HIV, viral hepatitis and sexually transmissible infections in Australia
Annual Surveillance Report 2012

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The Kirby Institute for infection and immunity in society
University of New South Wales, Sydney, NSW 2052

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

edited by

Ann McDonald

The Kirby Institute

in collaboration with

Australian Gonococcal Surveillance Programme

Communicable Diseases Network Australia

National Centre in HIV Social Research

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 for Public Health at the Kirby Institute is responsible for the public health monitoring and evaluation of patterns of transmission of bloodborne viral and sexually transmissible infections and is a research associate of the Australian Institute of Health and Welfare. Its work is overseen by the Ministerial Advisory Committee on AIDS, Sexual Health and Hepatitis.

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Preface

This report is the sixteenth 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 2011 and reported by 31 March 2012, 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 2012* 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 2012,* edited by the National Centre in HIV Social Research. 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 2012* also appears in the report on behavioural data.

Unless specifically stated otherwise, all data provided in the report are to the end of 2011, as reported by 31 March 2012. 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, Canberra, 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
- 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 Centre in HIV Social Research, The University of New South Wales, 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
- Victorian Government Department of Health, Melbourne; The Macfarlane Burnet Institute for Medical Research and Public Health Limited, Prahran; Hepatitis B Program, Epidemiology Unit, Victorian Infectious Diseases Reference Laboratory, North Melbourne, VIC
- Communicable Diseases Control Branch, Department of Health, Perth, WA

Australian Gonococcal Surveillance Programme

Reference Laboratories:

- Microbiology Department, Canberra Hospital, Garran, ACT
- Department of Microbiology, The Prince of Wales Hospital, Randwick, NSW
- Microbiology Laboratory, Royal Darwin Hospital, Casuarina, NT
- Queensland Health Scientific Services, Coopers Plains, QLD
- Microbiology and Infectious Diseases Department, SA Pathology at Women's and Children's Hospital, North Adelaide, SA
- 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; Royal Prince Alfred Hospital Sexual Health Clinic, Camperdown, NSW
- Brisbane Sexual Health Clinic, Brisbane; Gold Coast Sexual Health Clinic, Miami, QLD
- Clinic 275, Adelaide, SA
- Melbourne Sexual Health Centre, Melbourne, VIC

Australian Collaboration for Chlamydia Enhanced Sentinel Surveillance

- Australian Government Department of Health and Ageing, Canberra; National Aboriginal Community Controlled Health Organisation, Canberra, ACT
- The Kirby Institute (formerly the National Centre in HIV Epidemiology and Clinical Research), The University of New South Wales, Sydney; Perinatal and Reproductive Epidemiology Research Unit, incorporating the National Perinatal Statistics Unit, The University of New South Wales, Sydney, NSW
- Centre for Population Health, Burnet Institute, Melbourne; National Serology Reference Laboratory, Australia, Fitzroy, VIC

Contributing organisations

- Coffs Harbour Sexual Health Service, Coffs Harbour; Grafton Sexual Health Clinic, Grafton; Greater Southern Area Health Service; Holden Street Clinic, Gosford; Hunter New England Sexual Health Service; Illawarra Sexual Health, Wollongong; Kirketon Road Centre, Darlinghurst; Lismore/ Tweed Heads Sexual Health & AIDS Services, Lismore; Northern Sydney Sexual Health Service, St Leonards; Orange Sexual Health Service, Orange; Royal Prince Alfred Hospital Sexual Health Clinic, Camperdown; Short Street Sexual Health Clinic; St George Hospital; Sydney Sexual Health Centre, Sydney; Sydney West Area Health Service – Clinical Sexual Health Services, NSW
- NT Sexual Health and BBV Unit, NT
- Cairns Sexual Health Services, Cairns Base Hospital, Cairns; Gold Coast Sexual Health Clinic, Miami; Princess Alexandra Sexual Health, Princess Alexandra Hospital, Woolloongabba; Townsville Sexual Health Service, Townsville, QLD
- Hobart, Devonport and Launceston Sexual Health Service, TAS
- Melbourne Sexual Health Centre, Carlton, VIC
- Fremantle Hospital, Fremantle, WA

Genital Warts Surveillance Network

Contributing organisations

- Northern Sydney Sexual Health Service, St Leonards; Royal Prince Alfred Hospital Sexual Health Clinic, Camperdown, 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, NSW
- Communicable Disease Centre, Royal Darwin Hospital, Darwin, NT
- AIDS Medical Unit, North Quay; Clinic 87, Sunshine Coast & Cooloola HIV Sexual Health Service, Nambour; Gladstone Road Medical Centre, Highgate Hill; Gold Coast Sexual Health Clinic, Miami; Cairns Sexual Health Services, Cairns Base Hospital, Cairns, QLD
- The Care and Prevention Program, Adelaide University, Adelaide, SA
- The Alfred Hospital, Prahran; Melbourne Sexual Health Centre, Carlton; Monash Medical Centre, Clayton; Prahran Market Clinic, South Yarra; The Centre Clinic, St Kilda; The Carlton Clinic, Carlton; Northside Clinic, Fitzroy North, VIC
- Department of Clinical Immunology, Royal Perth Hospital, Perth, WA

Collaboration of Australian Needle and Syringe Programs

- Directions ACT, Canberra, ACT.
- ACON Hunter; Albury Community Health Centre, Albury; 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 K2, Kings Cross; NSW Users and AIDS Association (NUAA), Surry Hills; Northern Rivers Harm Reduction Service, Ballina, Byron Bay, Coffs Harbour, Grafton, Lismore, Murwillumbah, Nimbin, and Tweed Heads; Resource and Education Program for IDUs, Redfern; Central Access Service, Kogarah and Sutherland; South Court Primary Care NSP, Nepean; Sydney West HIV/Hepatitis C Prevention Service, Blacktown, Mt Druitt and Parramatta, NSW.
- Northern Territory AIDS and Hepatitis C Council, Alice Springs, Darwin and Palmerston, NT.
- Biala Community Alcohol and Drug Services, Brisbane; Cairns ATODS NSP, Cairns; Queensland Injectors Health Network (QuIHN), Brisbane, Gold Coast and Sunshine Coast; Kobi House, Toowoomba; West Moreton Sexual Health Service, Ipswich; Townsville ATODS NSP, QLD.
- Drug and Alcohol Services South Australia, Adelaide; Hindmarsh Centre, Hindmarsh; Nunkuwarrin Yunti Community Health Centre, Adelaide; South Australia Voice for Intravenous Education (SAVIVE): AIDS Council South Australia, Norwood; Parks Community Health Service, Adelaide; Port Adelaide Community Health Service, Port Adelaide; Noarlunga Community Health Service, Adelaide; Northern Metropolitan Community Health Service NSP and Shopfront, Salisbury, SA.
- Anglicare NSP Service, Hobart and Glenorchy; Clarence Community Health Centre, Clarence; Devonport Community Health Centre, Devonport; Salvation Army Launceston, Launceston, TAS.
- Barwon Health Drug and Alcohol Services, Geelong; Health Information Exchange, St Kilda; Health Works, Footscray; Inner Space, Collingwood; North Richmond NSP, North Richmond; Southern Hepatitis/HIV/AIDS Resource and Prevention Service (SHARPS), Melbourne, VIC.
- WA AIDS Council Mobile Exchange, Perth; Western Australia Substance Users Association (WASUA), Perth and South Coast, WA.
- St Vincent's Centre for Applied Medical Research (AMR) and NSW State Reference Laboratory for HIV at St Vincent's Hospital, Sydney, NSW.

Annual Surveillance Report 2012 Advisory Committee

- Dr Russell Waddell, Australasian Chapter of Sexual Health Medicine, Sydney, NSW
- Dr Benjamin Cowie, Australasian Society for HIV Medicine, NSW
- Liza Doyle, Australasian Society for HIV Medicine, NSW
- Simon Donohoe, Australian Federation of AIDS Organisations, Sydney, NSW
- Kate Pennington, Australian Government Department of Health and Ageing, Canberra, ACT
- Helen Tyrrell, Hepatitis Australia, Canberra, ACT
- Tadgh McMahon, Multicultural HIV/AIDS and Hepatitis C Service, Sydney, NSW
- Jo Watson, National Association of People Living with HIV/AIDS, Sydney, NSW
- Dr Limin Mao, National Centre in HIV Social Research, The University of New South Wales, Sydney, NSW
- Associate Professor David Wilson (Chair), Professor Basil Donovan, Professor Andrew Grulich, Professor Lisa Maher, Ann McDonald, Melanie Middleton, Andrew Nakhla, The Kirby Institute, The University of New South Wales, NSW.

Summary

HIV infection

- By 31 December 2011, 31 645 cases of HIV infection had been diagnosed in Australia.
- An estimated 24 731 people were living with diagnosed HIV infection in Australia at the end of 2011.
- The number of new HIV diagnoses in Australia in 2011 was 1 137, an increase of 8.2% over the number in 2010. The annual number of new HIV diagnoses has gradually increased over the past 12 years, from 719 diagnoses in 1999.
- Trends in newly diagnosed HIV infection have differed across State and Territory health jurisdictions. The rate of HIV diagnosis in New South Wales declined steadily from around 6.1 per 100 000 population in 2002 – 2006 to 5.3 in 2007 – 2011. In Victoria, the rate increased from 4.1 in 2003 to 5.7 in 2011, resulting in the highest rate among state and territory health jurisdictions in 2011. Increasing rates of HIV diagnosis in Queensland and Western Australia over previous years have stabilised, at around 5.0 and 4.3 per 100 000 population, respectively. Increasing HIV diagnosis rates over the period 2002 – 2011 in South Australia, Tasmania, the Northern Territory, and in the Australian Capital Territory were also reported.
- HIV continued to be transmitted primarily through sexual contact between men.
- The number of diagnoses of newly acquired HIV infection in Australia increased from 308 cases in 2010 to 378 in 2011. In New South Wales, the number increased by 33.9%, from 127 in 2010 to 170 in 2011 whereas 101 cases in Victoria, 61 in Queensland and 29 in Western Australia were diagnosed in 2011, resulting in an increase of 7.4%, 5.2% and 81.2%, respectively, over the number reported in 2010. Use of a laboratory test for detecting recent HIV infection among cases newly diagnosed in 2011 identified 85 additional cases of recent infection, resulting in a 26% increase over the number of diagnoses of newly acquired HIV infection.
- 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 (16% compared with 2%) in the five years 2007 – 2011.
- Of 1 327 cases of HIV infection newly diagnosed in 2007 – 2011, for which exposure to HIV was attributed to heterosexual contact, 60% 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 2007 – 2011 was stable at around 32 per 100 000 population. The rate of diagnosis of newly acquired hepatitis B infection declined in Australia from 1.4 to 0.8 per 100 000 population between 2007 and 2011.
- An estimated 209 000 people were living in Australia in 2011 with hepatitis B infection. An estimated 382 deaths in 2011 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 has declined from 57.5 per 100 000 in 2007 to 45.7 per 100 000 population in 2011.
- An estimated 226 700 people were living in Australia with chronic hepatitis C infection, including 49 500 with moderate to severe liver disease.
- The reported annual number of diagnoses of newly acquired hepatitis C infection ranged from 363 to 401 in 2007 – 2011 and accounted for 3.9% of new hepatitis C diagnoses.
- 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 2011, chronic hepatitis B infection and chronic hepatitis C infection were the underlying causes of liver disease in 7.8% and 25% 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 2007 – 2011 at around 10%. Within this group, hepatitis C prevalence declined from 28% in 2007 and 2008 to 21% in 2011, a slight increase from 19% in 2010.

Sexually transmissible infections other than HIV

- Chlamydia was the most frequently reported notifiable condition in Australia in 2011 with 80 800 diagnoses. The population rate of diagnosis of chlamydia in 2011 was 345 per 100 000 population, a 7% increase over the rate in 2010, continuing the increase seen over the past ten years.
- The number of diagnoses of donovanosis declined from 3 in 2007 to 0 in 2011.
- The rate of diagnosis of gonorrhoea increased by 45%, from 36.2 per 100 000 population in 2007 to 52.5 in 2010. The rate of diagnosis of infectious syphilis declined from 6.8 in 2007 to 5.0 in 2010 and increased to 5.7 in 2011. Increased rates of infectious syphilis in 2011 occurred in Queensland, South Australia, Victoria and Western Australia.
- Substantially higher rates of diagnosis of chlamydia and gonorrhoea were recorded in the Aboriginal and Torres Strait Islander population compared with non-Indigenous population.
- In the past 5 years, more than 75% of men and women seen for the first time through a network of sexual health services were tested for chlamydia. In 2011, the chlamydia positivity rate was highest among Aboriginal and Torres Strait Islander men (15.9%) and women (18.9%) and among young heterosexual men and women (16.4% and 15.5%, respectively), and was lowest among female sex workers (6.2%).
- 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 2.2% in 2011.

Main Findings

HIV infection

The annual number of new HIV diagnoses in Australia increased to 1 137 cases in 2011, an 8.2% increase over the numbers diagnosed in 2010. The number of new diagnoses has steadily increased from 719 cases in 1999 (Figure 1).

Figure 1 Newly diagnosed HIV infection in Australia

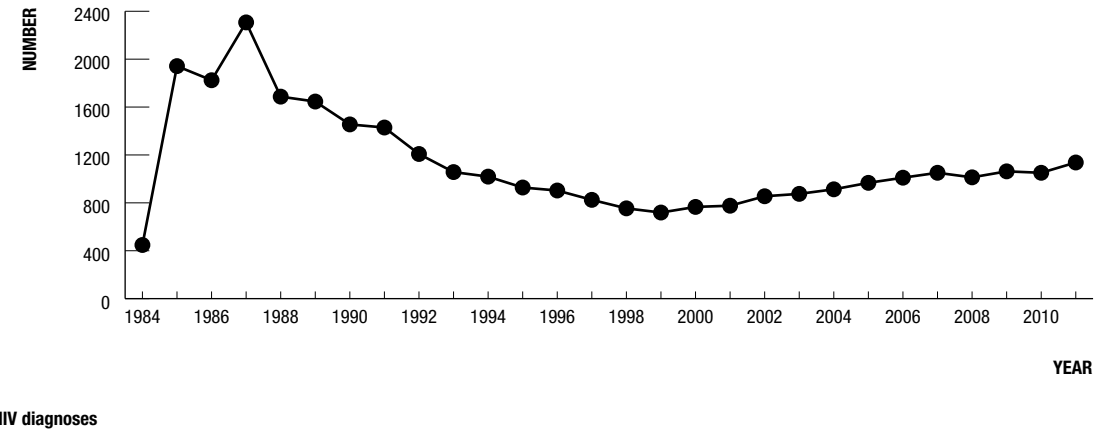
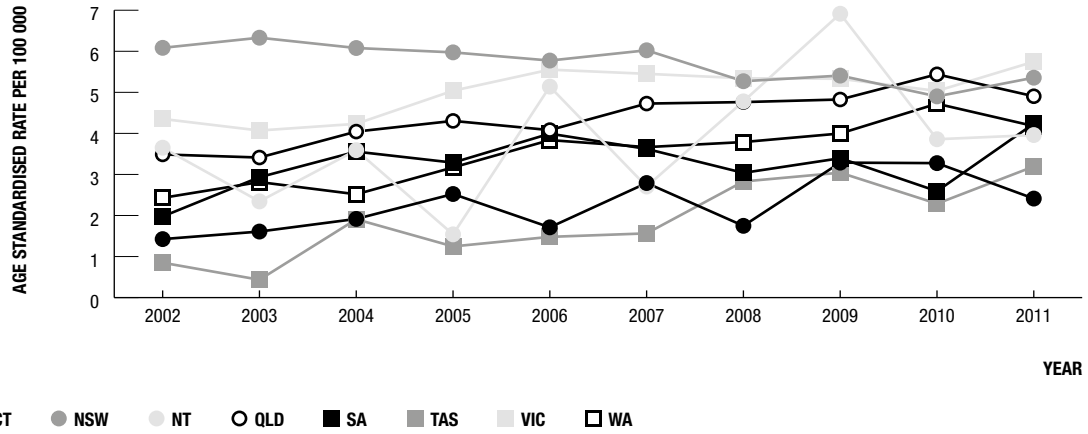


Figure 2 Newly diagnosed HIV infection, 2002 – 2011, by year and State/Territory



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 around 6.1 per 100 000 population in 2002 – 2006 to 5.3 in 2007 – 2011 (Figure 2). In Victoria, the rate of HIV diagnosis has increased steadily from 4.1 in 2003 to 5.7 in 2011, resulting in Victoria having the highest population rate of HIV diagnosis among state and territory health jurisdictions in Australia. Population rates of HIV diagnosis also increased over time in Queensland, from around 4.0 in 2002 – 2006 to 4.8 in 2007 – 2011, in Western Australia, from 2.8 to 4.0 and in Tasmania, from 1.2 to 2.8. Increases in the population rate of HIV diagnosis have also occurred in the Australian Capital Territory, the Northern Territory and in South Australia over the past 10 years.

Of 1 137 cases of HIV infection newly diagnosed in Australia in 2011, 161 (14.2%) 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 2011.

Figure 3 **Newly diagnosed HIV infection in Australia, 2002 – 2011, by newly acquired HIV status and year**

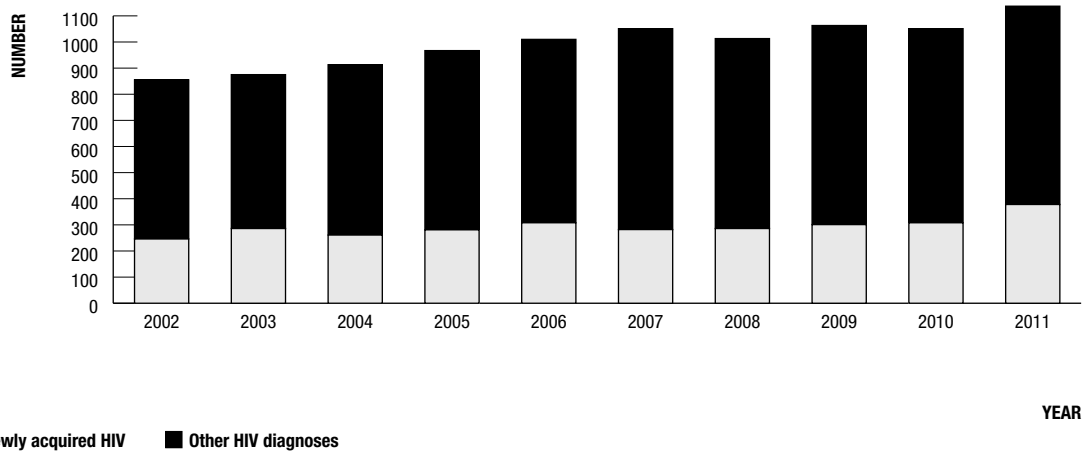
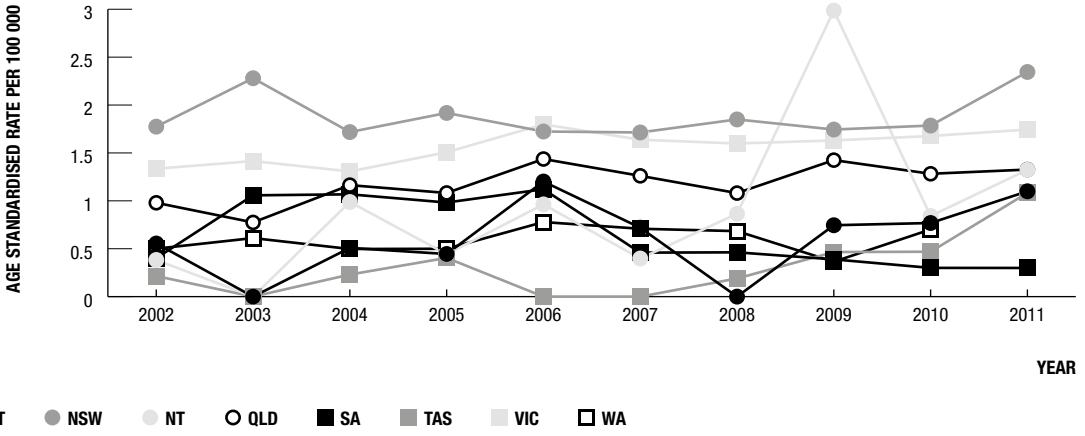
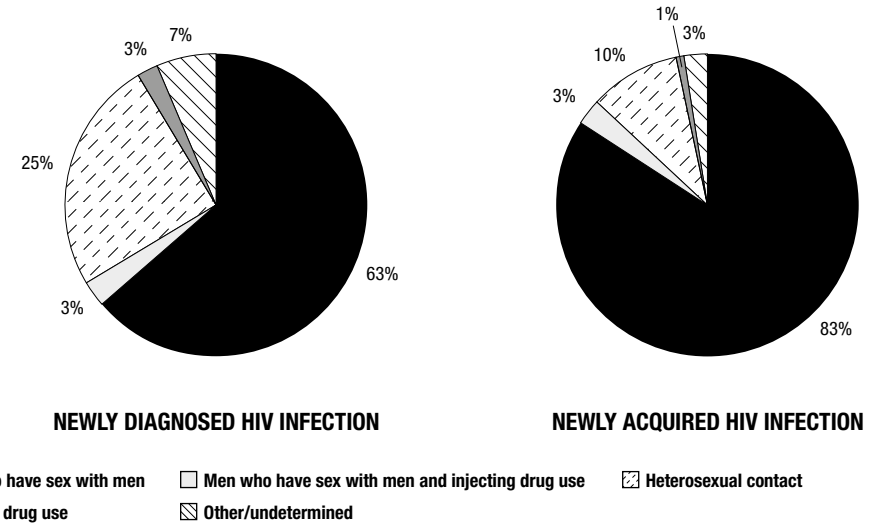


Figure 4 **Newly acquired HIV infection, 2002 – 2011, by year and State/Territory**



Among cases of newly diagnosed HIV infection, the proportion who acquired the infection in the 12 months prior to HIV diagnosis gradually increased from 26.8% in 2007 to 29.3% in 2010 and then increased to 33.2% in 2011 (Figure 3). A sharp rise in the population rate of diagnosis of newly acquired HIV infection occurred in New South Wales in 2011 whereas the diagnosis rate was relatively stable in Victoria, Queensland and South Australia (Figure 4).

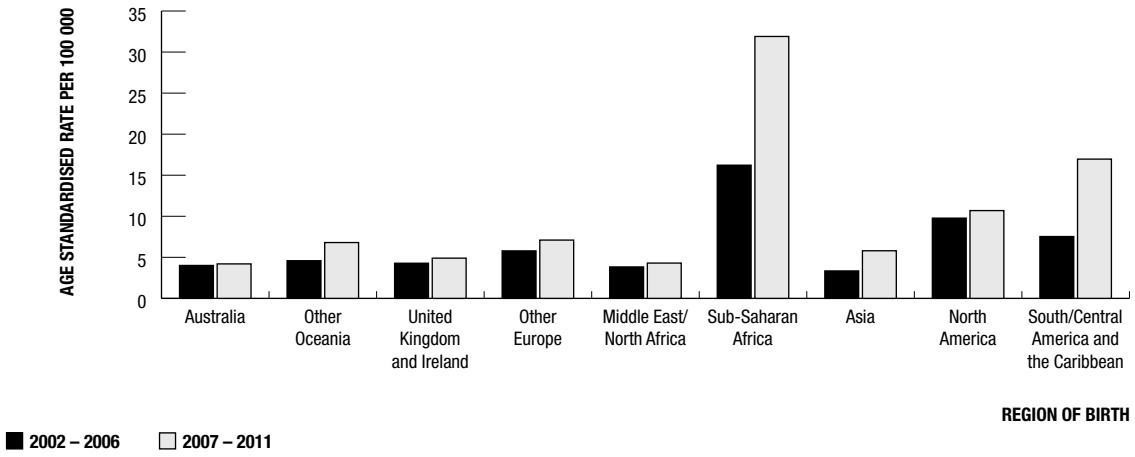
Figure 5 **HIV diagnoses, 2007 – 2011, by HIV exposure category**



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 2011 with a specialised laboratory test identified 85 additional cases of recent infection, resulting in an 26% increase over the number of diagnoses of newly acquired HIV infection.

