2</sup>				
	2008	2009	2010	2011	2012
<b>Nucleoside analogue reverse transcriptase inhibitors</b>					
Abacavir	595	544	492	473	425
Didanosine	322	229	163	117	84
Emtricitabine	181	131	211	146	157
Lamivudine	1 051	921	822	718	609
Stavudine	145	104	77	48	36
Zidovudine	190	156	128	98	70
Lamivudine & Zidovudine	980	846	719	602	461
Abacavir & Lamivudine	2 367	2 243	2 220	2 179	2 041
Abacavir, Lamivudine & Zidovudine	276	240	163	133	103
Tenofovir	1 419	1 294	1 586	1 967	2 039
Tenofovir & Emtricitabine	4 097	5 246	4 772	4 510	4 404
<b>Non-nucleoside analogue reverse transcriptase inhibitors</b>					
Delavirdine	6	7	6	-	-
Efavirenz	2 762	2 996	2 003	973	738
Nevirapine	2 667	2 791	2 809	2 728	2 376
Etravirine	-	155	403	456	454
Rilpivirine	-	-	-	-	18
<b>Protease inhibitors</b>					
Atazanavir	2 254	2 609	2 879	2 906	2 582
Darunavir	407	685	887	1 058	1 131
Fosamprenavir	233	219	181	148	111
Indinavir	76	52	31	21	18
Lopinavir & ritonavir	1 775	1 871	1 734	1 581	1 341
Ritonavir	2 413	2 850	3 181	3 098	2 652
Saquinavir	167	148	121	95	72
Tipranavir	31	27	20	15	11
<b>Fusion inhibitors</b>					
Enfuvirtide	118	60	37	22	13
Maraviroc	-	-	55	118	122
<b>Integrase inhibitor</b>					
Raltegravir	287	821	1 250	1 848	2 250
<b>Combination Class Agents</b>					
Tenofovir, Emtricitabine & Efavirenz	-	-	2 013	2 873	2 786
Tenofovir, Emtricitabine & Rilpivirine	-	-	-	-	217
<b>Total patients<sup>3</sup></b>	<b>10 200</b>	<b>10 900</b>	<b>12 400</b>	<b>12 700</b>	<b>12 800</b>
<b>Total cost<sup>4</sup> (\$'000s)</b>	<b>136 625</b>	<b>156 810</b>	<b>181 508</b>	<b>200 165</b>	<b>210 005</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 onwards estimated from the HSD Program Public Hospital Dispensed National Pack Number Report because of changes to S100 data collection methodology.

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 C infection through the Highly Specialised Drugs (S100) Program, by year<sup>1</sup>**

Year	Pegylated Interferon and Ribavirin	Total cost (\$'000s) <sup>2</sup>
<b>2008</b>		
January - March	2 324	10 263
April - June	2 478	11 174
July - September <sup>3</sup>	2 416	10 704
October - December	2 298	10 311
<b>2009</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</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</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</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

1 An estimated 3 172, 3 397, 3 286, 2 643 and 2 360 people were receiving treatment throughout 2008 to 2012, 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 from September 2008 was estimated from the HSD Program Public Hospital Dispensed National Pack Number Report.

**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 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 infection 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 200 or more and 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 Vandenbelt 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 incident HIV infection using specialised serological laboratory tests***

Cases of HIV infection, newly diagnosed in Queensland, South Australia, Victoria, Western Australia and at the NSW State Reference Laboratory for HIV, were tested for incident HIV infection using the BED capture enzyme immunoassay (BED-CEIA; Parekh *et al* 2002). Cases with a normalised optical density of less than 0.8 were classified as incident HIV infection and cases with a normalised optical density of 0.8 or higher were classified as established HIV infection. The cut-off of 0.8 corresponds to detection of incident HIV infection within 160 days of HIV acquisition. Cases of HIV infection with a BED-CEIA result were linked to cases notified to the National HIV Registry to retrieve the date of first HIV diagnosis in Australia, evidence of newly acquired HIV infection and self report of exposure to HIV.

### **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 Surveillance and Evaluation Program at 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 New South Wales from January 1992, from June 1998 in Victoria and from January 2005 in the Australian Capital Territory. Nationally, information on Aboriginal and Torres Strait Islander status at diagnosis of HIV infection was sought prospectively from May 1995. For HIV diagnoses prior to 1995, Aboriginal and Torres Strait Islander status was obtained retrospectively through State/Territory health authorities. In 2003 – 2012, Aboriginal and Torres Strait Islander status was reported at HIV diagnosis, by State/Territory health authorities other than the Australian Capital Territory prior to January 2005, in 99% of cases. Further information is available in Guthrie *et al* (2000).

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

### 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. Cases of newly diagnosed HIV infection in women and their exposed children were notified through national HIV/AIDS 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. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data – United States and 6 U.S. dependent areas – 2010. *HIV Surveillance Supplemental Report* 2012; 17 (No 3, part A). <http://www.cdc.gov/hiv/topics/surveillance/resources/reports/>. Published June 2012. Accessed 27 September 2013
- Health Protection Agency. HIV in the United Kingdom: 2012 Report: London: Health Protection Services, Colindale. November 2012.
- Joint United Nations Programme on HIV/AIDS (UNAIDS). Global report: UNAIDS report on the global AIDS epidemic 2012. UNAIDS, 2012. <http://www.unaids.org>
- Public Health Agency of Canada. Summary: Estimates of HIV prevalence and incidence in Canada, 2011. Centre for Communicable Diseases and Infection Control, Public Health Agency of Canada, 2012. <http://webqa.phac-aspc.gc.ca/aids-sida/publication/survreport/estimat2011-eng.php>

## 2 National surveillance for viral hepatitis

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

New diagnoses of hepatitis A and 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, prevalent and newly acquired hepatitis C and hepatitis D 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 2008 – 2012) using the 2012 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.