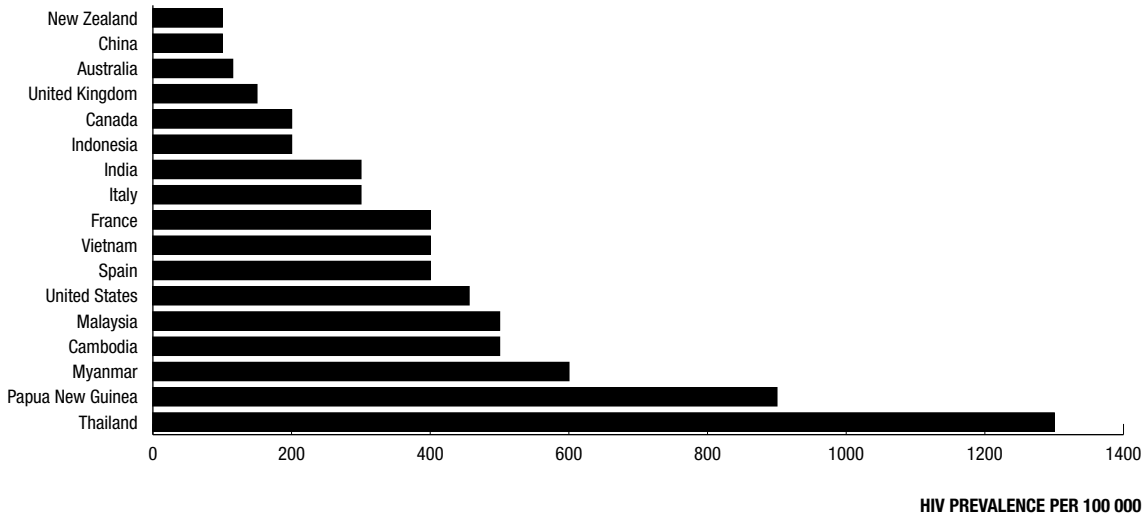
Transmission of HIV in Australia continues to occur primarily through sexual contact between men (Figure 5). In 2007 – 2011, 66% of new HIV diagnoses occurred among men who have sex with men, 25% were attributed to heterosexual contact, 3% to injecting drug use and exposure was undetermined in 7%. Men who have sex with men accounted for 86% of diagnoses of newly acquired HIV infection. Exposure to HIV was attributed to heterosexual contact and injecting drug use in 10% and 1%, respectively, of diagnoses of newly acquired HIV infection.

Figure 6 HIV diagnoses in Australia, 2002 – 2011, by year and region of birth



People born in Australia accounted for 55% of cases of HIV infection newly diagnosed in 2007 – 2011. Among Australian born cases, the rate of HIV diagnosis declined to 4.0 in 2009 – 2010 and then increased to 4.5 in 2011. In the overseas born population, the rate of HIV diagnosis increased from 6.9 in 2007 to 8.6 in 2011. The population rate of HIV diagnosis in sub-Saharan Africa in the five years from 2007 to 2011 peaked at 37.1 per 100 000 in 2010 and then declined to 27.3 in 2011. The rate of HIV diagnosis among people from high prevalence countries in Asia gradually increased from 5.3 in 2007 to 6.9 in 2011. Among cases of HIV infection newly diagnosed in the past five years, 11% were in people who reported speaking a language other than English at home.

Figure 7 HIV prevalence in selected countries



In 2011, the estimated number of people living in Australia with diagnosed HIV infection was 24 731. As a national prevalence (115 per 100 000), the estimate was lower than that for diagnosed and undiagnosed HIV infection in the United Kingdom in 2010 (150 per 100 000 population) and approximately four-fold lower than that for diagnosed and undiagnosed HIV infection in the United States in 2009 (456 per 100 000). Estimated HIV prevalence in several neighbouring countries is substantially higher than that in Australia.

Viral hepatitis

The population rate of reported diagnoses of hepatitis A infection in Australia remained low at 1.3 per 100 000 population or less in 2007 – 2011, 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).

The population rate of diagnosis of hepatitis B infection was stable in Australia in 2007 – 2011 at 32 per 100 000 population, but the diagnosis rate of newly acquired hepatitis B decreased from 1.4 per 100 000 population in 2007 to 0.8 in 2011 (Figure 8). The rate of diagnosis of newly acquired hepatitis B infection declined substantially from 2002 among people aged 15 – 19 years and 20 – 29 years (Figure 9). Adolescent "catch up" vaccination programs may have played a role in this reduction by increasing vaccine coverage. The rate of diagnosis of newly acquired hepatitis B infection remained relatively stable among those aged 30 years or older.

Figure 8 **Newly acquired hepatitis B infection, 2002 – 2011, by year and sex**

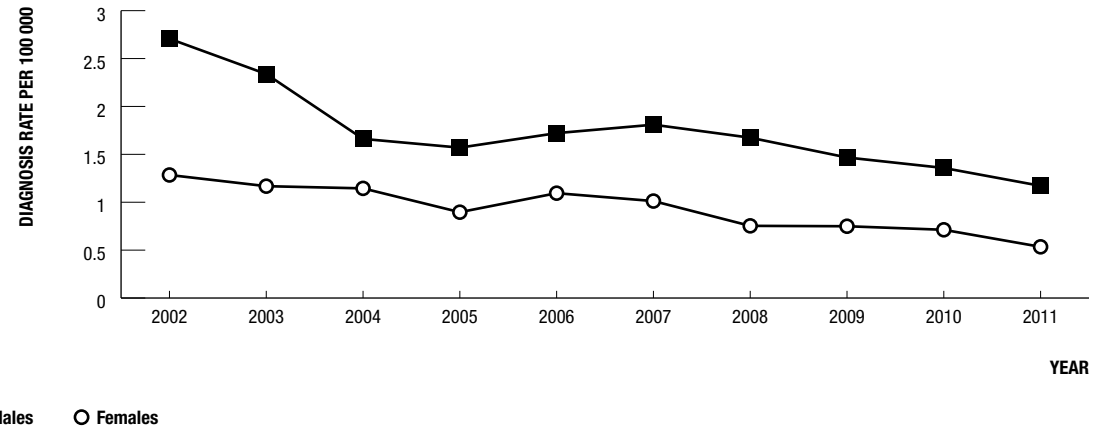
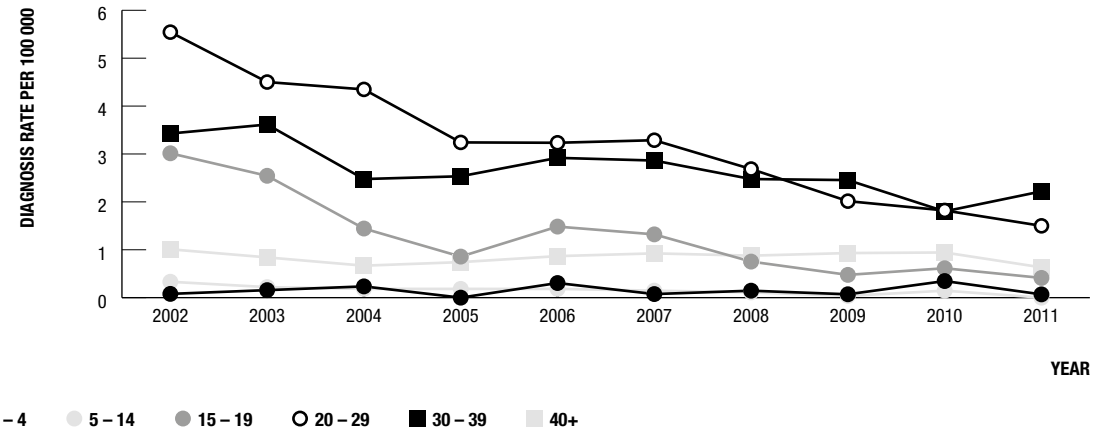
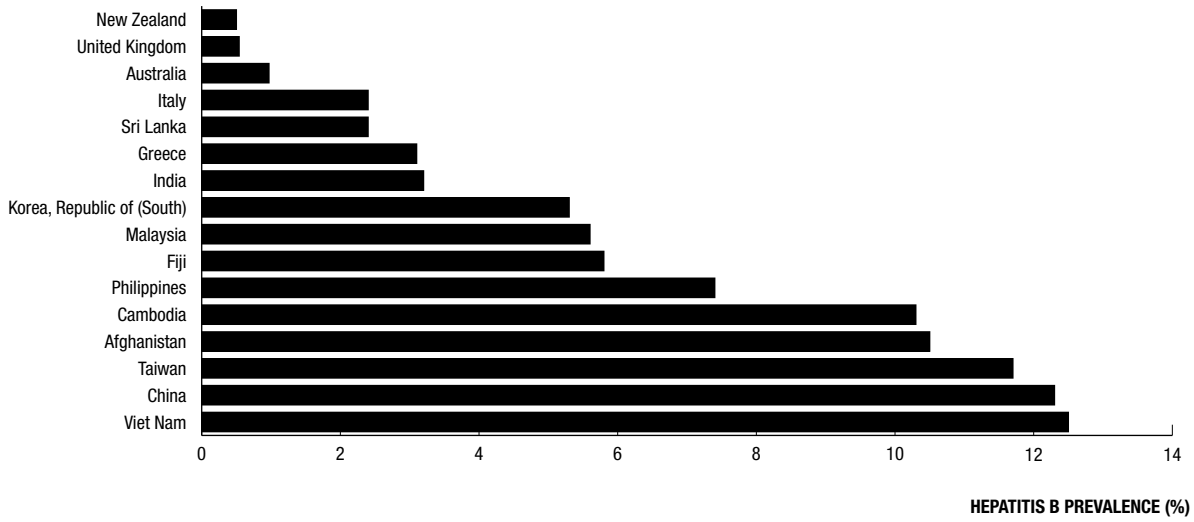


Figure 9 **Newly acquired hepatitis B infection, 2002 – 2011, by year and age group**



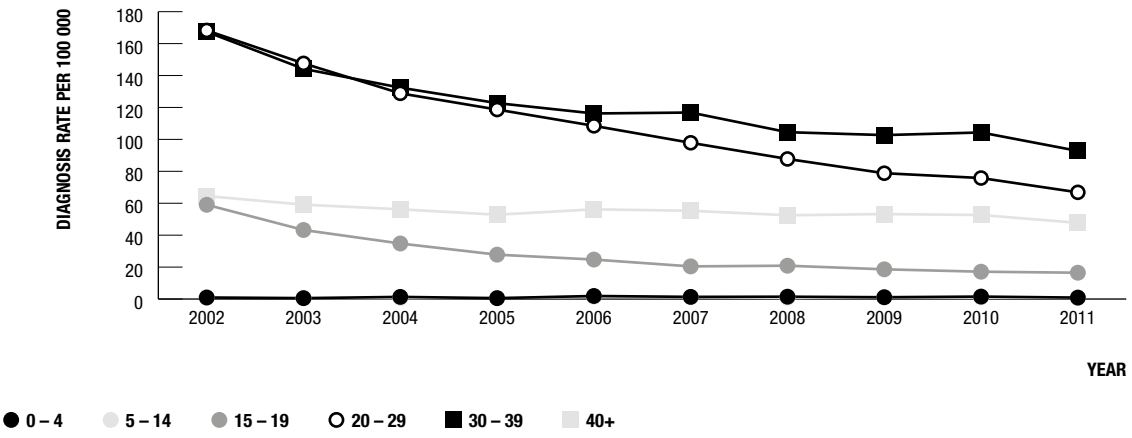
In 2011, the estimated number of people living in Australia with chronic hepatitis B was 209 000. As a national prevalence (0.97%), the estimate is greater than hepatitis B prevalence in New Zealand and the United Kingdom but substantially less than prevalence levels in many countries of birth for people living in Australia (Figure 10).

Figure 10 Estimated prevalence of chronic hepatitis B infection by country of birth



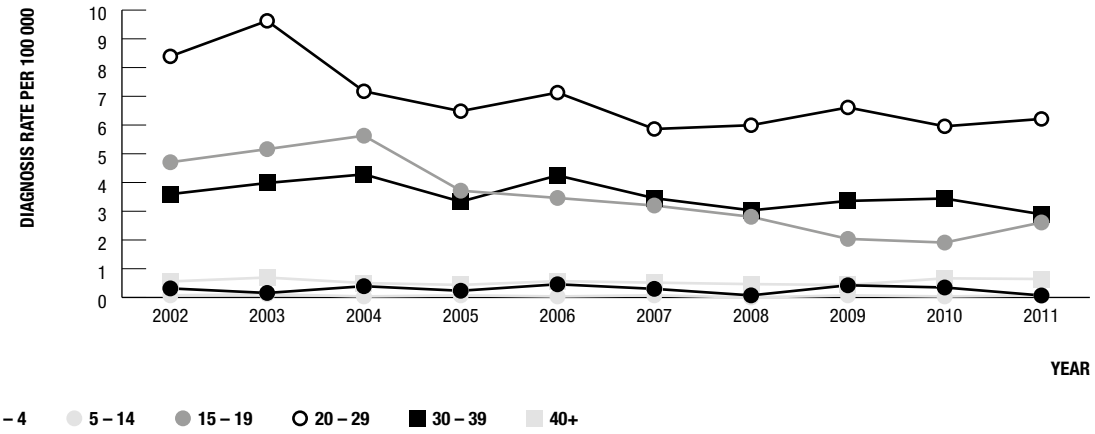
Information on the source of exposure to hepatitis B infection, reported through health authorities other than Queensland and Western Australia, indicated that the proportion of cases associated with injecting drug use declined from 47% in 2007 to 31% in 2011. The proportion of diagnoses attributed to heterosexual contact also declined, from 16% in 2007 to 11% in 2011, and the source of exposure to hepatitis B was undetermined in around 20% of cases (Table 2.1.7).

Figure 11 Hepatitis C infection, 2002 – 2011, by year and age group



The rate of diagnosis of hepatitis C infection per 100 000 population declined to 45.7 per 100 000 population in 2011. It declined by 60% in the 20 – 29 year age group and by 45% in the 30 – 39 year age group (Figure 11). In the 15 – 19 year age group, the rate of new hepatitis C diagnoses declined by 72% from 2002 to 2011.

Figure 12 Newly acquired hepatitis C, 2002 – 2011, by year and age group



Around 3.5% of cases of hepatitis C infection diagnosed in 2007 – 2011 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 – 29 years (Figure 12), 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 increased from 8.5 per 100 person years in 2007 to 17 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 fluctuated between 6.8 and 10.1 per 100 person years for the period 2009 – 2011 (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 less than the proportion of people in Australia who were born overseas (Table 2.1.8 and Table 2.1.14).

An estimated 209 000 people were living with hepatitis B infection and 382 deaths were attributed to chronic hepatitis B infection in 2011 (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 above 10% among people born in Vietnam, China, Taiwan, Afghanistan and Cambodia (Table 2.4.1).

An estimated 304 000 people living in Australia in 2011 had been exposed to hepatitis C virus. Of these, 77 300 people were estimated to have cleared their infection, 170 900 had chronic hepatitis C infection and early liver disease (stage F0/1), 49 500 had chronic hepatitis C infection and moderate liver disease (stage F2/3), and 6 300 were living with hepatitis C related cirrhosis (Table 6.2.2).

Hepatitis C prevalence in 2011 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 36).

Sexually transmissible infections other than HIV

Chlamydia was the most frequently reported infection in Australia in 2011, with 80 800 newly diagnosed cases. The population rate of reported diagnoses almost tripled in both the male and female population, from 101.5 in 2002 to 300.5 per 100 000 male population in 2011, and from 146.3 in 2002 to 421.6 per 100 000 female population in 2011 (Figure 13).

Figure 13 Chlamydia, 2002 – 2011, by year and sex

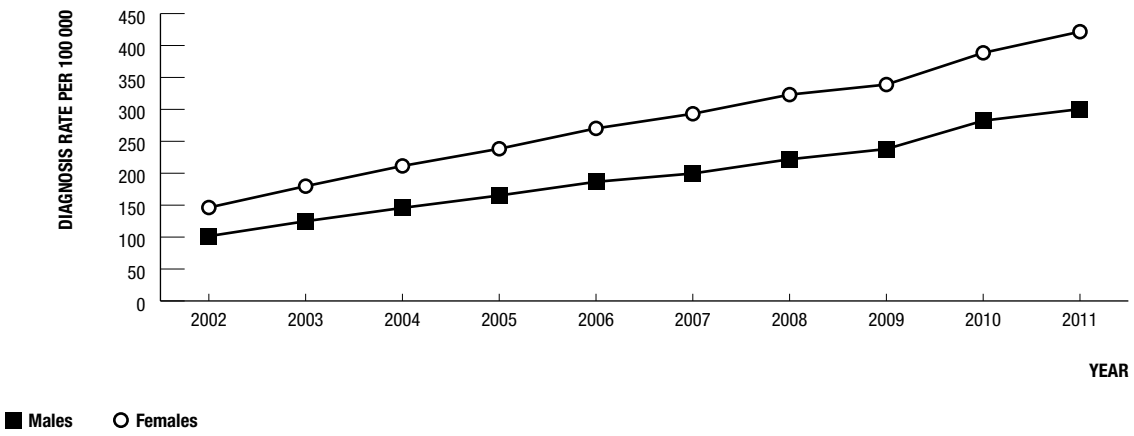
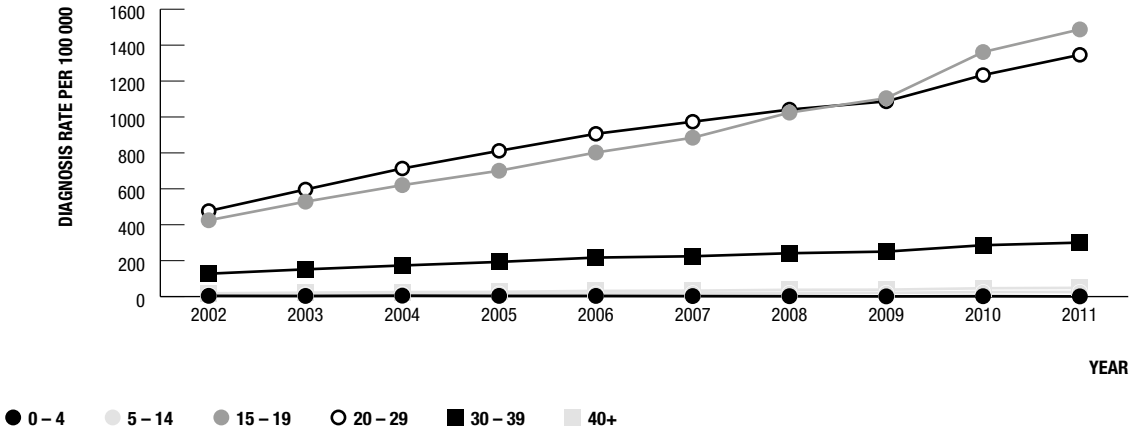


Figure 14 Chlamydia, 2002 – 2011, by year and age group



Increasing rates of diagnosis of chlamydia were reported in the majority of states and territories. The increases in the national rate were greatest in the 20 – 29 and 15 – 19 year age groups, which accounted for 81% of the annual number (Figure 14). In 2007 – 2011, 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 and these declines are the first to have occurred in the past 10 years.

Figure 15 **Gonorrhoea, 2002 – 2011, by year and sex**

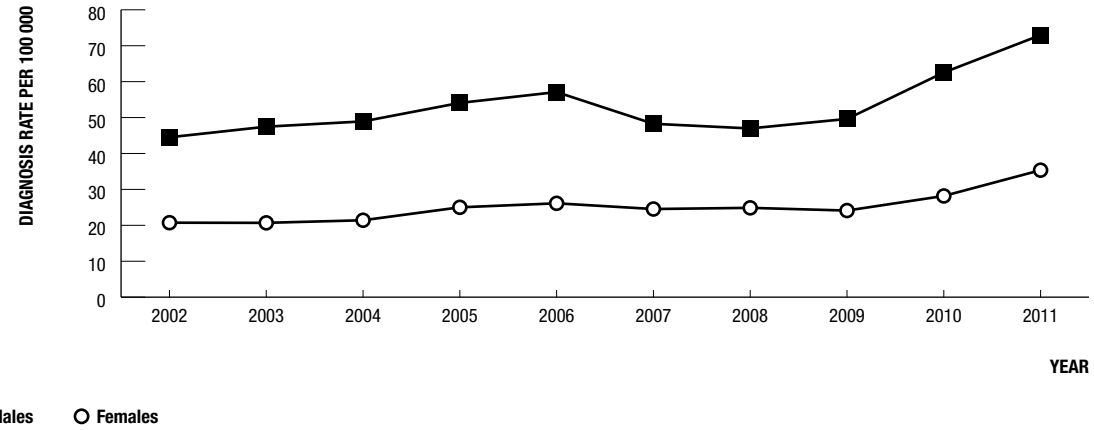
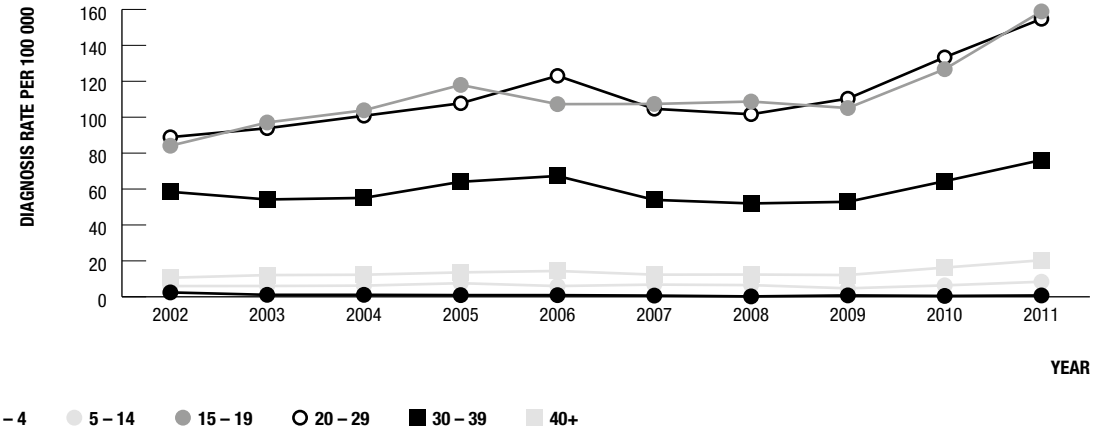


Figure 16 **Gonorrhoea, 2002 – 2011, by year and age group**



The population rate of diagnosis of gonorrhoea declined from 36.2 in 2007 to 35.6 in 2008 and then increased to 52.5 in 2011. The largest increases in gonorrhoea cases occurred in the Australian Capital Territory, New South Wales, Queensland and Victoria, where diagnoses increased by 90% or more between 2007 and 2011. The gonorrhoea diagnosis rate increased among males from 47 in 2008 to 73 in 2011 and among females from 24.1 in 2009 to 35.4 in 2011 (Figure 15). The rate was highest in 2010 among males in the age groups 20 – 29 years (203.7) and 15 – 19 years (137.5) (Figure 16).

Figure 17 **Infectious syphilis, 2004 – 2011, by year and sex**

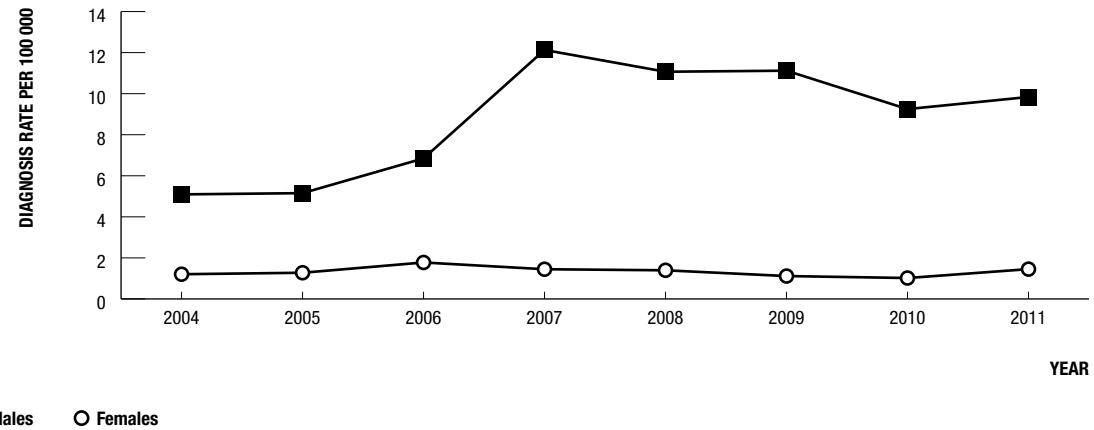
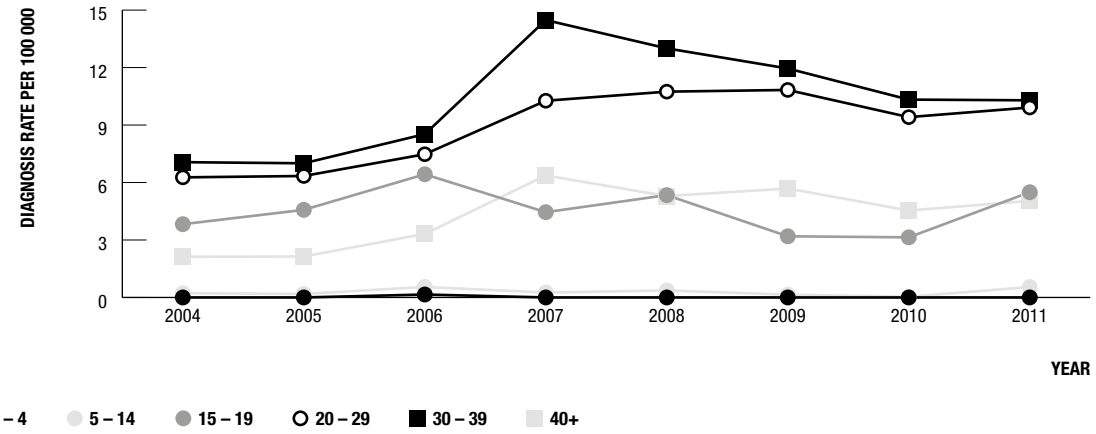


Figure 18 Infectious syphilis, 2004 – 2011, by year and age group



The rate of diagnosis of infectious syphilis declined from a peak of 6.8 per 100 000 population in 2007 to 5.0 in 2010 and then increased to 5.7 in 2011. Most of this increase occurred in the male population where the rate of diagnosis increased sharply from 5.1 in 2004 to 12.1 per 100 000 population in 2007 and then slowly declined to 9.0 in 2010 (Figure 17). The increases occurred in all jurisdictions except the Northern Territory, and were almost completely confined to men who have sex with men. In the Northern Territory, the rate of infectious syphilis declined steadily from 48.9 in 2007 to 11.5 in 2011. The decline in the rate of infectious syphilis occurred first in the age group 15 – 19 years, from 6.4 in 2006 to 3.1 in 2010 and then second in those aged 30 and older (Figure 18).

The rates of notification of chlamydia, gonorrhoea and infectious syphilis in the Northern Territory continue to be substantially higher than those in other state and territories. The continuing decline in the number of diagnoses of donovanosis, from 3 in 2007 to 0 in 2011, may be a consequence of improved case ascertainment and treatment.

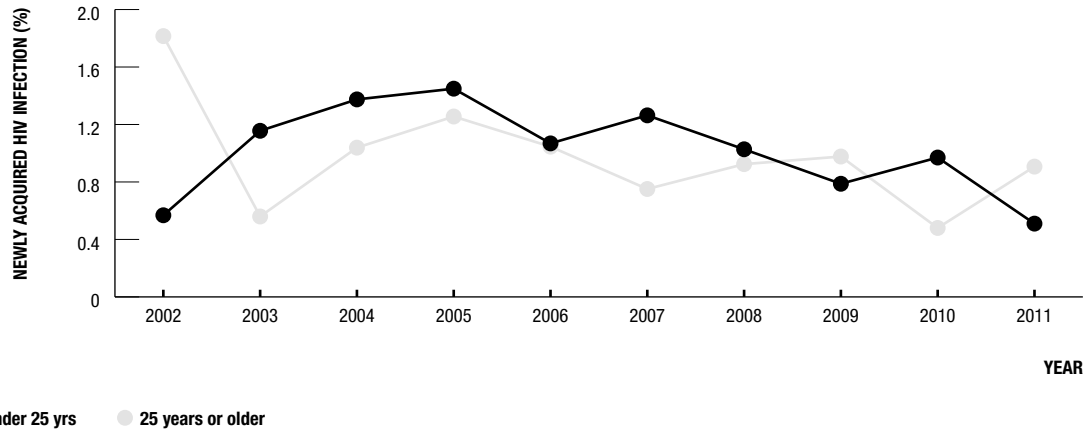
HIV, viral hepatitis and sexually transmissible infections in selected populations

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 third 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 or having the potential for increases in transmission.

Men who have sex with men

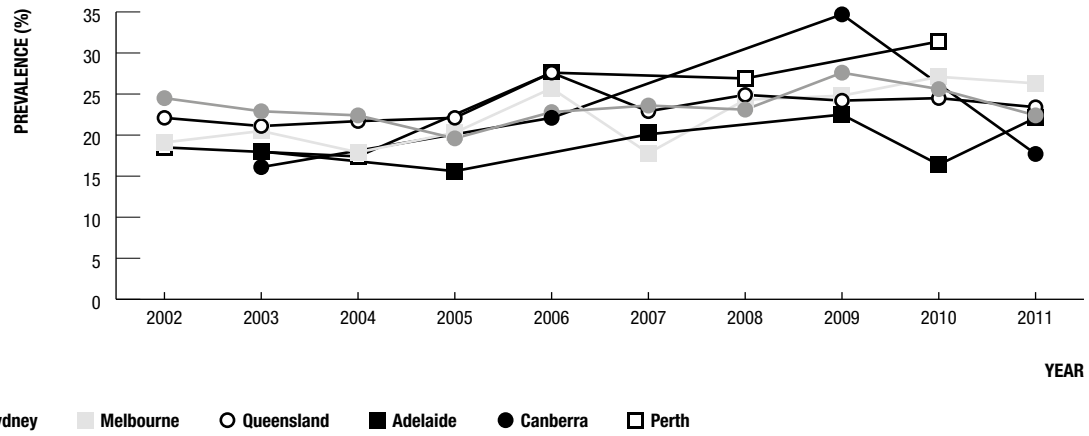
Men who have sex with men continue to make up the majority of people with diagnosed HIV infection in Australia. The overall number of new HIV diagnoses in this category in 2002 – 2006 and in 2007 – 2011 was 3 189 and 3 536, including 1 208 (38%) and 1 354 (38%) diagnoses of newly acquired HIV infection, respectively. Sexual transmission between men accounted for a higher proportion of diagnoses of newly acquired HIV infection (89%) than total HIV diagnoses (74%) among men. This difference may partly reflect higher levels of HIV antibody testing among men who have sex with men.

Figure 19 **Newly acquired HIV infection among men who have sex with men seen at sexual health clinics, 2002 – 2011, by year and age group**



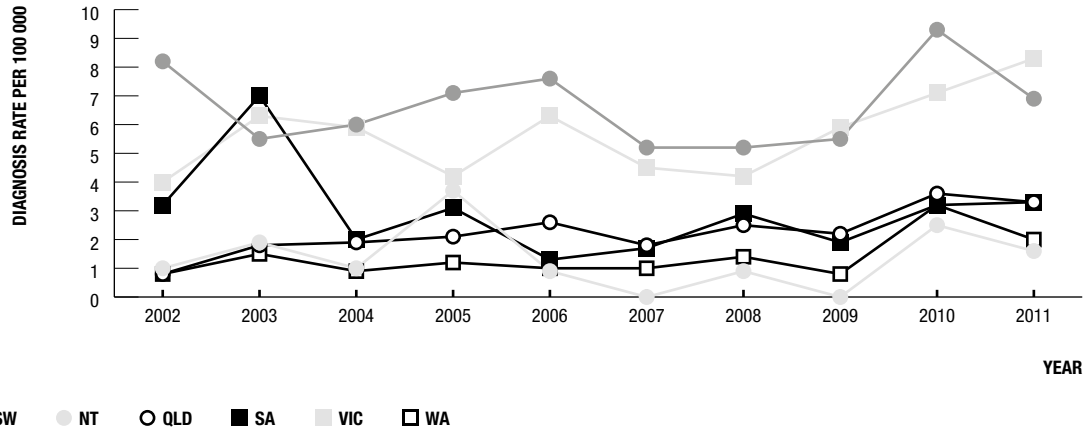
Among men who have sex with men seen at metropolitan sexual health clinics, the percentage in the age groups less than 25 years and 25 years or older with newly acquired HIV infection declined from 1.4 and 1.3% in 2005 to 0.5 and 0.9 in 2011 (Figure 19).

Figure 20 **Prevalence of unprotected anal intercourse with casual partners, 2002 – 2011, 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 has varied over the years, declining from 24.5% in 2002 to 20% in 2005,increasing to 28% in 2009 and then decreasing to 22% in 2011(Figure 20). The same survey carried out in Queensland indicates that the proportion of respondents reporting unsafe sexual behaviour has increased from around 22% in the years from 2001 to 2005, to 28% in 2006 but decreased to 23% in 2011. The respondents in Melbourne also indicated an increase in unsafe sexual behaviour, from around 19% in 2002, to 25% in 2006 – 2011. Increased unsafe sexual behaviour was also reported in Canberra and Perth.

Figure 21 Gonococcal rectal infection among men, 2002 – 2011, by State/Territory and year

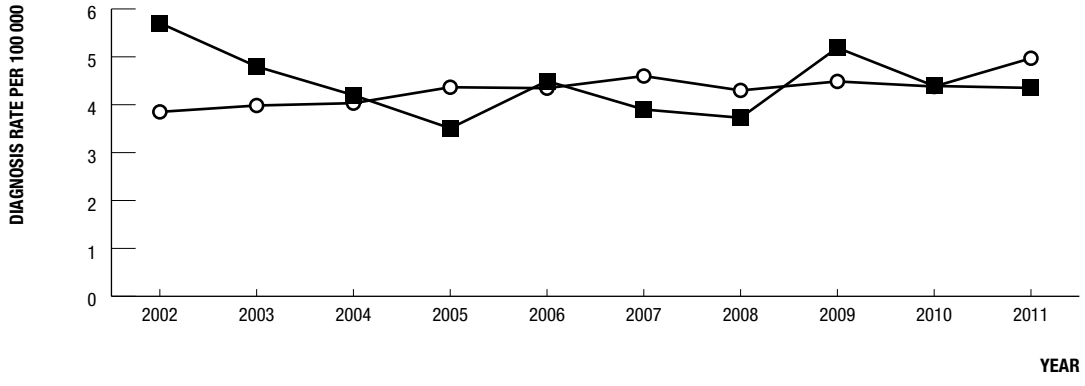


Among men who have sex with men, tested for chlamydia through the Australian Collaboration for Chlamydia Enhanced Sentinel Surveillance (ACCESS), chlamydia positivity increased from 6.1 in 2007 to 9.2 in 2009 and decreased to 7.9 in 2011 (Figure 38). Surveillance data for gonorrhoea also provide an indication 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 peaked in 2002 at 8.2, in 2006 at 7.6 and in 2010 at 9.3 per 100 000. Other state and territory jurisdictions recorded a similar pattern, with a sharp increase in the rate of rectal gonococcal isolates occurring in 2010, but the number of rectal isolates was lower in 2011 for most jurisdictions (Figure 21).

Aboriginal and Torres Strait Islander people

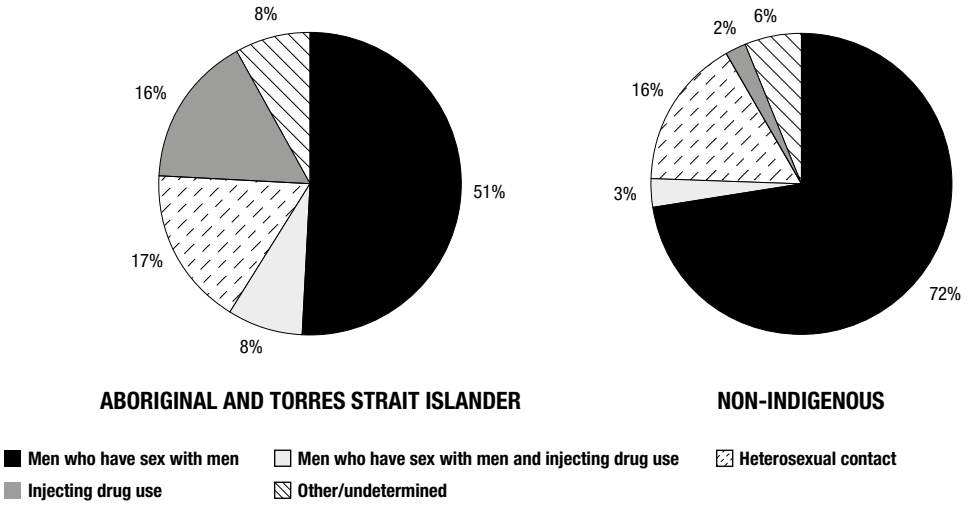
The rates of HIV diagnosis *per capita* in the Aboriginal and Torres Strait Islander and the non-Indigenous population, excluding cases and populations from high HIV prevalence countries in sub-Saharan Africa and South East Asia, differed little in 2002 – 2011 (Figure 22). In the Aboriginal and Torres Strait Islander population, the rate declined from around 4.5 in 2002 – 2006 to around 4.3 in 2007 – 2011. In the non-Indigenous, non-high HIV prevalence country of birth population, the rate of HIV diagnosis gradually increased from around 3.9 in 2002 to 5.0 in 2011. 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 22 HIV diagnoses, 2002 – 2011, by Aboriginal and Torres Strait Islander status[1] and year



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

Figure 23 HIV diagnoses, 2007 – 2011, by Aboriginal and Torres Strait Islander status[1] and HIV exposure category

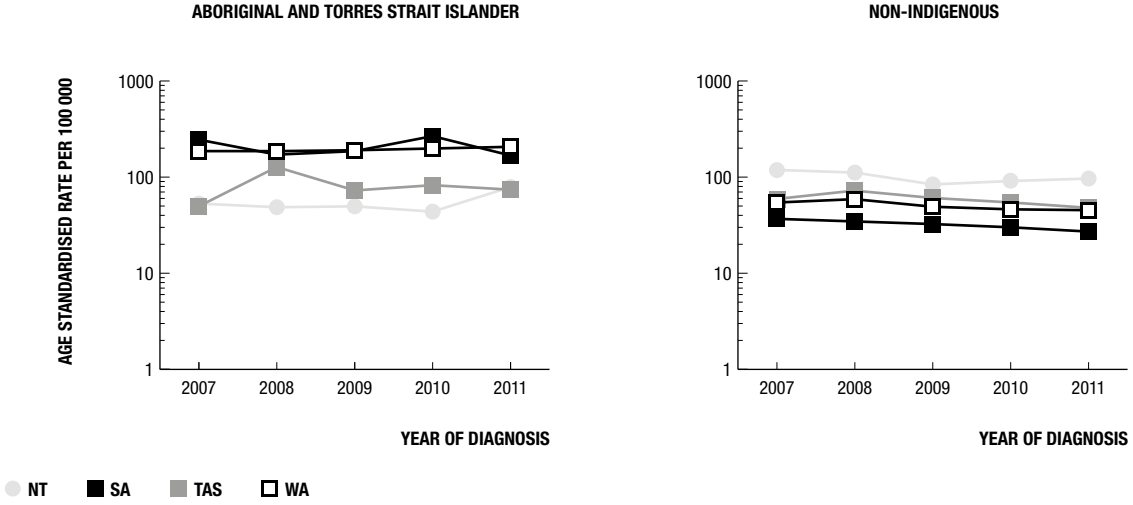


1 The non-Indigenous category excludes cases whose exposure to HIV was categorised as "Person from a high prevalence country".

In 2007 – 2011, 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 (59%). Heterosexual contact was the reported source of exposure to HIV in 17% of Aboriginal and Torres Strait Islander cases and in 16% of non-Indigenous cases (Figure 23). Aboriginal and Torres Strait Islander cases differed from non-Indigenous cases in that a higher proportion of infections were attributed to injecting drug use (16% among Aboriginal and Torres Strait Islander cases vs 2% for non-Indigenous cases), and a higher proportion of infections were among women (21% among Aboriginal and Torres Strait Islander cases vs 8% for non-Indigenous non-high prevalence country of exposure cases in 2007 – 2011).

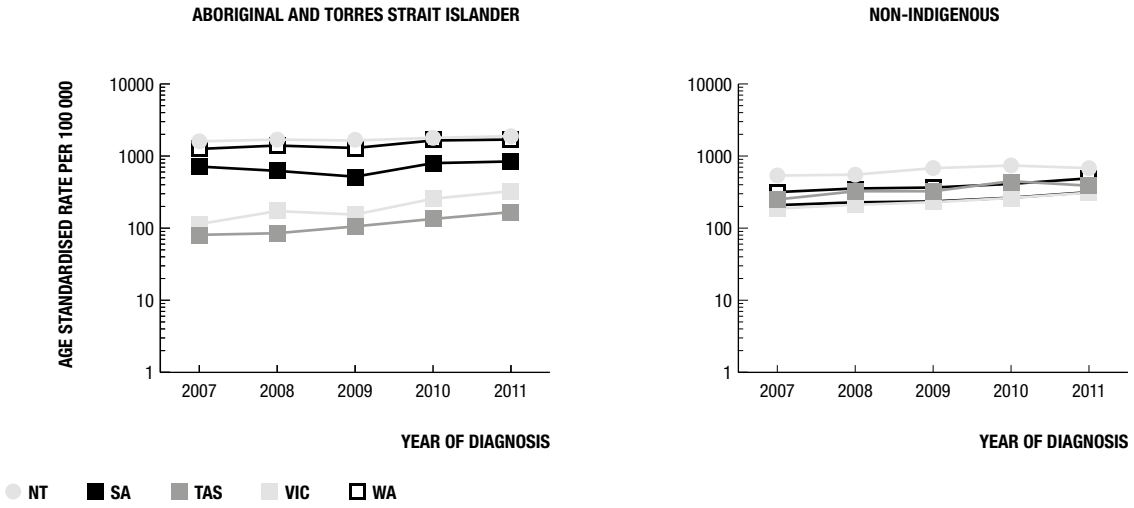
The rate of diagnosis of hepatitis B infection in the Aboriginal and Torres Strait Islander population resident in the Northern Territory, South Australia, Tasmania and Western Australia declined from 190 in 2007 to 103 in 2009 and increased to 151 in 2011, and the rate of diagnosis of newly acquired hepatitis B infection was 4 or less in 2007 – 2011. In the non-Indigenous population, the rate of diagnosis of hepatitis B increased from 19 in 2008 to 33 in 2011. The population rate of diagnosis of newly acquired hepatitis B infection was 1 per 100 000 population in 2007 – 2011.

Figure 24 Hepatitis C, 2007 – 2011, by Aboriginal and Torres Strait Islander status, State/Territory and year



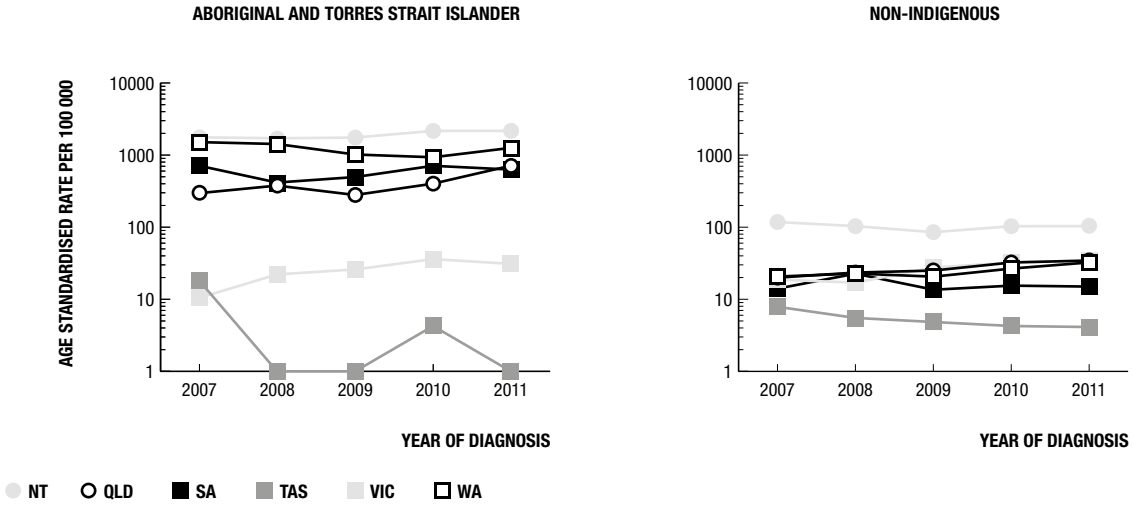
The population rate of diagnosis of hepatitis C infection in the Aboriginal and Torres Strait Islander population resident in the Northern Territory, South Australia, Tasmania and Western Australia was increased from around 30 per 100 000 population in 2006 – 2009 to around 140 per 100 000 population in 2010 and 2011 and decreased from 49 in 2007 to 40 in 2011 in the non-Indigenous population. In the Northern Territory, the rate of hepatitis C diagnosis in the Aboriginal and Torres Strait Islander population was stable at around 50 in 2007– 2010 and increased to 84 in 2011 whereas the rate in the non-Indigenous population declined from 115 in 2007 to 95 in 2011. In South Australia 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 25 Chlamydia, 2007 – 2011, by Aboriginal and Torres Strait Islander status, State/Territory and year



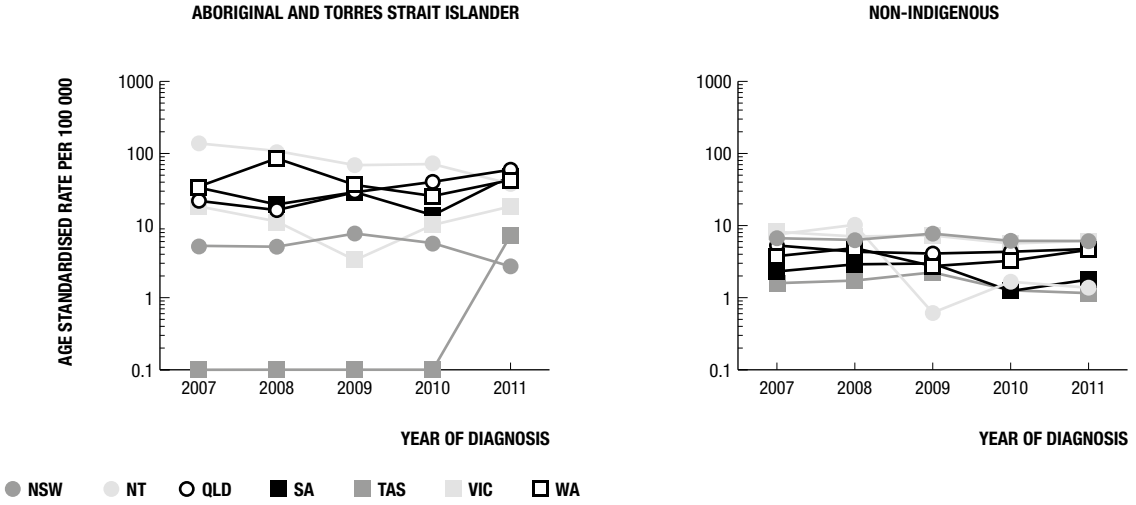
The rate of diagnosis of chlamydia in the Aboriginal and Torres Strait Islander was around 1 000 in 2007 – 2009 and then increased to 1 343 in 2011. In the non-Indigenous population resident in state and territory jurisdictions other than the Australian Capital Territory, New South Wales and Queensland, the rate of chlamydia diagnosis increased steadily from 234 in 2007 to 378 in 2011 (Figure 25).