### 2.4 Global comparisons of hepatitis B virus prevalence

The data in Table 2.4.1 were obtained 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 and Ageing. Chlamydia was notifiable in all health jurisdictions except New South Wales prior to 1998; chlamydia was made notifiable in New South Wales in 1998. Gonorrhoea was a notifiable condition in all health jurisdictions and infectious syphilis became notifiable in all jurisdictions in 2004. In most health jurisdictions, diagnoses of sexually transmissible infections were notified by the diagnosing laboratory, the medical practitioner, hospital or a combination of these sources (see Table below).

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

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

#### 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 and Tasmania were the only health authorities that sought information on Aboriginal and Torres Strait Islander status through laboratory notification.

Population rates of diagnosis of specific sexually transmissible infections were calculated by year and State/Territory of diagnosis using 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 2012).

## 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 2008 (51 sites), 2009 (51 sites), 2010 (52 sites) 2011 (52 sites) and 2012 (52 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 Kirby Institute. 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 bioCSL Pty Ltd. 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 (Ali H *et al*. 2013).

Routinely collected data at sexual health services includes data on demographics, sexual behaviour, 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 Australian born 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 2008, 51 in 2009, 52 in 2010, 52 in 2011 and 52 in 2012. 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 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 through the Victorian Infectious Diseases Reference Laboratory/Australasian Society for HIV Medicine Hepatitis B Epidemiology Mapping Project. The estimates presented 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 prevalence by country of birth and also by Aboriginal and Torres Strait Islander status, applied to the Australian population data provided in the 2011 Census. For details see MacLachlan *et al* ANZJPH 2013 "The burden of chronic hepatitis B virus infection in Australia, 2011" Accessible from <http://onlinelibrary.wiley.com/doi/10.1111/1753-6405.12049/abstract>

The model was parameterised using a wide range of data sources including the ABS, 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 HBV infection and the impact of vaccination were all incorporated.



## 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 by the Hepatitis C Virus Projections Working Group, a collaborative group formed under the auspices of MACASHH's Hepatitis C Sub-Committee. Estimates were derived from mathematical models in the following way. First, the number of people who had injecting drugs in Australia over the last three decades was estimated. Based on this pattern of injecting drug use, and estimates of hepatitis C incidence among injecting drug users derived from cohort studies, hepatitis C incidence as a result of injecting drug use was estimated. 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 receipt of blood or blood products. 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 2009 were adjusted to allow for mortality related to hepatitis C infection, injecting drug use and unrelated to hepatitis C infection or injecting. Further details are given in the Working Group's Report (MACASHH, 2006).

## 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 2013, 28 participating clinical sites enrolled over 3 800 people into the AHOD.

Data from all 28 participating clinical sites was 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 2012 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 2012, 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 (The Kirby Institute 2013).

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 and Ageing.

The number of people dispensed each antiretroviral drug during a calendar year was estimated from the proportional quarterly change in total allocated dose 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. 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.

The number of people dispensed lamivudine was also 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 was for people treated in 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.

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.

### 7.3 Monitoring prescriptions for treatment of viral hepatitis

The number of prescriptions for lamivudine, adefovir and entecavir for treatment of hepatitis B infection, for interferon and ribavirin therapy, pegylated interferon and ribavirin combination therapy and pegylated interferon only, was monitored 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 and Ageing. In 2003, the estimated number receiving treatment dropped to 1 142, possibly due to the expected inclusion of pegylated interferon and ribavirin into the HSD program in late 2003. In 2004 and 2005, the estimated number of people receiving combination interferon and ribavirin for hepatitis C infection was 1 831 and 1 847, respectively. In 2006, the number receiving treatment for hepatitis C infection increased to 2 847, due to removal in April 2006, of the requirement for biopsy proven liver damage prior to treatment. In 2007 and 2008, 3 539 and 3 562 people were receiving treatment. The estimates were based on the assumption that 50% of patients were receiving treatment for 6 months, and the remaining were receiving treatment for 12 months.

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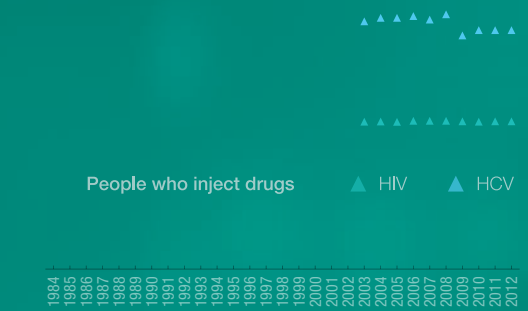
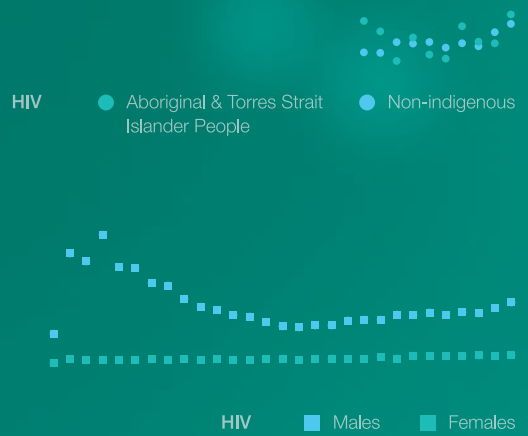
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