Figure 26 Gonorrhoea, 2007 – 2011, 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 and territory jurisdictions other than the Australian Capital Territory and New South Wales was around 550 in 2007 – 2010 but increased to 673 in 2011. In the non-Indigenous population, the rate of gonorrhoea diagnosis increased from 13 in 2007 to 22 in 2011 (Figure 26).

Figure 27 Infectious syphilis, 2007 – 2011, 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 and territory jurisdictions other than the Australian Capital Territory declined from 32 in 2007 to 22 in 2009 and then increased to 32 in 2011 (Figure 27). 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 20 in 2007 to 60 in 2011. The rate of diagnosis of infectious syphilis in the non-Indigenous population was stable at below 7 per 100 000 population in 2007 – 2011.

People who inject drugs

In 2002 – 2011, 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 28 HIV and hepatitis C prevalence in needle and syringe programs, 2002 – 2011, by year and sex

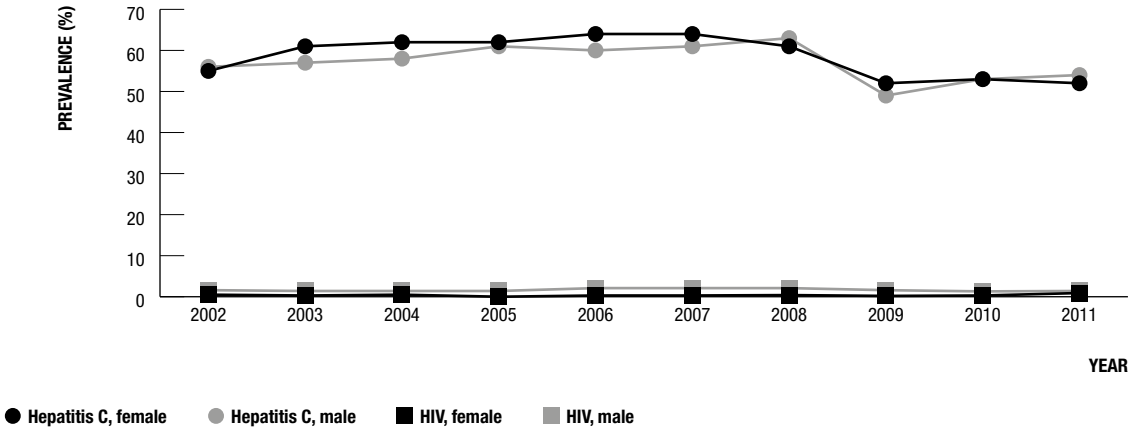
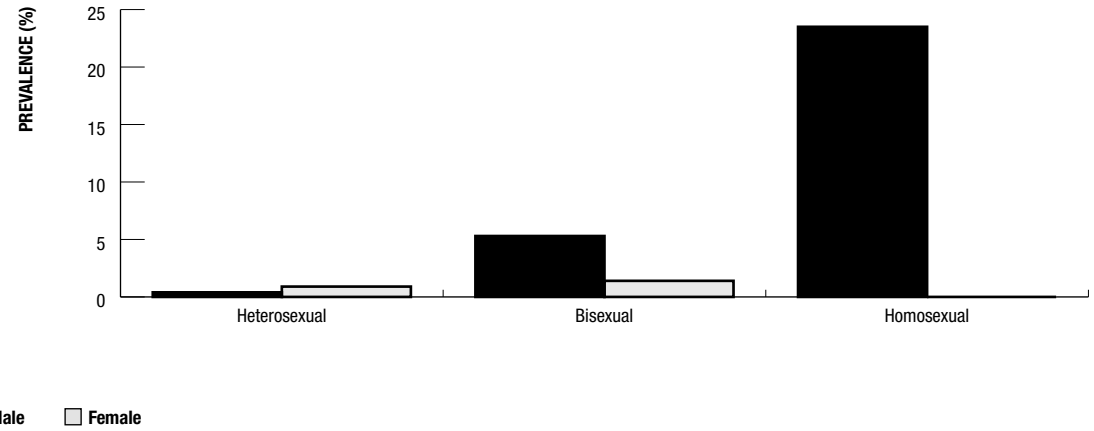


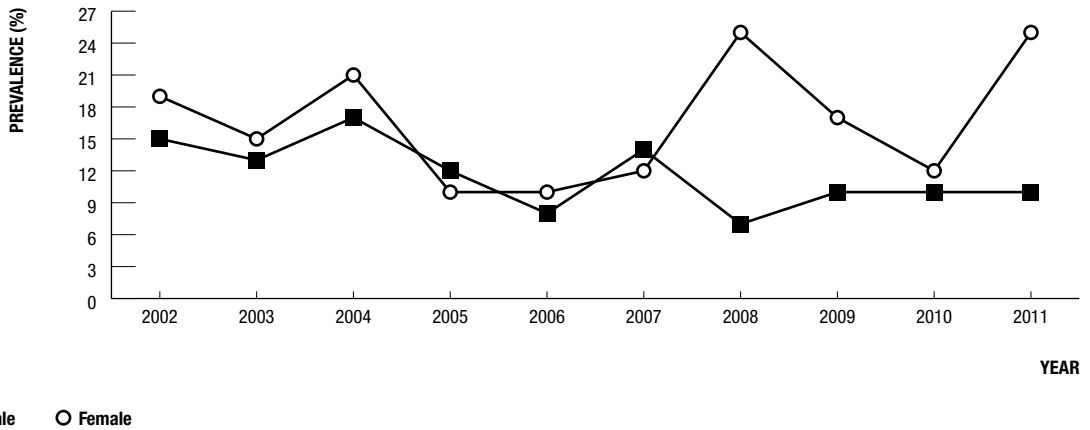
Figure 29 HIV prevalence at needle and syringe programs, 2011, by sexual identity



HIV prevalence among people attending needle and syringe programs has remained low (around 1% in 2002 – 2011) (Figure 28) but in the subgroup of men who have sex with men, it was 23.5% in 2011 (Figure 29). Of 3 666 men and 2 294 women with a history of injecting drug use who were tested for HIV antibody at metropolitan sexual health centres in 2002 – 2011, 8 males (0.2%) and 1 woman (0.04%) were diagnosed with HIV infection (Figures 34 and 35).

In contrast to the low HIV prevalence, hepatitis C prevalence among people attending needle and syringe programs remained at high levels in 2002 – 2011 (Figure 28). Hepatitis C prevalence dropped among males from 64% in 2007 to 52% in 2011, and among females from 61% in 2008 to 54% in 2011. The decline in hepatitis C prevalence was not explained by demographic or laboratory factors.

Figure 30 Prevalence of sharing among recent initiates to injecting[1] seen at needle and syringe programs, 2002 – 2011, by year and sex



1 With a history of injecting drug use of less than 5 years and 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 2007 – 2011; hepatitis C prevalence among these people decreased from 28% in 2007 and 2008 to around 20% in 2009 – 2011. The fluctuations in the prevalence of reported sharing of injecting equipment among women with a history of injecting drug use of less than five years may be attributable to the relatively small number of women with a short duration of injecting drug use (Figure 30). 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 fall 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 932 in 2002 – 2006 to 1 327 in 2007 – 2011, accounting for 20% and 25% of total HIV diagnoses in 2002 – 2006 and in 2007 – 2011, respectively.

Figure 31 Newly diagnosed HIV among men, 2002 – 2011, by year and HIV exposure category

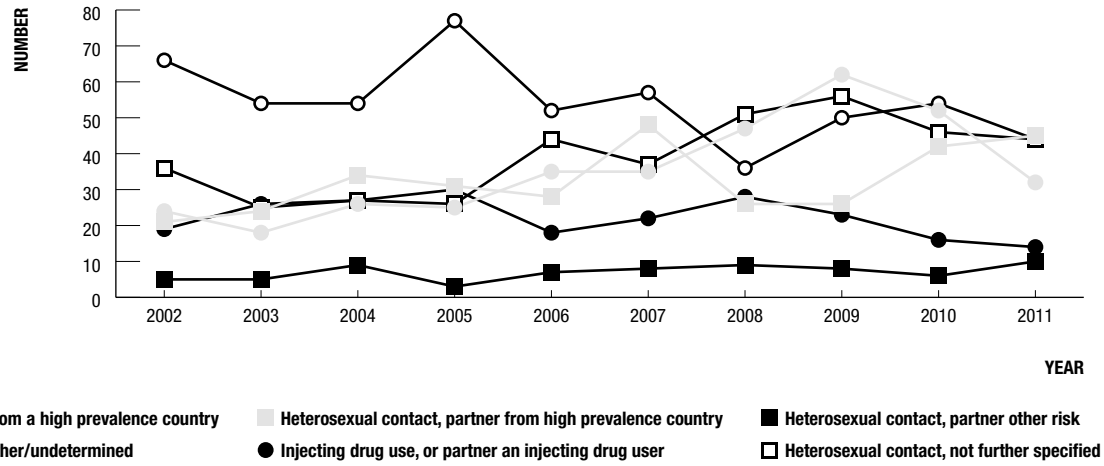
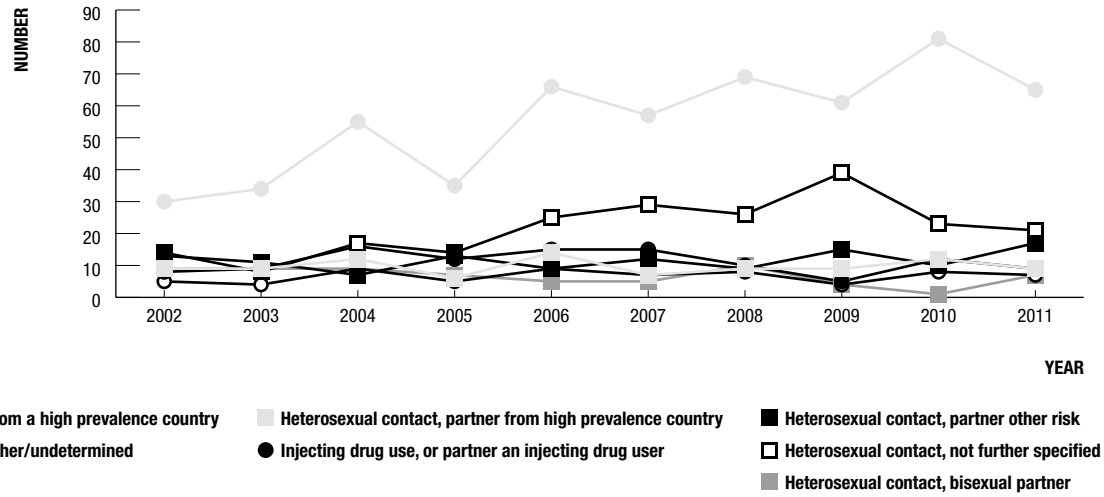


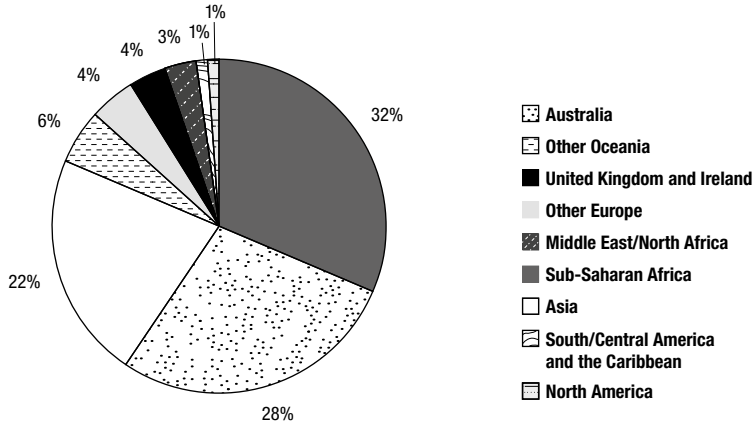
Figure 32 Newly diagnosed HIV among women, 2002 – 2011, by year and HIV exposure category



Men and women whose HIV infection was acquired in a high HIV prevalence country accounted for 39% and 43% of HIV diagnoses attributed to heterosexual contact in 2002 – 2006 and 2007 – 2011, respectively. In both five year intervals, the majority of cases came from high HIV prevalence countries in sub-Saharan Africa (65% in 2002 – 2006 and 70% in 2007 – 2011) and South East Asia (27% in 2002 – 2006 and 21% in 2007 – 2011). Sixty three and 60% of cases from high prevalence countries in 2002 – 2006 and in 2007 – 2011 were among women.

Excluding cases from a high prevalence country, the number whose exposure to HIV was attributed to heterosexual contact increased by 31%, from 583 in 2002 – 2006 to 764 in 2007 – 2011. 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 2002 – 2006, and in 2007 – 2011, respectively. Of new HIV diagnoses in 2007 – 2011 for which the country of birth of the heterosexual partner was reported (81.1%), 60% of partners were from South East Asia and 28% were from sub-Saharan Africa, respectively. Heterosexual contact, not further specified, was reported in 43% of cases attributed to heterosexual contact in 2002 – 2006 and 48% in 2007 – 2011. The source of exposure to HIV remained undetermined for substantial numbers of men in 2002 – 2011 (Figure 31).

Figure 33 HIV infection attributed to heterosexual contact, 2007 – 2011, by region of birth



Among 1 327 cases of HIV infection diagnosed in Australia in 2007 – 2011 for which exposure to HIV was attributed to heterosexual contact, the country of birth was reported as Australia in 26.6%, sub-Saharan Africa in 32.9% and South East Asia in 15.9% (Figure 33).

Figure 34 HIV prevalence among heterosexually active men seen at sexual health clinics, 2002 – 2011, by year and HIV exposure category

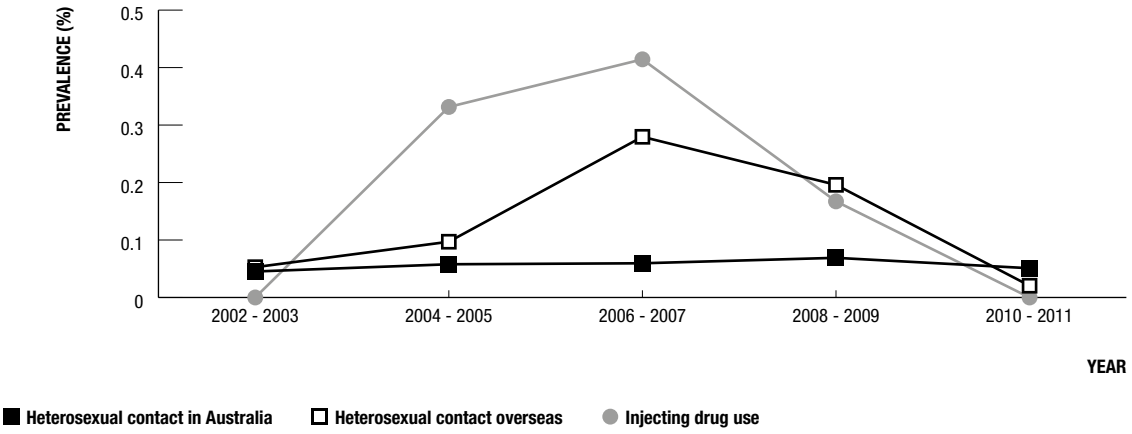
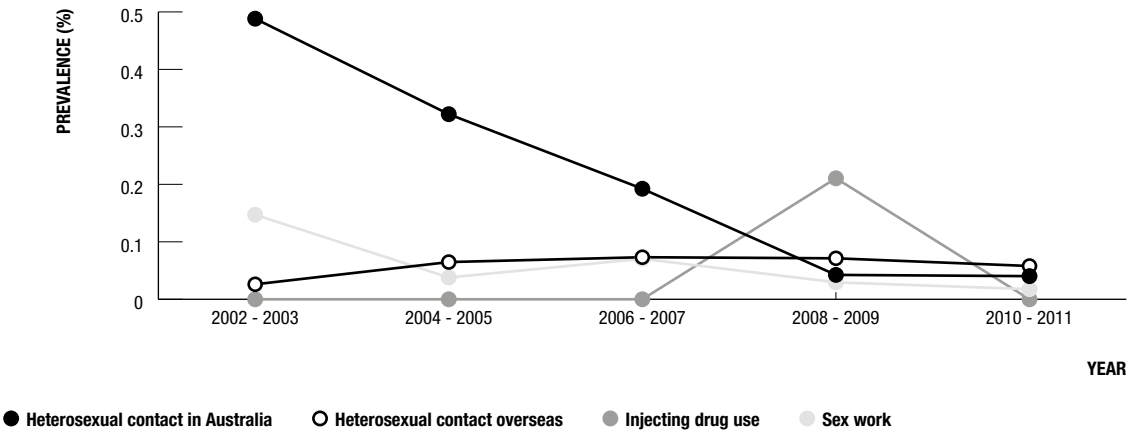
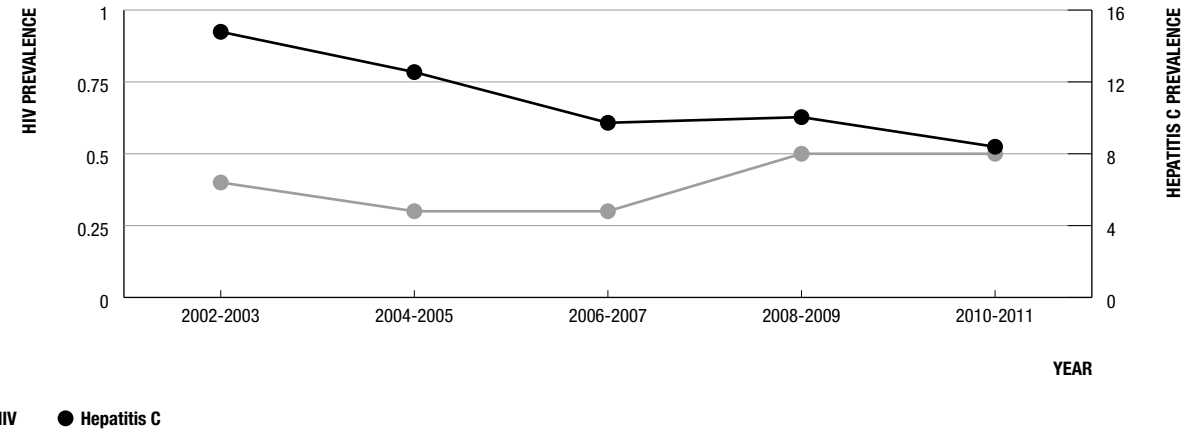


Figure 35 HIV prevalence among heterosexually active women seen at sexual health clinics, 2002 – 2011, by year and HIV exposure category



HIV prevalence has remained below 0.5% among heterosexually active men and women seen through metropolitan sexual health clinics. In 2002 – 2011, HIV prevalence was less than 0.2% among men and women who reported a history of heterosexual contact in Australia (Figures 34 and 35). 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 35).

Figure 36 HIV and hepatitis C prevalence[1] in blood donors, 2002 – 2011, by year



1 Prevalence per 100 000 donations

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 36).

Monitoring chlamydia positivity

The Australian Collaboration for Chlamydia Enhanced Sentinel Surveillance (ACCESS) monitors the uptake and outcome of chlamydia testing in Australia through five separate networks of sexual health services, family planning clinics, general practices, Aboriginal community controlled health services and laboratories.

Young heterosexual men and women (aged <25 years), men who have sex with men, Aboriginal and/or Torres Strait Islander people, and women currently involved in sex work are identified as priority populations for monitoring chlamydia testing and positivity.

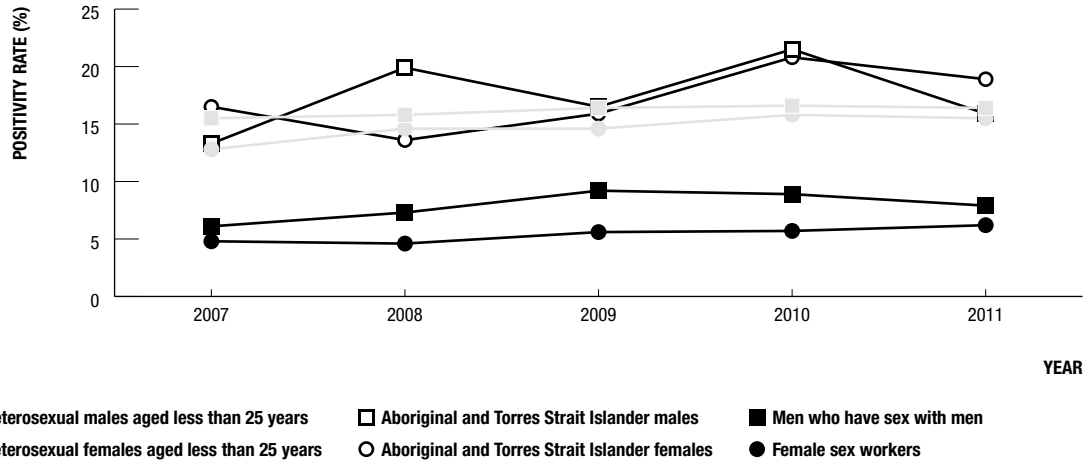
In this report, trends in chlamydia testing and positivity are provided from sexual health services between 2007 and 2011 and from three other networks from 2008 to 2010 (general practice clinics, family planning clinics and laboratories).

Sexual health services

In 2011, a total of 17 703 new clients in the priority populations attended the participating sexual health services. These included: young heterosexual women (5 596); young heterosexual men (4 757), men who have sex with men (4 412), Aboriginal and/or Torres Strait Islander people (1 515), and women currently involved in sex work (1 423).

In the five year period from 2007 to 2011, a high proportion of all priority populations seen for the first time through the network of sexual health services were tested for chlamydia. In 2011, 95% of women currently involved in sex work, 89% of men who have sex with men, 89% of young heterosexual men, 84% of young heterosexual women, 78% of Aboriginal and/or Torres Strait Islander men and 67% of Aboriginal and/or Torres Strait Islander women, were tested (Table 4.5.1).

Figure 37 Chlamydia positivity rate among people seen for the first time at sexual health services, 2007 – 2011, by year and chlamydia priority population



In the same five year period, the chlamydia positivity rate steadily increased among nearly all priority populations. In 2011, chlamydia positivity was highest among Aboriginal and Torres Strait Islander women (18.9%) followed by young heterosexual men (16.4%), Aboriginal and Torres Strait Islander men (15.9%) and young heterosexual women (15.5%) and lowest in men who have sex with men (7.9%) and female sex workers (6.2%) (Figure 37; Table 4.5.1).

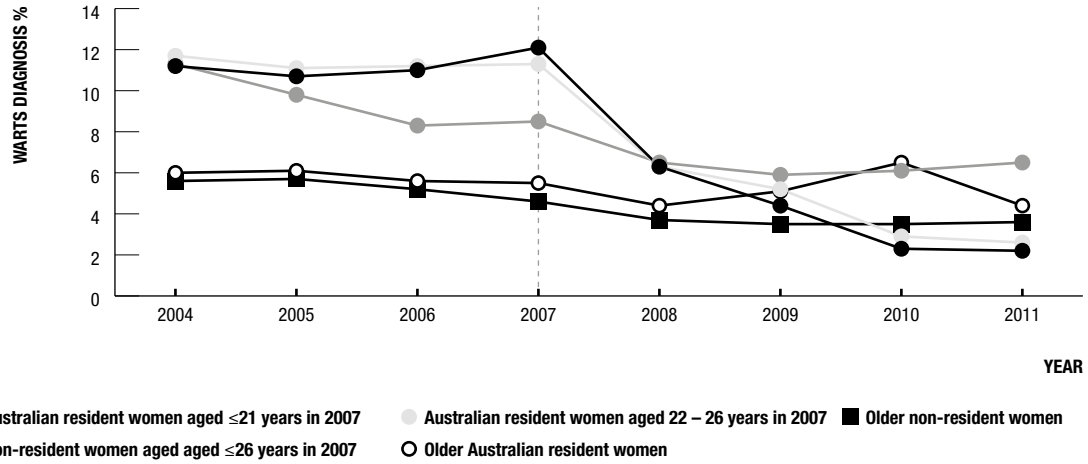
Other networks

Chlamydia positivity was not available for 2011, but in 2010 among 16-29 year olds it was 10.8% in the family planning network, 9.8% in the general practice network and 7.4% in the laboratory network (Table 4.5.2).

Monitoring genital warts

The Genital Warts Surveillance Network is a surveillance system to monitor the diagnosis of genital warts. The aim of the network is to determine the population effects of the national human papillomavirus (HPV) vaccination program that began in mid-2007; by monitoring the diagnosis rates of genital warts in various populations, and determining HPV vaccination rates (Donovan B et al. 2011).

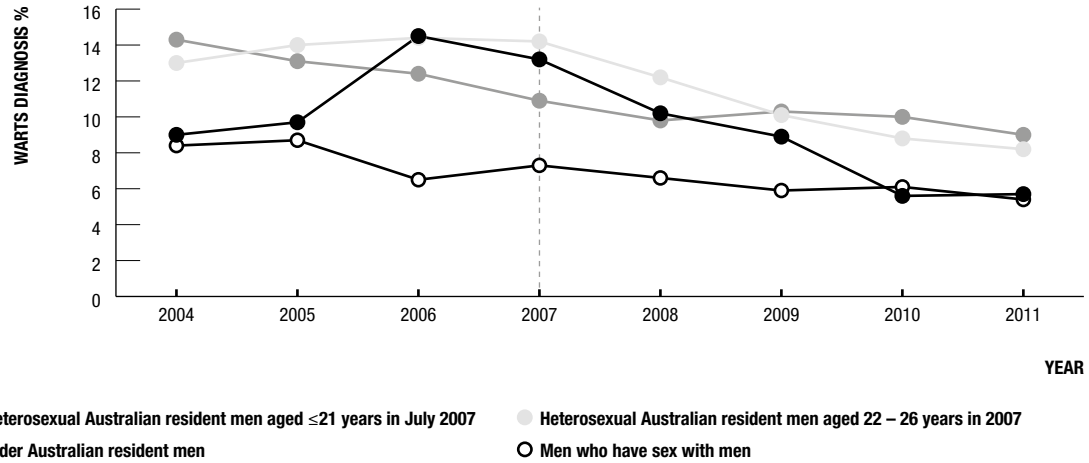
Figure 38 Prevalence of genital warts among women seen for the first time at sexual health services[1], 2004 – 2011, by Australian resident status and age group



1 The national human papillomavirus (HPV) vaccination program commenced in mid 2007.

Information available through the Genital Warts Surveillance Network indicates that the genital warts diagnosis rate among Australian women, aged 21 years or younger in July 2007 and thus eligible for free HPV vaccine, was above 10% in 2007 and before and then declined to 2.2% in 2011 (Figure 38). Among Australian heterosexual men in the same age group, the genital warts diagnosis rate was above 9% in 2007 and before and declined to 5.7% in 2011 (Figure 39).

Figure 39 Prevalence of genital warts among men seen for the first time at sexual health services[1], 2004 – 2011, by Australian resident status and age group

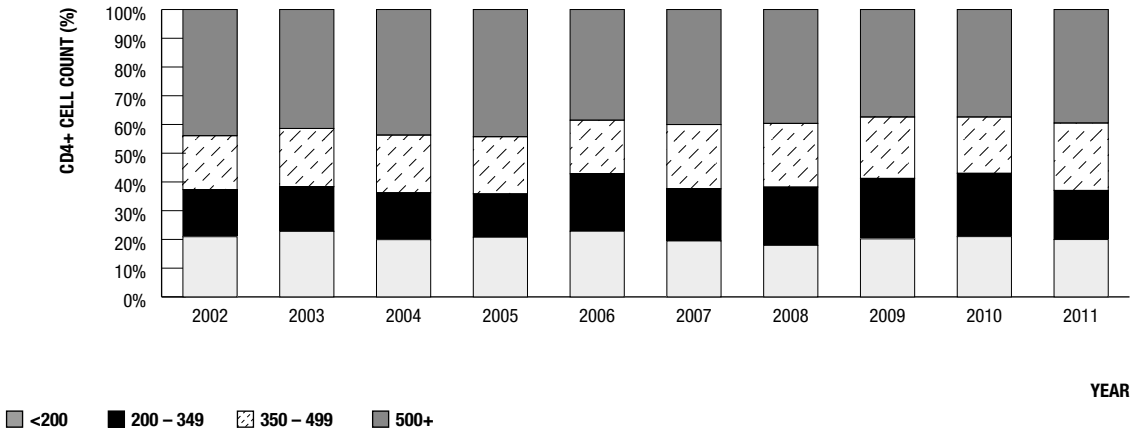


1 The national human papillomavirus (HPV) vaccination program commenced in mid 2007.

Illness and treatment in people with HIV infection and viral hepatitis

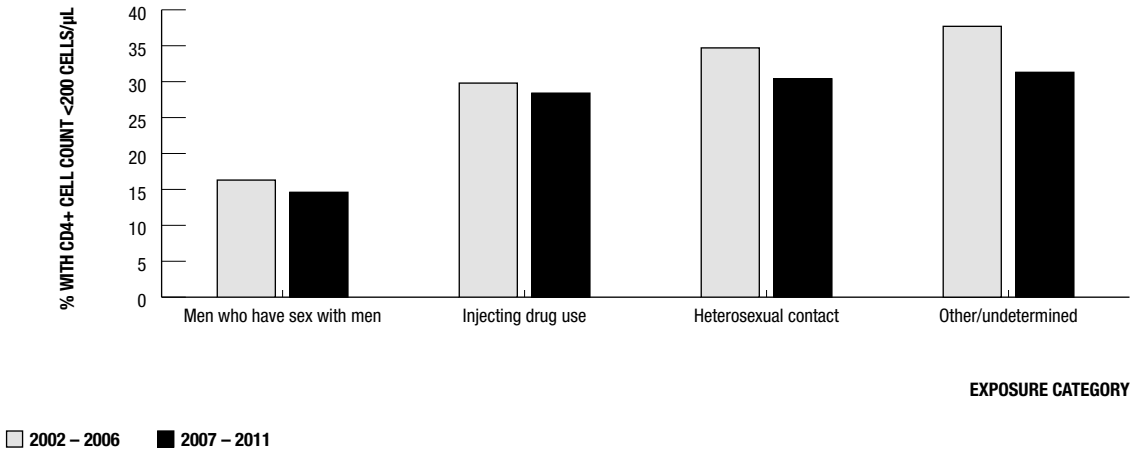
In the past 10 years, there has been no change in the proportion of cases diagnosed with advanced HIV infection, measured by the CD4+ cell count of less than 200 cells/µl at HIV diagnosis, which was 16.9% among cases diagnosed in 2002 – 2006 and 16.7% among cases diagnosed in 2007 – 2011 (Figure 40). There has, however, been a slight increase in the proportion of people with a late diagnosis, defined by a CD4+ cell count of 200 to less than 350 cells/ µl at HIV diagnosis, from 30.1% in 2002 – 2006 to 33.5% in 2007 – 2011 (Table 1.1.1).

Figure 40 CD4+ cell count at HIV diagnosis, 2002 – 2011, by year



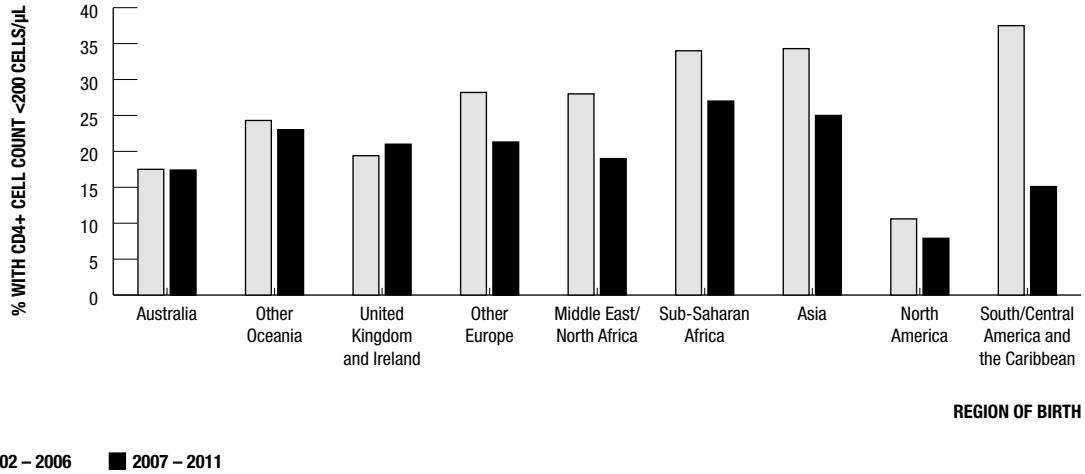
The extent of advanced HIV infection was lowest, and declined over time, among men who have sex with men. Men and women whose exposure to HIV was attributed to heterosexual contact experienced a substantially higher rate of diagnosis with advanced HIV infection, but men who have sex with men still accounted for more than 50% of cases in this category between 2002 and 2011 (Figure 41). 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 in the years 2002 – 2006 and 2007 – 2011 (Figure 42).

Figure 41 Advanced HIV infection[1], 2002 – 2011, by year and exposure category



1 Advanced HIV Infection is defined as newly diagnosed HIV infection with a CD4+ cell count of less than 200 cells/µl.

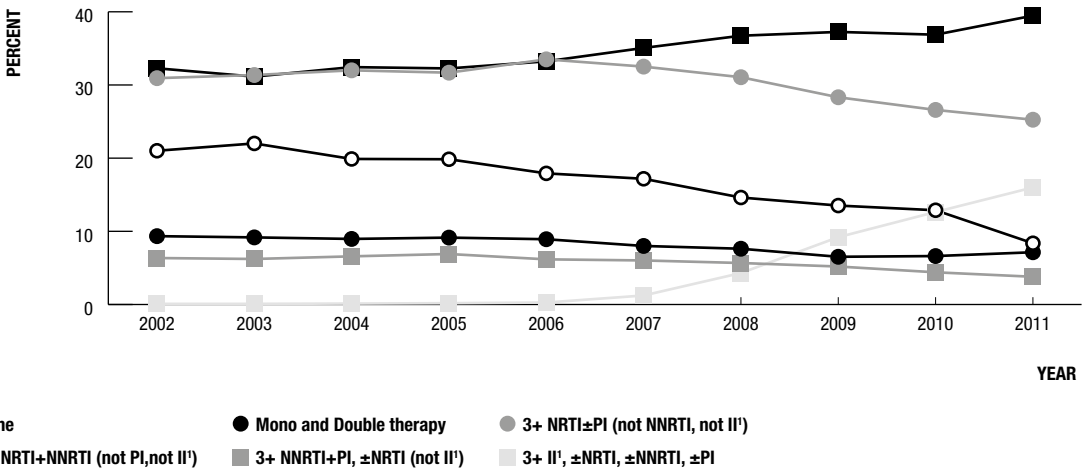
Figure 42 Advanced HIV infection[1], 2002 – 2011, by year and region of birth



1 Advanced HIV Infection is defined as newly diagnosed HIV infection with a CD4+ cell count of less than 200 cells/µl.

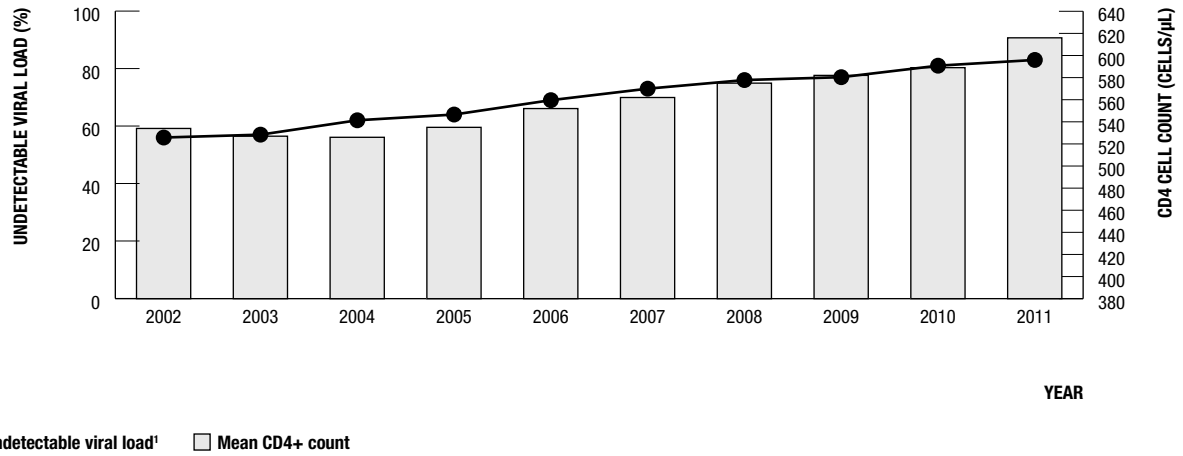
There is no comprehensive registry of advanced illness related to hepatitis B and C in Australia. One indicator of the extent of illness caused by hepatitis C is the number of liver transplants due to chronic infection. Of 194 people who had a liver transplant in 2011, 55 (28.4%) had hepatitis C infection whereas hepatitis B was the primary cause of liver failure for 9 (4.6%) people having liver transplants (Table 2.3.1).

Figure 43 Treatment uptake among people enrolled on the Australian HIV Observational Database, 2002 – 2011, by year



1 II = Integrase inhibitor.

Figure 44 **HIV viral load and CD4+cell count among people enrolled on the Australian HIV Observational Database, 2002 – 2011, by year**



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

The Australian HIV Observational Database indicated that 84.5% of 2 032 people under follow up in 2011 were receiving triple combination antiretroviral treatment for HIV infection (Figure 43). Viral load was undetectable for more than 60% of people being followed through the Australian HIV Observational Database from 2004 and CD4+ cell count was higher than 500 cells/µl from 2002 (Figure 44). Of people enrolled in the Australian HIV Observational Database in 2011, 9.4% had been diagnosed with both HIV and hepatitis C antibody.

Use of antiretroviral therapy by men who have sex with men participating in the Gay Community Periodic Surveys in Melbourne increased from 51.5% in 2007 to 72.6% in 2011, resulting in the highest reported uptake among in Australia in 2011. The percentage of men in Sydney who reported use of antiretroviral therapy increased from 53.2% in 2007 to 70.6% in 2011.

Tables

1 National surveillance for newly diagnosed HIV infection

1.1 National HIV Registry

1.2 Monitoring incident HIV infection

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

1.4 National surveillance for perinatal exposure to HIV

1.5 Global comparisons for HIV

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, proportion with late HIV diagnosis, State/Territory and percent of total cases by sex and HIV exposure category

	Year of HIV diagnosis										
Characteristic	**≤ 02[1]**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**	**Total[1,2]**
Total cases	**22 563**	**875**	**913**	**967**	**1 010**	**1 051**	**1 013**	**1 065**	**1 051**	**1 137**	**31 645**
Males (%)	92.3	89.8	86.0	90.1	85.1	86.8	85.9	86.1	85.3	87.4	90.7
Median age (years)											
Male	33	36	37	37	38	38	37	37	37	37	34
Female	29	31	31	32	31	32	31	32	31	34	30
Language spoken at home[3]											
English	–	–	552	655	657	788	754	794	760	873	5 833
Other language	–	–	49	55	72	82	67	110	110	109	654
Not reported	–	–	312	257	281	181	192	161	181	155	1 720
HIV status at diagnosis (%)[4]											
Late HIV diagnosis	12.3	11.8	13.0	12.1	16.4	14.4	17.1	18.5	19.8	14.2	15.1
Advanced HIV infection	15.7	17.3	15.9	16.6	18.8	15.4	15.1	17.7	18.8	16.5	16.8
State/Territory											
ACT	267	5	7	8	6	9	7	12	12	9	342
NSW	12 978	430	414	407	395	416	367	381	351	389	16 528
NT	128	5	8	3	11	6	11	16	6	9	203
QLD	2 388	128	156	170	165	195	201	209	242	222	4 076
SA	826	45	54	51	61	56	47	53	41	67	1 301
TAS	95	2	9	6	7	7	13	14	10	15	178
VIC	4 698	205	215	258	286	285	285	291	280	328	7 131
WA	1 183	55	50	64	79	77	82	89	109	98	1 886
HIV exposure category (%)[5]											
Men who have sex with men	77.6	73.3	67.4	72.0	67.1	68.1	65.7	64.6	66.5	71.0	74.7
Men who have sex with men and injecting drug use	4.4	4.5	4.1	4.5	4.0	2.9	3.3	3.6	2.2	2.7	4.1
Injecting drug use[6]	4.2	3.4	4.4	3.5	2.7	2.8	3.3	2.3	2.3	1.9	3.8
Heterosexual contact	10.6	18.4	23.8	19.3	25.5	25.1	27.0	28.3	28.2	23.3	14.9
Person from a high prevalence country	*2.6*	*6.4*	*9.5*	*6.8*	*10.8*	*9.4*	*12.0*	*12.3*	*13.5*	*8.9*	*4.9*
Partner with/at risk of HIV infection	*4.0*	*8.0*	*9.1*	*8.0*	*7.4*	*9.0*	*7.1*	*6.6*	*7.7*	*8.3*	*5.2*
Not further specified	*4.0*	*4.1*	*5.2*	*4.5*	*7.3*	*6.7*	*7.9*	*9.4*	*7.0*	*6.1*	*4.8*
Haemophilia/coagulation disorder	1.5	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	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.2	0.9
Mother with/at risk of HIV infection	0.4	0.2	0.1	0.6	0.6	0.9	0.6	1.1	0.6	0.9	0.5
Health care setting	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Other/undetermined	15.7	7.0	6.9	8.5	6.3	6.1	4.2	5.3	6.3	4.4	12.9

1 Late diagnosis and advanced infection for HIV diagnoses in 2002 only. Total percentage with late HIV diagnosis in 2002 – 2011 only.

2 Not adjusted for multiple reporting.

3 Language spoken at home was sought for 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' 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[1], cumulative to 31 December 2011, by age group, sex and year

		Year of HIV diagnosis										
Age group (years)		**≤ 02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**	**Total[2]**
0 – 1	M	45	0	0	0	1	1	1	0	1	1	50
	F	22	0	1	1	3	1	1	2	1	1	33
2 – 12	M	90	0	0	2	2	4	4	3	3	3	111
	F	22	2	0	2	1	5	1	8	2	5	48
13 – 19	M	435	5	8	10	9	8	7	10	12	12	516
	F	91	4	6	3	6	2	6	3	3	5	129
20 – 29	M	6 970	165	161	183	170	196	220	222	210	265	8 762
	F	589	29	52	26	54	40	48	45	55	33	971
30 – 39	M	7 773	319	309	321	297	310	276	304	276	307	10 492
	F	413	30	30	43	47	55	57	53	61	55	844
40 – 49	M	3 684	164	191	215	242	250	234	232	244	237	5 693
	F	150	11	21	15	25	19	22	22	17	35	337
50 – 59	M	1 269	99	85	98	101	96	89	115	103	124	2 179
	F	55	5	12	4	9	12	6	10	9	6	128
60+	M	417	34	31	41	38	46	39	31	47	45	769
	F	64	5	4	1	2	4	2	3	2	2	89
Not reported	M	134	0	0	1	0	1	0	0	0	0	136
	F	32	0	0	0	0	0	0	0	0	0	32
Sub-total	M	20 817	786	785	871	860	912	870	917	896	994	28 708
	F	1 438	86	126	95	147	138	143	146	150	142	2 611
Total[2]		**22 563**	**875**	**913**	**967**	**1 010**	**1 051**	**1 013**	**1 065**	**1 051**	**1 137**	**31 645**

1 Not adjusted for multiple reporting.

2 Totals include 77 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 2011, by State/Territory and whether or not HIV infection was newly diagnosed in Australia

	Place of first diagnosis of HIV infection		
State/Territory	**Newly diagnosed in Australia**	**Newly diagnosed overseas**	**Total**
ACT	9	0	9
NSW	330	59	389
NT	9	0	9
QLD	196	26	222
SA	57	10	67
TAS	15	0	15
VIC	278	50	328
WA	82	16	98
Total	**976**	**161**	**1 137**

Source: State/Territory health authorities

Table 1.1.4 Number (percent) of new HIV diagnoses in Australia, 2007 – 2011, and age standardised rate per 100 000 population[1] by year of HIV diagnosis and region of birth

	2007			2008			2009			2010			2011		
Region/ Country of birth	Number	%	Age standardised rate	Number	%	Age standardised rate	Number	%	Age standardised rate	Number	%	Age standardised rate	Number	%	Age standardised rate
Australia	607	57.8	4.4	575	56.8	4.1	564	53.0	4.0	562	53.5	4.0	628	55.2	4.5
Overseas born	383	36.4	6.9	401	39.6	7.1	473	44.4	8.6	465	44.2	8.1	482	42.4	8.6
Other Oceania	*34*	*3.2*	*4.4*	*60*	*5.9*	*8.9*	*48*	*4.5*	*6.6*	*44*	*4.2*	*6.3*	*60*	*5.3*	*7.7*
United Kingdom and Ireland	*45*	*4.3*	*4.3*	*49*	*4.8*	*4.8*	*58*	*5.4*	*6.2*	*42*	*4.0*	*4.2*	*57*	*5.0*	*5.0*
Other Europe	*36*	*3.4*	*6.7*	*35*	*3.5*	*5.2*	*46*	*4.3*	*7.5*	*53*	*5.0*	*7.7*	*51*	*4.5*	*8.5*
Middle East/North Africa	*18*	*1.7*	*4.8*	*6*	*0.6*	*1.9*	*21*	*2.0*	*5.9*	*13*	*1.2*	*3.3*	*16*	*1.4*	*5.7*
Sub-Saharan Africa	*73*	*6.9*	*27.9*	*98*	*9.7*	*30.7*	*115*	*10.8*	*36.3*	*121*	*11.5*	*37.1*	*86*	*7.6*	*27.3*
Asia	*134*	*12.7*	*5.3*	*115*	*11.4*	*4.3*	*149*	*14.0*	*6.3*	*157*	*14.9*	*6.3*	*165*	*14.5*	*6.9*
North America	*15*	*1.4*	*9.8*	*14*	*1.4*	*9.4*	*15*	*1.4*	*10.5*	*17*	*1.6*	*12.0*	*16*	*1.4*	*11.8*
South/Central America and the Caribbean	*28*	*2.7*	*19.5*	*24*	*2.4*	*15.8*	*21*	*2.0*	*14.9*	*18*	*1.7*	*13.9*	*31*	*2.7*	*20.7*
Total with a reported country of birth	**990**	**94.2**	**4.7**	**976**	**96.3**	**4.6**	**1 037**	**97.4**	**4.9**	**1 027**	**97.7**	**4.8**	**1 110**	**97.6**	**5.2**
Not reported	61	5.8		37	3.7		28	2.6		24	2.3		27	2.4	
Total	**1 051**	**100.0**		**1 013**	**100.0**		**1 065**	**100.0**		**1 051**	**100.0**		**1 137**	**100.0**	

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

Source: State/Territory health authorities

Table 1.1.5 Median CD4+ cell count at diagnosis of HIV infection (number of HIV diagnoses with CD4+ cell count), 2007 – 2011, by State/Territory, HIV exposure category, newly acquired infection status, sex and year

		Year of HIV diagnosis				
Characteristic	**Sex**	**2007**	**2008**	**2009**	**2010**	**2011**
State/Territory						
ACT	M	355 (4)	272 (4)	275 (6)	640 (10)	575 (8)
	F	– (1)	– (1)	315 (2)	465 (2)	– (1)
NSW	M	443 (244)	440 (261)	408 (305)	413 (290)	440 (332)
	F	300 (24)	450 (37)	340 (42)	356 (29)	255 (29)
NT	M	552 (6)	407 (7)	433 (10)	418 (4)	307 (7)
	F	– (0)	– (1)	680 (5)	– (1)	– (1)
QLD	M	450 (149)	410 (131)	425 (144)	375 (182)	430 (167)
	F	360 (25)	360 (29)	380 (24)	400 (39)	410 (21)
SA	M	435 (44)	418 (41)	379 (40)	357 (36)	432 (44)
	F	336 (10)	314 (5)	353 (9)	511 (5)	313 (16)
TAS	M	399 (4)	490 (8)	713 (10)	340 (9)	363 (11)
	F	588 (3)	247 (5)	216 (3)	– (1)	357 (4)
VIC	M	441 (214)	428 (212)	442 (229)	419 (207)	433 (192)
	F	363 (31)	300 (30)	322 (25)	388 (30)	250 (20)
WA	M	444 (58)	390 (61)	344 (56)	402 (70)	372 (62)
	F	408 (15)	321 (20)	299 (24)	364 (28)	380 (27)
Exposure category						
Men who have sex with men[1]	M	465 (574)	460 (565)	448 (623)	440 (601)	455 (661)
Injecting drug use[2]	M	390 (15)	483 (19)	312 (17)	385 (16)	345 (14)
	F	355 (7)	450 (7)	– (1)	511 (7)	275 (6)
Heterosexual contact	M	332 (108)	300 (115)	284 (126)	254 (130)	317 (116)
	F	360 (94)	330 (113)	322 (121)	353 (118)	341 (102)
Other/undetermined	M	450 (26)	348 (26)	290 (34)	323 (41)	349 (32)
	F	523 (8)	430 (8)	465 (12)	437 (10)	457 (11)
Newly acquired HIV infection status						
Diagnoses of newly acquired HIV infection[3]	M	565 (215)	535 (225)	548 (258)	524 (275)	510 (319)
	F	510 (9)	675 (12)	630 (13)	516 (12)	596 (14)
Other HIV diagnoses	M	390 (508)	385 (500)	360 (542)	330 (533)	380 (504)
	F	357 (100)	320 (116)	310 (121)	356 (123)	300 (105)
Total[4]		**424 (832)**	**420 (853)**	**406 (936)**	**400 (944)**	**430 (942)**

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

	Year of HIV diagnosis												
	2007		2008		2009		2010		2011		2007 – 2011		
HIV exposure category	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Total**
Person from a high prevalence country	35	58	46	69	62	62	52	81	32	65	228	335	563
Sub-Saharan Africa	*26*	*29*	*40*	*43*	*55*	*38*	*44*	*54*	*25*	*39*	*190*	*203*	*393*
South East Asia	*4*	*24*	*4*	*21*	*3*	*17*	*4*	*21*	*1*	*20*	*16*	*103*	*119*
North Africa/Middle East	*4*	*4*	*0*	*1*	*1*	*2*	*2*	*2*	*0*	*2*	*7*	*11*	*18*
Other Oceania	*0*	*1*	*3*	*4*	*3*	*5*	*2*	*4*	*6*	*4*	*14*	*18*	*32*
Not reported	*1*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*1*
Partner from a high prevalence country	48	7	26	9	26	9	42	12	45	9	187	46	233
Sub-Saharan Africa	*6*	*5*	*3*	*3*	*7*	*8*	*2*	*7*	*5*	*7*	*23*	*30*	*53*
South East Asia	*25*	*2*	*16*	*1*	*15*	*0*	*25*	*0*	*28*	*1*	*109*	*4*	*113*
Other Oceania	*3*	*0*	*0*	*0*	*1*	*0*	*2*	*0*	*3*	*1*	*9*	*1*	*10*
Other/not reported	*14*	*0*	*7*	*5*	*3*	*1*	*13*	*5*	*9*	*0*	*46*	*11*	*57*
Heterosexual contact with partner at risk	47	53	64	47	65	62	52	39	54	48	282	249	531
Injecting drug use	*2*	*7*	*4*	*2*	*1*	*4*	*0*	*5*	*0*	*2*	*7*	*20*	*27*
Bisexual man	*–*	*5*	*–*	*10*	*–*	*4*	*–*	*1*	*–*	*7*	*–*	*27*	*27*
Partner with medically acquired HIV	*0*	*0*	*0*	*1*	*0*	*1*	*0*	*1*	*0*	*0*	*0*	*3*	*3*
Partner with HIV infected person whose exposure was not specified	*8*	*12*	*9*	*8*	*8*	*14*	*6*	*9*	*10*	*17*	*41*	*60*	*101*
Not further specified	*37*	*29*	*51*	*26*	*56*	*39*	*46*	*23*	*44*	*22*	*234*	*139*	*373*
Total	**130**	**118**	**137**	**125**	**153**	**133**	**146**	**132**	**131**	**122**	**697**	**630**	**1 327**

Source: State/Territory health authorities

Table 1.1.7 Number of specimens tested for HIV antibody in public health laboratories, 2002 – 2011, by State/Territory and year of test

	Year of HIV antibody test									
State/Territory	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
ACT[1]	5 712	7 978	14 388	15 551	16 565	17 602	19 443	20 173	–	21 316
NSW	357 526	358 063	347 064	356 046	322 569	251 724	191 873	114 041	151 320	119 225
NT	15 710	16 407	15 323	15 217	7 247	6 686	7 782	6 360	6 924	8 466
QLD	184 994	188 403	206 322	222 558	238 509	251 430	253 778	210 315	135 198	144 908
SA	75 360	79 409	83 970	88 158	88 552	80 664	95 696	62 560	61 252	64 010
TAS	12 574	12 967	12 754	13 041	12 573	12 248	13 346	4 126	4 447	4 571
VIC	202 682	204 561	152 284	165 461	183 508	253 145	231 844	224 300	148 623	235 822
WA	93 271	100 483	102 694	114 203	101 277	104 540	124 688	167 695	134 241	133 468
Total	**947 829**	**968 271**	**934 799**	**990 235**	**970 800**	**978 039**	**938 450**	**809 570**	**642 005**	**731 786**

1 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[1], 2002 – 2011, by year. Total number of cases, median age, and number of cases by State/Territory, HIV exposure category, evidence of newly acquired HIV infection, sex and year

		Year of HIV diagnosis										
Characteristic	**Sex**	**02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**	**Total[2]**
Total cases		**246**	**286**	**261**	**281**	**308**	**282**	**286**	**301**	**308**	**378**	**2 937**
Males (%)	M	94.7	96.2	94.3	96.8	93.5	95.7	95.1	94.7	95.4	95.8	95.2
Median age (years)	M	34	33	35	35	36	35	35	36	35	35	35
	F	37	34	23	27	35	35	31	29	38	36	32
State/Territory												
ACT	M	2	0	2	1	3	2	0	3	3	4	20
	F	0	0	0	0	1	0	0	0	0	0	1
NSW	M	118	153	113	128	110	115	123	114	125	166	1 265
	F	2	4	5	3	7	4	6	8	2	4	45
NT	M	1	0	2	1	2	1	2	4	2	2	17
	F	0	0	0	0	0	0	0	3	0	1	4
QLD	M	34	26	42	42	57	48	44	60	54	58	465
	F	3	3	3	1	1	4	2	2	4	3	26
SA	M	6	15	15	15	17	7	6	6	4	5	96
	F	0	1	1	0	0	0	1	0	1	0	4
TAS	M	1	0	1	2	0	0	1	2	2	5	14
	F	0	0	0	0	0	0	0	0	0	0	0
VIC	M	67	69	62	74	85	83	81	88	89	97	795
	F	0	3	4	4	8	3	5	2	5	4	38
WA	M	4	12	9	9	14	14	15	8	15	25	125
	F	6	0	1	1	2	1	0	0	1	4	16
HIV exposure category												
Men who have sex with men	M	212	243	209	234	247	235	240	246	265	327	2 458
Male who have sex with men, and injecting drug use	M	9	12	12	15	13	5	11	11	7	7	102
Injecting drug use[3]	M	0	5	2	2	2	2	0	2	1	2	18
	F	0	2	4	1	2	1	3	0	1	1	15
Heterosexual contact	M	8	13	16	9	16	20	18	19	13	21	153
	F	10	9	10	8	16	10	11	14	12	14	114
Health care setting[4]	M	0	0	2	0	0	0	0	0	0	0	2
	F	1	0	0	0	0	0	0	0	0	0	1
Other/undetermined	M	4	2	5	12	10	8	3	7	8	5	64
	F	0	0	0	0	1	1	0	1	0	1	4
Evidence of newly acquired infection												
Testing history only	M	98	139	105	128	150	126	123	134	132	143	1 278
	F	1	5	10	5	7	5	7	5	7	3	55
Primary HIV infection only	M	51	44	46	49	44	61	60	52	80	98	585
	F	2	0	3	2	9	5	5	6	1	9	42
Testing history	M	84	92	95	95	94	83	89	97	82	121	932
and primary HIV infection	F	8	6	1	2	3	2	2	4	5	4	37

1 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.

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

3 Excludes men who have sex with men.

4 'Health care setting' includes 1 case of occupationally acquired HIV infection.

Source: State/Territory health authorities

Table 1.2.2 Number of cases of HIV infection newly diagnosed in 2011 with a matching BED capture enzyme immunoassay (BED-CEIA) record[1], number with newly acquired infection[2], number without newly acquired infection that were tested for incident HIV infection using the BED-CEIA[3], number with BED-CEIA evidence only of incident infection[4], and total number (%) of diagnoses of recent infection[5], by State/Territory[6]

State/ Territory	Number of new diagnoses with a BED-CEIA record[1]	Number (%) with newly acquired infection[2]	Number without newly acquired infection, tested for incident infection[3]	Number with incident HIV infection only[4]	Total number (%) with recent HIV infection[5]
ACT	9	4 (44.4)	3	2	6 (66.7%)
NSW[6]	330	178 (53.9%)	–	–	178 (53.9%)
NT	1	0 (0.0%)	1	0	0 (0.0%)
QLD	109	38 (34.9%)	71	19	57 (52.3%)
SA	34	2 (5.9%)	32	7	9 (26.5%)
TAS	0	0 (0.0%)	0	0	0 (0.0%)
VIC	311	95 (30.5%)	216	53	148 (47.6%)
WA	39	6 (15.4%)	33	4	10 (25.6%)
Total	**833**	**323 (38.8%)**	**356**	**85**	**408 (49.0%)**

1 Number of cases of HIV infection newly diagnosed in 2011, excluding cases previously diagnosed overseas.

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 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).

4 Number of cases with incident HIV infection only, detected by the BED-CEIA.

5 Total number of cases of newly acquired infection plus cases with incident infection only, detected by the BED-CEIA.

6 Total number of diagnoses of newly acquired HIV infection in NSW only.

Source: State and Territory health authorities

Table 1.2.3 Number and percentage of isolates with resistance at one or more loci, by drug class against which resistance was detected and year

			Drug class against which resistance was detected		
Year of diagnosis	Total	% non-B subtypes	PI[1] Number (%)	NRTI[1] Number (%)	NNRTI[1] 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)

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[1], 2002 – 2011, 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

	Year of HIV diagnosis										
Characteristic	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**Total**
Total cases	**27**	**23**	**22**	**18**	**23**	**19**	**19**	**24**	**22**	**22**	**219**
Males (%)	55.6	73.9	72.7	83.3	73.9	84.2	77.9	83.3	68.2	77.3	74.4
Median age (years)	36	34	29	33	31	33	36	37	35	33	34
Newly acquired infection (%)	22.2 (6)	17.4 (4)	31.8 (7)	16.7 (3)	30.4 (7)	26.3 (5)	31.6 (6)	29.2 (7)	22.7 (5)	22.7 (5)	25.1 (55)
HIV status at diagnosis (%)[2]											
Late HIV diagnosis	29.6	4.3	4.5	5.6	13.0	26.3	21.1	12.5	18.2	4.5	14.2
Advanced HIV infection	18.5	26.1	31.8	11.1	8.7	10.5	15.8	33.3	9.1	36.4	20.5
State/Territory (%)											
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)
NSW	29.6 (8)	17.4 (4)	18.2 (4)	11.1 (2)	38.1 (9)	42.1 (8)	38.9 (8)	39.1 (9)	31.8 (7)	22.7 (5)	29.2 (64)
NT	7.4 (2)	4.3 (1)	4.5 (1)	0.0 (0)	0.0 (0)	0.0 (0)	5.6 (1)	0.0 (0)	4.5 (1)	9.1 (2)	3.7 (8)
QLD	18.5 (5)	26.1 (6)	22.7 (5)	44.4 (8)	23.8 (6)	26.3 (5)	11.1 (2)	30.4 (8)	36.4 (8)	36.4 (8)	27.9 (61)
SA	7.4 (2)	8.7 (2)	9.1 (2)	0.0 (0)	0.0 (0)	5.3 (1)	22.2 (4)	8.7 (2)	4.5 (1)	0.0 (0)	6.4 (14)
TAS	0.0 (0)	0.0 (0)	4.5 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	4.4 (1)	0.0 (0)	4.5 (1)	1.4 (3)
VIC	3.7 (1)	21.7 (5)	18.2 (4)	11.1 (2)	9.5 (2)	15.8 (3)	0.0 (0)	4.4 (1)	13.6 (3)	4.5 (1)	10.0 (22)
WA	33.3 (9)	21.7 (5)	22.7 (5)	33.3 (6)	28.6 (6)	10.5 (2)	22.2 (4)	13.0 (3)	9.1 (2)	22.7 (5)	21.5 (47)
HIV exposure category (%)											
Men who have sex with men	25.9 (7)	31.8 (7)	52.4 (11)	27.8 (5)	47.8 (11)	47.4 (9)	47.4 (9)	52.6 (10)	60.0 (12)	66.7 (14)	45.5 (95)
Men who have sex with men, and injecting drug use	3.7 (1)	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)	8.6 (18)
Injecting drug use[3]	14.8 (4)	13.6 (3)	19.0 (4)	16.7 (3)	21.7 (5)	15.8 (3)	36.8 (7)	10.5 (2)	20.0 (4)	4.8 (1)	17.2 (36)
Heterosexual contact	55.6 (15)	40.9 (9)	28.6 (6)	27.8 (5)	26.1 (6)	21.1 (4)	10.5 (2)	21.1 (4)	15.0 (3)	23.8 (5)	28.2 (59)
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)	0.0 (0)	4.8 (1)	0.5 (1)
Other/undetermined[4]	0.0 (0)	4.3 (1)	4.5 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	20.8 (5)	9.1 (2)	4.5 (1)	4.6 (10)

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[1] of diagnosis of HIV infection, 2007 – 2011, by year, Aboriginal and Torres Strait Islander status and area of residence

		Year of diagnosis				
Area of residence	**Aboriginal and Torres Strait Islander status**	**2007**	**2008**	**2009**	**2010**	**2011**
Major cities	Aboriginal and Torres Strait Islander	10	9	12	9	8
	Non-Indigenous[2]	6	6	7	7	7
Inner regional	Aboriginal and Torres Strait Islander	3	2	2	4	2
	Non-Indigenous[2]	2	2	2	2	2
Outer regional	Aboriginal and Torres Strait Islander	2	1	2	4	4
	Non-Indigenous[2]	3	5	3	2	3
Remote	Aboriginal and Torres Strait Islander	0	3	3	0	0
	Non-Indigenous[2]	4	1	2	1	2
Very remote	Aboriginal and Torres Strait Islander	0	0	1	1	6
	Non-Indigenous[2]	0	0	2	2	1
Total	**Aboriginal and Torres Strait Islander**	**4**	**4**	**5**	**5**	**5**
	Non-Indigenous[2]	**5**	**5**	**5**	**5**	**6**

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: National Notifiable Diseases Surveillance System

1.4 National surveillance for perinatal exposure to HIV

Table 1.4.1 Number and population rate[1] of perinatal exposure to HIV among children born in Australia, 2002 – 2011, by State/Territory and year of birth

	Year of birth									
State/	2002 – 2003		2004 – 2005		2006 – 2007		2008 – 2009		2010 – 2011	
Territory	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	1	12.1	0	0.0	0	0.0	0	0.0	1	9.7
NSW	18	10.4	26	15.1	19	10.7	28	14.9	30	15.6
NT	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
QLD	8	8.3	13	12.8	14	12.3	13	10.1	8	6.2
SA	2	5.7	1	2.9	4	10.5	4	10.0	1	10.0
TAS	0	0.0	0	0.0	1	7.6	1	7.5	3	23.5
VIC	4	3.3	7	5.6	17	12.5	32	22.5	31	22.0
WA	12	25.1	3	5.8	2	3.5	0	0.0	7	11.1
Total	**45**	**9.0**	**50**	**9.7**	**57**	**10.3**	**78**	**13.2**	**81**	**14.4**

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

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

Table 1.4.2 Number of women whose perinatally HIV exposed children were born in Australia, 2002 – 2011, by time of the woman's HIV diagnosis relative to the first exposed child's birth in 2002 – 2011

	Interval of the woman's HIV diagnosis					
First exposed	Before or at the birth (years)					
child's year of birth	<1	1-2	>2	Total	After the birth	Total
2002 – 2003	12	1	27	40	1	41
2004 – 2005[1]	18	4	18	40	3	44
2006 – 2007	12	8	18	38	4	42
2008 – 2009[1]	25	8	23	56	0	59
2010 – 2011[1]	24	3	26	53	1	56
Total[1]	**91**	**24**	**112**	**227**	**9**	**242**

1 Total includes 1 woman whose first exposed child was born in 2004 – 2005 and whose date of HIV diagnosis was not reported, 3 women whose first exposed child was born in 2008 – 2009 and whose date of HIV diagnosis was not reported and 2 women whose first exposed child was born in 2010 – 2011 and whose date of HIV diagnosis was not reported.

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

Table 1.4.3 Number of perinatally exposed children born in Australia, 2002 – 2011, 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

	Interval of the woman's HIV diagnosis					
	Before or at the birth		After the birth		Total	
Child's year of birth	Number exposed	Number with HIV	Number exposed	Number with HIV	Number exposed[1]	Number with HIV[2]
2002 – 2003	44	3	1	0	45	3
2004 – 2005[1]	46	0	3	2	50	2
2006 – 2007	53	3	4	3	57	6
2008 – 2009[1,2]	75	0	0	0	78	1
2010 – 2011[1]	78	1	1	0	81	1
Total[1]	**296**	**7**	**9**	**5**	**311**	**13**

1 Totals include 1 exposed child born in 2004 – 2005, 3 exposed children born in 2008 – 2009 and 2 exposed children born in 2010 – 2011, for whom the date of the woman's HIV diagnosis was not reported. The cumulative total includes 6 exposed children, born in 2002 – 2011, to women whose date of HIV diagnosis was not reported.

2 Total number of children with HIV infection born in 2008 – 2009 in includes 1 child whose mother's date of HIV diagnosis was not reported.

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

1.5 Global comparisons for HIV

Table 1.5.1 Estimated HIV prevalence in selected countries

	HIV prevalence	
Country	**2011[1]**	**Rate[2]**
Africa		
Mauritius[3]	8 800	1 000
Somalia[3]	34 000	700
South Africa[3]	5 600 000	17 800
Sudan[3]	260 000	1 100
Zambia[3]	980 000	13 500
Zimbabwe[3]	1 200 000	14 300
Asia Pacific		
Australia	24 731	115
Cambodia[3]	63 000	500
China[3]	740 000	100
India[3]	2 400 000	300
Indonesia[3]	310 000	200
Japan[3]	8 100	<100
Malaysia[3]	100 000	500
Myanmar[3]	240 000	600
New Zealand[3]	2 500	100
Papua New Guinea[3]	34 000	900
Philippines[3]	8 700	<100
Republic of Korea[3]	9 600	<100
Thailand[3]	530 000	1 300
Vietnam[3]	280 000	400
Europe		
France[3]	150 000	400
Germany[3]	67 000	100
Italy[3]	140 000	300
Spain[3]	130 000	400
United Kingdom[4]	91 500	150
North America		
Canada[3]	67 000	200
United States[5]	1 148 200	456

1 Estimated number of people living with HIV/AIDS.

2 Rate per 100 000 population aged 15 – 49 years.

3 Estimated HIV prevalence in 2009.

4 Estimated HIV prevalence in 2010.

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

Tables

2 National surveillance for viral hepatitis

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

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

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[1] of diagnosis of hepatitis A infection, 2007 – 2011, by State/Territory and year

	Year of diagnosis									
	2007		2008		2009		2010		2011	
State/Territory	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	2	0.5	5	1.6	6	1.5	5	1.3	3	0.8
NSW	65	0.9	69	1.0	98	1.4	83	1.2	57	0.8
NT	5	1.9	3	2.3	1	0.4	3	1.5	3	1.1
QLD	29	0.7	72	1.7	56	1.3	41	0.9	25	0.5
SA	5	0.3	20	1.3	59	3.8	4	0.3	6	0.4
TAS	3	0.6	1	0.2	5	1.1	4	0.8	4	0.8
VIC	36	0.7	85	1.6	304	5.6	95	1.8	34	0.6
WA	21	1.0	22	1.0	35	1.6	32	1.4	12	0.5
Total	**166**	**0.8**	**277**	**1.3**	**564**	**2.6**	**267**	**1.2**	**144**	**0.6**

1 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, 2007 – 2011, by age group, year and sex

	Year of diagnosis														
Age group	2007			2008			2009			2010			2011		
(years)	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
0 – 4	5	8	13	9	6	15	13	6	19	12	14	26	5	3	8
5 – 14	10	19	29	35	25	60	29	21	50	35	23	58	15	9	24
15 – 19	4	4	8	12	7	19	22	23	45	9	15	24	6	5	11
20 – 29	23	18	41	41	34	75	73	62	135	23	25	48	20	12	32
30 – 39	15	9	24	22	10	32	56	64	120	21	15	36	18	14	32
40 – 49	14	9	23	15	15	30	35	43	78	11	15	26	5	2	7
50 – 59	6	4	10	15	8	23	26	38	64	14	9	23	7	6	13
60+	8	10	18	10	13	23	25	28	53	9	17	26	9	8	17
Total	**85**	**81**	**166**	**159**	**118**	**277**	**279**	**285**	**564**	**134**	**133**	**267**	**85**	**59**	**144**

Source: National Notifiable Diseases Surveillance System

Table 2.1.3 Number and rate[1] of diagnosis of hepatitis B infection, 2007 – 2011, by State/Territory and year

	Year of diagnosis									
	2007		2008		2009		2010		2011	
State/Territory	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	68	19.6	59	16.2	106	28.5	95	25.8	95	24.1
NSW	2 555	37.1	2 489	35.7	2 622	37.0	2 563	35.4	2 532	34.5
NT	246	120.8	200	96.4	162	75.3	160	69.5	163	70.2
QLD	1 030	24.9	878	20.7	1 061	24.4	1 119	25.1	905	19.9
SA	520	33.5	431	27.5	458	28.9	432	26.9	412	25.7
TAS	45	9.8	70	15.1	85	18.5	57	12.2	53	11.4
VIC	1 948	37.0	1 918	35.9	2 023	36.9	1 965	35.0	1 982	34.6
WA	667	31.8	658	30.6	739	33.1	797	34.6	677	28.6
Total	**7 079**	**33.7**	**6 703**	**31.4**	**7 256**	**33.3**	**7 188**	**32.2**	**6 819**	**30.0**

1 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, 2007 – 2011, by age group, year and sex

	Year of diagnosis														
Age group	2007			2008			2009			2010			2011		
(years)	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]
0 – 4	10	6	16	14	10	24	2	4	6	10	10	20	5	3	8
5 – 14	78	67	146	80	60	142	79	51	131	74	39	114	56	26	83
15 – 19	192	138	333	167	125	295	187	138	326	161	127	292	143	107	250
20 – 29	914	1 023	1 947	840	969	1 827	938	972	1 936	876	1 039	1 952	922	930	1 890
30 – 39	1 066	862	1 950	982	848	1 849	1 056	948	2 031	1 053	936	2 019	986	860	1 878
40 – 49	844	537	1 393	812	464	1 282	861	520	1 389	779	487	1 274	768	450	1 228
50 – 59	469	320	793	441	296	739	536	341	881	510	384	896	544	337	884
60+	290	199	495	309	227	537	315	222	544	357	249	614	331	259	594
Not reported	2	1	6	2	2	8	7	3	12	2	3	7	1	0	4
Total	**3 865**	**3 153**	**7 079**	**3 647**	**3 001**	**6 703**	**3 981**	**3 199**	**7 256**	**3 822**	**3 274**	**7 188**	**3 756**	**2 972**	**6 819**

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

Source: National Notifiable Diseases Surveillance System

Table 2.1.5 Number and rate[1] of diagnosis of newly acquired hepatitis B infection, 2007 – 2011, by State/Territory and year

	Year of diagnosis									
	2007		2008		2009		2010		2011	
State/Territory	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	13	3.4	1	0.3	5	1.4	3	0.6	2	0.5
NSW	56	0.8	45	0.6	37	0.5	35	0.5	31	0.4
NT	10	4.1	8	4.2	4	1.6	3	1.2	4	1.5
QLD	70	1.7	47	1.1	49	1.1	57	1.3	46	1.0
SA	12	0.8	11	0.7	10	0.6	21	1.3	9	0.6
TAS	9	2.0	11	2.6	9	2.1	6	1.3	13	2.9
VIC	84	1.6	88	1.6	89	1.6	70	1.3	67	1.2
WA	42	2.0	48	2.2	38	1.7	33	1.4	18	0.8
Total	**296**	**1.4**	**259**	**1.2**	**241**	**1.1**	**228**	**1.0**	**190**	**0.8**

1 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, 2007 – 2011, by age group, year and sex

	Year of diagnosis														
Age group	2007			2008			2009			2010			2011		
(years)	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
0 – 4	0	1	1	1	1	2	1	0	1	0	5	5	1	0	1
5 – 14	2	2	4	1	2	3	1	0	1	3	1	4	0	0	0
15 – 19	9	10	19	6	5	11	3	4	7	5	4	9	3	3	6
20 – 29	57	40	97	50	32	82	44	20	64	35	24	59	28	21	49
30 – 39	58	29	87	50	26	76	45	31	76	37	19	56	48	21	69
40 – 49	28	14	42	39	9	48	36	11	47	35	11	46	23	9	32
50 – 59	20	7	27	15	3	18	15	9	24	23	8	31	17	5	22
60+	15	4	19	16	3	19	14	7	21	11	7	18	10	1	11
Total	**189**	**107**	**296**	**178**	**81**	**259**	**159**	**82**	**241**	**149**	**79**	**228**	**130**	**60**	**190**

Source: National Notifiable Diseases Surveillance System

Table 2.1.7 Number of diagnoses of newly acquired hepatitis B infection[1], 2007 – 2011, by exposure category, year and sex

	Year of diagnosis														
	2007			2008			2009			2010			2011		
Exposure category	**M**	**F**	**T**	**M**	**F**	**T**	**M**	**F**	**T**	**M**	**F**	**T**	**M**	**F**	**T**
Injecting drug use	32	18	50	33	9	42	34	19	53	31	18	49	28	11	39
Sexual contact	9	11	20	16	8	24	22	10	32	6	8	14	18	6	24
Men who have sex with men	*3*	*–*	*3*	*1*	*–*	*1*	*7*	*–*	*7*	*0*	*–*	*0*	*6*	*–*	*6*
Heterosexual contact	*6*	*11*	*17*	*13*	*7*	*20*	*11*	*9*	*20*	*5*	*7*	*12*	*9*	*5*	*14*
Not further specified	*0*	*0*	*0*	*2*	*1*	*3*	*4*	*1*	*5*	*1*	*1*	*2*	*3*	*1*	*4*
Blood/tissue recipient	0	0	0	2	0	2	2	1	3	0	0	0	0	1	1
Skin penetration procedure	4	0	4	6	4	10	3	2	5	6	1	7	10	4	14
Healthcare exposure	1	0	1	4	1	5	3	1	4	3	0	3	2	3	5
Household contact	4	3	7	3	2	5	2	0	2	3	4	7	2	1	3
Other	15	5	20	3	1	4	7	2	9	5	4	9	5	0	5
Undetermined	1	3	4	15	5	20	28	18	46	30	10	40	20	15	35
Total	**66**	**40**	**106**	**82**	**30**	**112**	**101**	**53**	**154**	**84**	**45**	**129**	**85**	**41**	**126**

1 Includes diagnoses in the Australian Capital Territory in 2009 and 2011 only, diagnoses in New South Wales and the Northern Territory in 2009 – 2011, diagnoses in South Australia and Victoria in 2007 – 2011 and diagnoses in Tasmania in 2007 – 2009 and 2011.

Source: National Notifiable Diseases Surveillance System

Table 2.1.8 Number and percentage of diagnoses of newly acquired hepatitis B infection[1], 2007 – 2011, and the Australian population, by region/country of birth and year

	Year of diagnosis										
	2007		2008		2009		2010		2011		Australian
Region/country of birth	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	population[2]
Total with a reported country of birth	**162**	**82.2**	**139**	**86.9**	**175**	**92.6**	**137**	**80.1**	**116**	**80.6**	**21 507 719**
Australia	133	67.5	96	60.0	113	59.8	90	52.6	80	55.6	69.8
Overseas born	29	14.7	43	26.9	62	32.8	47	27.5	36	25.0	24.6
Other Oceania	*4*	*2*	*5*	*3.1*	*11*	*5.8*	*2*	*1.2*	*7*	*4.9*	*2.8*
United Kingdom and Ireland	*6*	*3*	*5*	*3.1*	*12*	*6.3*	*4*	*2.3*	*4*	*2.8*	*5.4*
Other Europe	*8*	*4.1*	*6*	*3.7*	*10*	*5.3*	*8*	*4.7*	*2*	*1.4*	*4.5*
Middle East/North Africa	*2*	*1*	*3*	*1.9*	*7*	*3.7*	*7*	*4.1*	*4*	*2.8*	*1.4*
Sub-Saharan Africa	*1*	*0.5*	*2*	*1.3*	*3*	*1.6*	*7*	*4.1*	*5*	*3.5*	*1.3*
Asia	*7*	*3.6*	*19*	*11.9*	*19*	*10.1*	*17*	*9.9*	*14*	*9.7*	*8.1*
North America	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0.6*	*0*	*0.0*	*0.5*
South/Central America and the Caribbean	*1*	*0.5*	*3*	*1.9*	*0*	*0*	*1*	*0.6*	*0*	*0.0*	*0.5*
Not reported	35	17.8	21	13.1	14	7.4	34	19.9	28	19.4	5.6
Total	**197**	**100**	**160**	**100**	**189**	**100**	**171**	**100**	**144**	**100**	

1 Includes diagnoses in the Australian Capital Territory, New South Wales, the Northern Territory, Tasmania and Western Australia in 2009 – 2011 and diagnoses in South Australia and Victoria in 2007 – 2011 only.

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

Source: National Notifiable Diseases Surveillance System

Table 2.1.9 Number and rate[1] of diagnosis of hepatitis C infection, 2007 – 2011, by State/Territory and year

	Year of diagnosis									
	2007		2008		2009		2010		2011	
State/Territory	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
ACT	199	54.9	200	55.4	165	44.5	223	59.4	191	50.6
NSW	4 045	58.9	3 653	52.7	3 790	53.9	3 767	52.6	3 326	45.9
NT	224	103.4	212	95.3	166	73.4	170	74.6	209	86.8
QLD	2 680	64.9	2 585	61.0	2 652	61.3	2 703	60.9	2 435	53.9
SA	628	40.6	584	37.3	555	35.2	530	33.3	458	28.5
TAS	274	59.1	348	75.5	282	61.0	263	55.6	229	48.8
VIC	2 755	52.6	2 411	45.4	2 513	46.5	2 592	46.8	2 337	41.6
WA	1 249	59.4	1 326	61.5	1 146	51.5	1 069	46.7	1 076	46.0
Total	**12 054**	**57.5**	**11 319**	**53.2**	**11 269**	**52.1**	**11 317**	**51.2**	**10 261**	**45.7**

1 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, 2007 – 2011, by age group, year and sex

	Year of diagnosis														
Age group	2007			2008			2009			2010			2011		
(years)	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]
0 – 4	8	10	18	8	11	20	4	12	16	10	12	22	8	5	13
5 – 14	16	16	32	12	9	21	14	16	31	14	10	26	11	10	22
15 – 19	119	174	294	131	173	305	128	145	274	114	134	251	107	133	240
20 – 29	1 718	1 161	2 888	1 567	1 103	2 679	1 395	1 094	2 503	1 396	1 005	2 456	1 311	862	2 184
30 – 39	2 265	1 271	3 550	2 048	1 151	3 207	2 080	1 076	3 179	1 999	1 205	3 243	1 883	980	2 885
40 – 49	2 133	1 064	3 204	1 919	953	2 878	1 925	929	2 864	1 842	935	2 787	1 711	798	2 513
50 – 59	1 036	504	1 544	1 171	534	1 709	1 312	567	1 884	1 345	627	1 978	1 238	595	1 833
60+	287	225	515	268	228	499	255	255	511	311	223	536	323	232	560
Not reported	3	2	9	0	0	1	1	1	7	10	5	18	6	2	11
Total	**7 585**	**4 427**	**12 054**	**7 124**	**4 162**	**11 319**	**7 114**	**4 095**	**11 269**	**7 041**	**4 156**	**11 317**	**6 598**	**3 617**	**10 261**

1 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, 2007 – 2011, by State/Territory and year

	Year of diagnosis[1]				
State/Territory	2007	2008	2009	2010	2011
ACT	10	5	8	12	9
NSW	65	26	41	40	45
NT	4	6	5	0	3
QLD	–	–	–	–	–
SA	49	43	37	43	33
TAS	20	21	22	23	27
VIC	152	162	192	207	163
WA	79	100	93	76	120
Total	**379**	**363**	**398**	**401**	**400**

1 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, 2007 – 2011, by age group, year and sex

	Year of diagnosis														
Age group	2007			2008			2009			2010			2011		
(years)	M	F	T	M	F	T	M	F	T	M	F	T[1]	M	F	T
0 – 4	2	2	4	0	1	1	1	5	6	2	3	5	1	0	1
5 – 14	0	2	2	0	0	0	0	2	2	1	0	1	0	2	2
15 – 19	22	24	46	22	19	41	18	12	30	8	20	28	15	23	38
20 – 29	115	58	173	116	67	183	128	82	210	105	88	193	143	60	203
30 – 39	68	37	105	52	41	93	70	34	104	59	48	107	66	24	90
40 – 49	24	14	38	22	11	33	18	15	33	35	15	50	34	14	48
50 – 59	4	3	7	3	4	7	5	4	9	12	3	15	11	6	17
60+	0	4	4	3	2	5	1	0	1	0	2	2	0	1	1
Not reported	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
Total	**235**	**144**	**379**	**218**	**145**	**363**	**241**	**154**	**398**	**222**	**179**	**401**	**270**	**130**	**400**

Source: National Notifiable Diseases Surveillance System

Table 2.1.13 Number of diagnoses of newly acquired hepatitis C infection[1], 2007 – 2011, by exposure category, year and sex

	Year of diagnosis														
	2007			2008			2009			2010			2011		
Exposure category	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Injecting drug use	156	88	244	160	94	254	164	95	259	159	107	266	175	65	240
Sexual contact	8	5	13	6	8	14	6	8	14	9	3	12	6	8	14
Blood/tissue recipient	1	1	2	0	0	0	0	0	0	1	0	1	0	0	0
Skin penetration procedure	3	5	8	6	4	10	4	4	8	5	5	10	12	2	14
Healthcare exposure	2	4	6	2	3	5	1	9	10	2	7	9	1	3	4
Household contact	0	1	1	1	0	1	0	2	2	2	0	2	1	1	2
Other	15	16	31	14	9	23	27	13	40	20	6	26	15	5	20
Undetermined	50	24	74	29	27	56	39	23	62	24	51	75	60	46	106
Total	**235**	**144**	**379**	**218**	**145**	**363**	**241**	**154**	**395**	**222**	**179**	**401**	**270**	**130**	**400**

Source: National Notifiable Diseases Surveillance System

Table 2.1.14 Number and percentage of diagnoses of newly acquired hepatitis C infection[1], 2007 – 2011, and the Australian population, by region/country of birth and year

	Year of diagnosis										
	2007		2008		2009		2010		2011		Australian
Region/country of birth	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	population[2]
Total with a reported country of birth	**317**	**82.8**	**312**	**88.1**	**320**	**80.2**	**315**	**83.3**	**317**	**85.7**	**21 507 719**
Australia	285	74.4	280	79.1	282	70.7	280	74.1	285	77.0	69.8
Overseas born	32	8.4	32	9.0	38	9.5	35	9.3	32	8.6	24.6
Other Oceania	*4*	*1.0*	*3*	*0.8*	*8*	*2.0*	*5*	*1.3*	*9*	*2.4*	*2.8*
United Kingdom and Ireland	*6*	*1.6*	*10*	*2.8*	*5*	*1.3*	*7*	*1.9*	*4*	*1.1*	*5.4*
Other Europe	*6*	*1.6*	*2*	*0.6*	*4*	*1.0*	*6*	*1.6*	*0*	*0.0*	*4.5*
Middle East/North Africa	*3*	*0.8*	*2*	*0.6*	*4*	*1.0*	*3*	*0.8*	*3*	*0.8*	*1.4*
Sub-Saharan Africa	*2*	*0.5*	*1*	*0.3*	*0*	*0.0*	*3*	*0.8*	*1*	*0.3*	*1.3*
Asia	*10*	*2.6*	*13*	*3.7*	*13*	*3.3*	*7*	*1.9*	*12*	*3.2*	*8.1*
North America	*0*	*0.0*	*1*	*0.3*	*2*	*0.5*	*2*	*0.5*	*1*	*0.3*	*0.5*
South/Central America and the Caribbean	*1*	*0.3*	*0*	*0.0*	*2*	*0.5*	*2*	*0.5*	*2*	*0.5*	*0.5*
Not reported	66	17.2	42	11.9	79	19.8	63	16.7	53	14.3	5.6
Total	**383**	**100**	**354**	**100**	**399**	**100**	**378**	**100**	**370**	**100**	**100.0**

1 Includes diagnoses in the Australian Capital Territory in 2009 – 2011, diagnoses in New South Wales in 2007 and 2009 – 2011, diagnoses in the Northern Territory in 2008 only and diagnoses in South Australia, Tasmania, Victoria and Western Australia in 2007 – 2011.

2 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, 2007 – 2011, by State/Territory and year

	Year of diagnosis				
State/Territory	**2007**	**2008**	**2009**	**2010**	**2011**
ACT	0	0	0	0	0
NSW	11	13	9	8	9
NT	0	1	0	0	0
QLD	9	7	13	20	7
SA	12	14	16	9	8
TAS	0	0	0	0	0
VIC	9	14	13	6	17
WA	4	6	0	0	2
Total	**45**	**55**	**51**	**43**	**43**

Source: National Notifiable Diseases Surveillance System

Table 2.1.16 Number of diagnoses of hepatitis D infection, 2007 – 2011, by age group, year and sex

	Year of diagnosis														
Age group	**2007**			**2008**			**2009**			**2010**			**2011**		
(years)	**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	0	0	0	1	0	1	0	0	0
15 – 19	1	0	1	3	2	5	5	1	6	2	0	2	1	1	2
20 – 29	10	4	14	10	1	11	10	6	16	6	1	7	2	4	6
30 – 39	10	5	15	13	1	14	5	3	8	4	7	11	10	3	13
40 – 49	10	3	13	10	4	14	8	0	8	11	1	12	6	6	12
50 – 59	2	0	2	5	2	7	8	2	10	8	1	9	7	0	7
60+	0	0	0	2	2	4	0	2	2	1	0	1	1	2	3
Not reported	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Total	**33**	**12**	**45**	**43**	**12**	**55**	**36**	**15**	**51**	**33**	**10**	**43**	**27**	**16**	**43**

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, 2011, by State/Territory and Aboriginal and Torres Strait Islander status

	Aboriginal and Torres Strait Islander status				
State/Territory	**Aboriginal and Torres Strait Islander**	**Non-Indigenous**	**Not reported**	**Total**
ACT	0 (0.0)	3 (100.0)	0 (0.0)	3
NSW	1 (1.8)	55 (96.5)	1 (1.8)	57
NT	0 (0.0)	3 (100.0)	0 (0.0)	3
QLD	0 (0.0)	18 (72.0)	7 (28.0)	25
SA	0 (0.0)	6 (100.0)	0 (0.0)	6
TAS	1 (25.0)	3 (75.0)	0 (0.0)	4
VIC	0 (0.0)	33 (97.1)	1 (2.9)	34
WA	0 (0.0)	12 (100.0)	0 (0.0)	12
Total	**2 (1.4)**	**133 (92.4)**	**9 (6.3)**	**144**

Source: National Notifiable Diseases Surveillance System

Table 2.2.2 Number and rate[1] of diagnosis of hepatitis B infection, 2007 – 2011, by year, State/Territory[2] and Aboriginal and Torres Strait Islander status

State/	Aboriginal and Torres Strait	2007		2008		2009		2010		2011	
Territory	Islander status	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
NT	Aboriginal and Torres Strait Islander	157	385	115	273	79	201	75	178	76	182
	Non-Indigenous[3]	89	51	85	53	83	49	85	50	87	52
SA	Aboriginal and Torres Strait Islander	34	130	26	139	19	77	23	107	29	134
	Non-Indigenous[3]	486	32	405	27	439	29	409	27	383	25
TAS	Aboriginal and Torres Strait Islander	1	7	0	0	2	11	1	8	2	13
	Non-Indigenous[3]	44	10	70	16	83	19	56	13	51	12
WA	Aboriginal and Torres Strait Islander	46	80	61	119	40	97	43	100	55	92
	Non-Indigenous[3]	621	28	597	27	699	31	754	34	622	28
Total	**Aboriginal and Torres Strait Islander**	**238**	**190**	**202**	**123**	**140**	**103**	**142**	**112**	**162**	**151**
	Non-Indigenous[3]	**1 240**	**27**	**1 157**	**19**	**1 304**	**32**	**1 304**	**31**	**1 143**	**33**

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, 2011, by State/Territory[1] and Aboriginal and Torres Strait Islander status

	Aboriginal and Torres Strait Islander status						
State/Territory	**Aboriginal and Torres Strait Islander**		**Non-Indigenous**		**Not reported**		**Total**
ACT	0	(0.0)	94	(98.9)	1	(1.1)	95
NSW	–		–		2 351	(92.9)	2 532
NT	76	(46.6)	74	(45.4)	13	(8.0)	163
QLD	–		–		627	(69.3)	905
SA	29	(7.0)	372	(90.3)	11	(2.7)	412
TAS	2	(3.8)	39	(73.6)	12	(22.6)	53
VIC	–		–		1 287	(64.9)	1 982
WA	55	(8.1)	570	(84.2)	52	(7.7)	677
Total	**254**	**(3.7)**	**2 211**	**(32.4)**	**4 354**	**(63.9)**	**6 819**

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

Source: National Notifiable Diseases Surveillance System

Table 2.2.4 Number and rate[1] of diagnosis of newly acquired hepatitis B infection, 2007 – 2011, by year, State/Territory[2] and Aboriginal and Torres Strait Islander status

		Torres Strait Islander status									
State/	**Aboriginal and Torres Strait**	**2007**		**2008**		**2009**		**2010**		**2011**	
Territory	**Islander status**	**Number**	**Rate**	**Number**	**Rate**	**Number**	**Rate**	**Number**	**Rate**	**Number**	**Rate**
NSW	Aboriginal and Torres Strait Islander	1	1	5	3	4	3	2	1	3	2
	Non-Indigenous[3]	55	1	40	1	33	0	33	0	28	0
NT	Aboriginal and Torres Strait Islander	4	5	4	12	0	0	1	2	1	1
	Non-Indigenous[3]	6	3	4	2	4	2	2	1	3	2
QLD	Aboriginal and Torres Strait Islander	8	5	8	5	4	2	10	7	8	5
	Non-Indigenous[3]	62	1	39	1	45	1	47	1	38	1
SA	Aboriginal and Torres Strait Islander	1	2	0	0	0	0	0	0	0	0
	Non-Indigenous[3]	11	1	11	1	10	1	21	1	9	1
TAS	Aboriginal and Torres Strait Islander	1	7	0	0	2	11	0	0	1	7
	Non-Indigenous[3]	8	2	11	3	7	2	6	1	12	3
VIC	Aboriginal and Torres Strait Islander	1	3	1	3	3	9	4	12	1	3
	Non-Indigenous[3]	83	2	87	2	86	2	66	1	66	1
WA	Aboriginal and Torres Strait Islander	3	4	2	4	0	0	2	3	1	1
	Non-Indigenous[3]	39	2	46	2	38	2	31	1	17	1
Total	**Aboriginal and Torres Strait Islander**	**19**	**3**	**20**	**4**	**13**	**2**	**19**	**4**	**15**	**3**
	Non-Indigenous[3]	**264**	**1**	**238**	**1**	**223**	**1**	**206**	**1**	**173**	**1**

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

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

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

Source: National Notifiable Diseases Surveillance System

Table 2.2.5 Number (percent) of diagnoses of newly acquired hepatitis B infection, 2011, by State/Territory and Aboriginal and Torres Strait Islander status

	Aboriginal and Torres Strait Islander status					
State/Territory	**Aboriginal and Torres Strait Islander**		**Non-Indigenous**		**Not reported**	**Total**
ACT	0	(0.0)	2	(100.0)	0 (0.0)	2
NSW	3	(9.7)	22	(71.0)	6 (19.4)	31
NT	1	(25.0)	3	(75.0)	0 (0.0)	4
QLD	8	(17.4)	22	(47.8)	16 (34.8)	46
SA	0	(0.0)	9	(100.0)	0 (0.0)	9
TAS	1	(7.7)	11	(84.6)	1 (7.7)	13
VIC	1	(1.5)	59	(88.1)	7 (10.4)	67
WA	1	(5.6)	17	(94.4)	0 (0.0)	18
Total	**15**	**(7.9)**	**145**	**(76.3)**	**30 (15.8)**	**190**

Source: National Notifiable Diseases Surveillance System

Table 2.2.6 Number and rate[1] of diagnosis of hepatitis C infection, 2007 – 2011, by year, State/Territory[2] and Aboriginal and Torres Strait Islander status

		Year of diagnosis									
State/	**Aboriginal and Torres Strait**	**2007**		**2008**		**2009**		**2010**		**2011**	
Territory	**Islander status**	**Number**	**Rate**	**Number**	**Rate**	**Number**	**Rate**	**Number**	**Rate**	**Number**	**Rate**
NT	Aboriginal and Torres Strait Islander	27	57	26	53	27	52	24	48	44	84
	Non-Indigenous[3]	197	115	186	108	139	82	146	87	165	95
SA	Aboriginal and Torres Strait Islander	63	227	48	165	48	172	68	245	37	145
	Non-Indigenous[3]	565	37	536	35	507	33	462	30	421	28
TAS	Aboriginal and Torres Strait Islander	8	46	21	118	10	67	14	80	11	65
	Non-Indigenous[3]	266	62	327	76	272	63	249	56	218	50
WA	Aboriginal and Torres Strait Islander	131	189	129	189	139	193	134	200	149	210
	Non-Indigenous[3]	1 118	50	1 197	54	1 007	46	935	42	927	42
Total	**Aboriginal and Torres Strait Islander**	**229**	**136**	**224**	**131**	**224**	**128**	**240**	**143**	**241**	**142**
	Non-Indigenous[3]	**2 146**	**49**	**2 246**	**52**	**1 925**	**44**	**1 792**	**41**	**1 731**	**40**

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

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

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

Source: National Notifiable Diseases Surveillance System

Table 2.2.7 Number (percent) of diagnoses of hepatitis C infection, 2011, by State/Territory[1] and Aboriginal and Torres Strait Islander status

	Aboriginal and Torres Strait Islander status			
State/Territory	**Aboriginal and Torres Strait Islander**	**Non-Indigenous**	**Not reported**	**Total**
ACT	–	–	158 (82.7)	191
NSW	–	–	2 885 (86.7)	3 326
NT	44 (21.1)	150 (71.8)	15 (7.2)	209
QLD	–	–	1 359 (55.8)	2 435
SA	37 (8.1)	387 (84.5)	34 (7.4)	458
TAS	11 (4.8)	153 (66.8)	65 (28.4)	229
VIC	–	–	1 594 (68.2)	2 337
WA	149 (13.8)	871 (80.9)	56 (5.2)	1 076
Total	**652 (6.4)**	**3 443 (33.6)**	**6 166 (60.1)**	**10 261**

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

Source: National Notifiable Diseases Surveillance System

Table 2.2.8 Number (percent) of diagnoses of hepatitis D infection, 2011, by State/Territory[1] and Aboriginal and Torres Strait Islander status

	Aboriginal and Torres Strait Islander status			
State/Territory	**Aboriginal and Torres Strait Islander**	**Non-Indigenous**	**Not reported**	**Total**
ACT	0 (0.0)	0 (0.0)	0 (0.0)	0
NSW	–	–	8 (88.9)	9
NT	0 (0.0)	0 (0.0)	0 (0.0)	0
QLD	0 (0.0)	5 (71.4)	2 (28.6)	7
SA	–	–	8 (100.0)	8
TAS	0 (0.0)	0 (0.0)	0 (0.0)	0
VIC	0 (0.0)	17 (100.0)	0 (0.0)	17
WA	1 (50.0)	1 (50.0)	0 (0.0)	2
Total	**1 (2.3)**	**24 (55.8)**	**18 (41.9)**	**43**

1 Data are not shown for State/Territory health jurisdictions in which Aboriginal and Torres Strait Islander status was reported for less 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

	Year											
Diagnosis	**1985-2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**Total[2]**
Hepatitis B	102 (7.8)	7 (5.8)	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)	162
Hepatitis C	190 (14.6)	30 (24.8)	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)	586
Hepatitis B/C/D	9 (0.7)	3 (2.5)	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)	33
Hepatocellular carcinoma	38 (2.9)	6 (5.0)	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)	195
Hepatitis B	*14 (1.1)*	*1 (0.8)*	*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)*	*51*
Hepatitis C	*13 (1.0)*	*5 (4.1)*	*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)*	*91*
Hepatitis B/C/D	*1 (0.1)*	*0 (0.0)*	*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)*	*3*
Hepatitis negative	*10 (0.8)*	*0 (0.0)*	*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)*	*50*
Other[1]	965 (74.0)	75 (62.0)	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)	1 776
Total	**1 304 (100.0)**	**121 (100.0)**	**112 (100.0)**	**147 (100.0)**	**132 (100.0)**	**130 (100.0)**	**119 (100.0)**	**155 (100.0)**	**146 (100.0)**	**192 (100.0)**	**194 (100.0)**	**2 752**

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

2 Data available to 31 December 2011.

Source: Australia and New Zealand Liver Transplant Registry

2.4 Global comparisons for hepatitis B

Table 2.4.1 Estimated hepatitis B prevalence in selected countries

Country of birth	Hepatitis B prevalence (%)
Viet Nam	12.5
China	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	0.97
United Kingdom	0.54
New Zealand	0.50

Source: Hepatitis B Program, Epidemiology Unit, Victorian Infectious Diseases Reference Laboratory

Tables

3 National surveillance for sexually transmissible infections

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

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

3.3 Gonococcal isolates

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, 2007 – 2011, by State/Territory and year

	Year of diagnosis									
	2007		2008		2009		2010		2011	
State/Territory	Number	Rate[1]	Number	Rate[1]	Number	Rate[1]	Number	Rate[1]	Number	Rate[1]
ACT	905	227.7	987	245.3	945	232.4	1 161	280.9	1 261	304.8
NSW	12 432	179.4	13 984	198.5	14 946	207.2	18 247	247.3	20 495	274.2
NT	2 178	892.7	2 289	916.8	2 445	946.5	2 661	1003.1	2 630	980.6
QLD	12 971	306.3	15 191	348.2	16 695	370.4	19 217	413.1	18 649	393.2
SA	3 462	223.6	3 656	233.1	3 758	236.2	4 333	268.0	5 128	312.4
TAS	1 129	242.2	1 480	315.7	1 462	310.5	2 008	421.7	1 779	371.5
VIC	11 149	208.7	12 202	223.0	13 872	246.4	16 461	283.4	19 184	324.1
WA	7 721	358.2	8 642	389.6	8 831	383.1	10 178	425.4	11 674	477.7
Total	**51 947**	**244.0**	**58 431**	**268.5**	**62 954**	**281.5**	**74 266**	**323.2**	**80 800**	**345.8**

1 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, 2007 – 2011, by age group, year and sex

	Year of diagnosis														
Age group	2007			2008			2009			2010			2011		
(years)	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]
0 – 4	18	19	38	13	15	29	7	9	16	11	17	30	9	7	16
5 – 14	69	439	508	50	496	547	67	494	562	87	598	686	90	613	705
15 – 19	2 984	9 711	12 719	3 701	11 229	14 962	4 092	12 145	16 259	5 304	14 609	19 962	5 484	16 152	21 663
20 – 29	11 972	16 703	28 729	13 290	18 460	31 795	14 739	19 733	34 517	17 382	22 480	39 964	19 186	24 724	43 987
30 – 39	3 670	3 137	6 822	3 994	3 403	7 407	4 202	3 545	7 754	4 876	3 991	8 889	5 066	4 266	9 345
40 – 49	1 408	750	2 168	1 735	860	2 603	1 789	859	2 650	2 159	1 064	3 230	2 245	1 190	3 438
50 – 59	541	189	731	594	218	814	650	233	884	840	251	1 092	894	266	1 161
60+	182	32	215	207	41	248	219	48	267	298	46	345	339	54	394
Not reported	6	5	17	10	11	26	16	13	45	21	35	68	36	52	91
Total	**20 850**	**30 985**	**51 947**	**23 594**	**34 733**	**58 431**	**25 781**	**37 079**	**62 954**	**30 978**	**43 091**	**74 266**	**33 349**	**47 324**	**80 800**

1 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, 2007 – 2011, by State/Territory[1] and year

	Year of diagnosis				
State/Territory	2007	2008	2009	2010	2011
NT	1	1	0	0	0
QLD	2	1	1	1	0
WA	0	0	0	0	0
Total	**3**	**2**	**1**	**1**	**0**

1 State/Territory with reported cases of donovanosis.

Source: National Notifiable Diseases Surveillance System

Table 3.1.4 Number of diagnoses of donovanosis, 2007 – 2011, by age group, year and sex

	Year of diagnosis														
Age group	2007			2008			2009			2010			2011		
(years)	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
0 – 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 – 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 – 29	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0
30 – 39	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
40 – 49	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
50+	1	0	1	1	0	1	1	0	1	0	0	0	0	0	0
Not reported	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**2**	**1**	**3**	**2**	**0**	**2**	**1**	**0**	**1**	**1**	**0**	**1**	**0**	**0**	**0**

Source: National Notifiable Diseases Surveillance System

Table 3.1.5 Number and rate of diagnosis of gonorrhoea, 2007 – 2011, by State/Territory and year

	Year of diagnosis									
	2007		2008		2009		2010		2011	
State/Territory	Number	Rate[1]	Number	Rate[1]	Number	Rate[1]	Number	Rate[1]	Number	Rate[1]
ACT	45	11.9	21	5.6	55	13.5	56	14.1	128	31.2
NSW	1 382	20.0	1 330	18.9	1 653	23.1	2 300	31.5	2 880	39.0
NT	1 600	658.0	1 550	628.1	1 551	603.9	1 933	733.5	1 956	735.5
QLD	1 368	32.6	1 639	37.9	1 557	34.8	2 087	45.3	2 960	63.3
SA	462	29.9	493	31.6	373	23.6	473	29.1	445	27.3
TAS	38	8.2	25	5.4	21	4.6	20	4.2	19	3.9
VIC	990	18.7	929	17.1	1 487	26.7	1 748	30.6	1 879	32.3
WA	1 761	82.2	1 692	77.1	1 347	58.7	1 403	59.4	1 820	75.5
Total	**7 646**	**36.2**	**7 679**	**35.6**	**8 044**	**36.3**	**10 020**	**44.1**	**12 087**	**52.5**

1 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, 2007 – 2011, by age group, year and sex

	Year of diagnosis														
Age group	2007			2008			2009			2010			2011		
(years)	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]
0 – 4	3	6	9	1	2	3	6	5	11	3	4	7	4	7	11
5 – 14	48	138	186	28	150	178	26	102	129	32	141	174	43	188	231
15 – 19	749	795	1 544	746	842	1 588	749	792	1 547	881	976	1 858	1 027	1 285	2 314
20 – 29	1 981	1 106	3 088	2 053	1 045	3 103	2 321	1 180	3 505	2 946	1 364	4 321	3 388	1 662	5 056
30 – 39	1 241	394	1 640	1 178	416	1 595	1 253	381	1 637	1 567	433	2 001	1 821	543	2 368
40 – 49	673	119	793	639	149	789	640	118	758	928	142	1 073	1 146	185	1 331
50 – 59	263	28	291	264	47	311	282	44	326	366	46	412	493	69	564
60+	82	7	89	83	18	101	99	15	114	137	16	153	170	24	196
Not reported	1	1	6	3	4	11	1	1	17	4	3	21	6	5	16
Total	**5 041**	**2 594**	**7 646**	**4 995**	**2 673**	**7 679**	**5 377**	**2 638**	**8 044**	**6 864**	**3 125**	**10 020**	**8 098**	**3 968**	**12 087**

1 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, 2007 – 2011, by State/Territory and year

	Year of diagnosis									
	2007		2008		2009		2010		2011	
State/Territory	Number	Rate[1]	Number	Rate[1]	Number	Rate[1]	Number	Rate[1]	Number	Rate[1]
ACT	9	2.4	4	1.0	11	2.9	14	3.9	9	2.5
NSW	458	6.7	428	6.2	530	7.6	420	5.9	422	5.9
NT	118	48.9	83	35.2	38	15.7	43	17.1	30	11.5
QLD	241	5.8	190	4.5	189	4.3	224	5.0	332	7.2
SA	49	3.1	49	3.2	54	3.4	23	1.4	47	2.3
TAS	8	1.6	8	1.7	10	2.2	6	1.3	6	1.3
VIC	431	8.2	379	7.1	388	7.0	300	5.3	330	5.8
WA	104	4.9	176	8.1	89	4.0	85	3.7	127	5.3
Total	**1 418**	**6.8**	**1 317**	**6.2**	**1 309**	**6.0**	**1 115**	**5.0**	**1 303**	**5.7**

1 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, 2007 – 2011, by age group, year and sex

	Year of diagnosis														
Age group	2007			2008			2009			2010			2011		
(years)	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T	M	F	T[1]
0 – 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 – 14	3	4	7	0	8	8	0	3	3	0	1	1	7	8	15
15 – 19	34	29	63	40	35	75	29	11	40	32	13	45	46	43	89
20 – 29	245	51	296	275	50	325	285	46	331	257	43	300	276	62	340
30 – 39	402	35	437	372	29	401	333	33	366	279	31	312	304	26	330
40 – 49	361	20	381	325	10	336	364	10	374	266	19	285	321	18	339
50 – 59	155	8	163	116	11	127	132	8	140	111	8	119	119	5	124
60+	62	4	66	42	3	45	47	4	51	46	2	48	50	4	54
Not reported	0	0	5	0	0	0	0	0	4	0	0	5	0	0	12
Total	**1 262**	**151**	**1 418**	**1 170**	**146**	**1 317**	**1 190**	**115**	**1 309**	**991**	**117**	**1 115**	**1 123**	**166**	**1 303**

1 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, 2007 – 2011, by sexual exposure, sex worker history, facility of diagnosis and sex

	Year of diagnosis														
	2007			2008			2009			2010			2011		
Characteristic	**Male**	**Female**	**Total[1]**	**Male**	**Female**	**Total[1]**	**Male**	**Female**	**Total[1]**	**Male**	**Female**	**Total[1]**	**Male**	**Female**	**Total[1]**
Sexual exposure															
Heterosexual contact	70	49	121	80	67	147	56	35	91	59	52	111	133	106	239
Men who have sex with men	550	–	550	445	–	445	213	–	213	221	–	221	534	–	534
Other/undetermined[2]	120	28	148	191	19	211	339	23	366	272	32	310	48	17	75
Not reported[2]	522	74	599	454	60	514	582	57	639	439	33	473	408	43	455
Sex work in the past 12 months															
Current sex work	4	1	5	3	3	6	0	1	1	2	0	2	30	21	51
No sex work	138	15	154	194	44	238	101	27	128	103	21	124	142	12	154
Undetermined[2]	594	61	659	501	39	541	474	28	506	418	61	485	294	68	374
Not reported[2]	526	74	600	472	60	532	615	59	674	468	35	504	657	65	724
Place of diagnosis															
Public hospital	25	7	32	27	17	44	24	8	32	55	22	77	56	34	90
Sexual health clinic	93	3	97	95	6	101	69	5	74	176	18	194	206	25	231
Family planning clinic	2	0	2	0	0	0	0	0	0	1	0	1	1	0	1
General practice	37	5	42	61	2	63	46	5	51	169	6	175	179	8	187
Other	41	18	60	54	30	84	42	16	58	66	11	77	62	15	78
Undetermined[2]	276	31	307	307	25	333	438	24	466	342	34	382	419	50	481
Not reported[2]	788	87	878	626	66	692	571	57	628	182	26	209	200	34	235
Total	**1 262**	**151**	**1 418**	**1 170**	**146**	**1 317**	**1 190**	**115**	**1 309**	**991**	**117**	**1 115**	**1 123**	**166**	**1 303**

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

2 A characteristic was recorded 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[1] of diagnosis of chlamydia, 2007 – 2011, by year, State/Territory[2] and Aboriginal and Torres Strait Islander status

		Year of diagnosis									
State/ Territory	Aboriginal and Torres Strait Islander status	2007		2008		2009		2010		2011	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
NT	Aboriginal and Torres Strait Islander	1 320	1 836	1 397	1 936	1 356	1 876	1 474	2 059	1 556	2 146
	Non-Indigenous[3]	858	505	892	526	1 089	649	1 187	706	1 074	642
SA	Aboriginal and Torres Strait Islander	271	688	220	590	190	496	286	765	302	797
	Non-Indigenous[3]	3 191	213	3 436	229	3 568	238	4 047	271	4 826	322
TAS	Aboriginal and Torres Strait Islander	22	81	24	86	30	109	34	134	45	167
	Non-Indigenous[3]	1 107	261	1 456	342	1 432	337	1 974	464	1 734	408
VIC	Aboriginal and Torres Strait Islander	52	104	74	154	65	138	111	227	145	298
	Non-Indigenous[3]	11 097	205	12 128	224	13 807	255	16 350	302	19 039	352
WA	Aboriginal and Torres Strait Islander	1 190	1 319	1 296	1 451	1 228	1 326	1 572	1 717	1 642	1 771
	Non-Indigenous[3]	6 531	293	7 346	330	7 603	341	8 606	386	10 032	451
Total	**Aboriginal and Torres Strait Islander**	**2 855**	**1 056**	**3 011**	**1 120**	**2 869**	**1 050**	**3 477**	**1 282**	**3 690**	**1 343**
	Non-Indigenous[3]	**22 784**	**234**	**25 258**	**260**	**27 499**	**283**	**32 164**	**331**	**36 705**	**378**

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[1], 2007 – 2011, by age group, Aboriginal and Torres Strait Islander status and year

		Year of diagnosis				
Age group (years)	**Aboriginal and Torres Strait Islander status**	**2007**	**2008**	**2009**	**2010**	**2011**
0 – 4	Aboriginal and Torres Strait Islander	1	5	3	5	1
	Non-Indigenous[2]	21	22	5	17	2
5 – 14	Aboriginal and Torres Strait Islander	137	140	117	169	163
	Non-Indigenous[2]	111	118	152	196	184
15 – 19	Aboriginal and Torres Strait Islander	1 086	1 125	1 084	1 298	1 404
	Non-Indigenous[2]	4 982	5 929	6 362	7 898	9 325
20 – 29	Aboriginal and Torres Strait Islander	1 159	1 231	1 257	1 469	1 631
	Non-Indigenous[2]	13 228	14 355	15 903	17 985	20 699
30 – 39	Aboriginal and Torres Strait Islander	365	359	309	400	356
	Non-Indigenous[2]	3 019	3 194	3 363	3 885	4 165
40 – 49	Aboriginal and Torres Strait Islander	76	118	76	99	106
	Non-Indigenous[2]	983	1 153	1 161	1 459	1 546
50 – 59	Aboriginal and Torres Strait Islander	24	25	19	28	27
	Non-Indigenous[2]	332	351	410	525	532
60+	Aboriginal and Torres Strait Islander	7	8	4	9	2
	Non-Indigenous[2]	94	114	119	155	181
Total[3]	**Aboriginal and Torres Strait Islander**	**2 855**	**3 011**	**2 869**	**3 477**	**3 690**
	Non-Indigenous[2]	**22 784**	**25 258**	**27 499**	**32 164**	**36 705**

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[1], 2011, by Aboriginal and Torres Strait Islander status, sex and age group

		Age group (years)								
Aboriginal and Torres Strait Islander Status	**Sex**	**0 – 4**	**5 – 14**	**15 – 19**	**20 – 29**	**30 – 39**	**40 – 49**	**50 – 59**	**60+**	**Total[4]**
Aboriginal and	Male	0	30	467	660	167	41	19	1	1 385
Torres Strait Islander	Female	1	133	937	971	189	65	8	1	2 305
	Total[3]	**1**	**163**	**1 404**	**1 631**	**356**	**106**	**27**	**2**	**3 690**
Non-Indigenous[2]	Male	2	17	2 310	9 178	2 260	982	396	150	15 320
	Female	0	166	7 001	11 470	1 898	561	135	30	21 306
	Total[3]	**2**	**184**	**9 325**	**20 699**	**4 165**	**1 546**	**532**	**181**	**36 705**
Total	Male	2	47	2 777	9 838	2 427	1 023	415	151	16 705
	Female	1	299	7 938	12 441	2 087	626	143	31	23 611
	Total[3]	**3**	**347**	**10 729**	**22 330**	**4 521**	**1 652**	**559**	**183**	**40 395**

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, 2011, by State/Territory[1] and Aboriginal and Torres Strait Islander status

	Aboriginal and Torres Strait Islander status					
State/Territory	**Aboriginal and Torres Strait Islander**		**Non-Indigenous**		**Not reported**	**Total**
ACT	–		–		1 163 (92.2)	1 261
NSW	–		–		19 865 (96.9)	20 495
NT	1 556	(59.2)	909	(34.6)	165 (6.3)	2 630
QLD	3 195	(17.1)	7 422	(39.8)	8 032 (43.1)	18 649
SA	302	(5.9)	4 332	(84.5)	494 (9.6)	5 128
TAS	45	(2.5)	1 218	(68.5)	516 (29.0)	1 779
VIC	145	(0.8)	10 390	(54.2)	8 649 (45.1)	19 184
WA	1 642	(14.1)	9 115	(78.1)	917 (7.9)	11 674
Total	**7 044**	**(8.7)**	**33 955**	**(42.0)**	**39 801 (49.3)**	**80 800**

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

Source: National Notifiable Diseases Surveillance System

Table 3.2.5 Rate[1] of diagnosis of chlamydia, 2007 – 2011, by year, Aboriginal and Torres Strait Islander status and area of residence

		Year of diagnosis				
Area of residence	**Aboriginal and Torres Strait Islander status**	**2007**	**2008**	**2009**	**2010**	**2011**
Major cities	Aboriginal and Torres Strait Islander	787	845	820	1 199	1 320
	Non-Indigenous[2]	258	282	307	356	412
Inner regional	Aboriginal and Torres Strait Islander	213	292	337	453	633
	Non-Indigenous[2]	211	251	286	353	396
Outer regional	Aboriginal and Torres Strait Islander	902	929	1 040	1 135	1 528
	Non-Indigenous[2]	252	274	304	346	360
Remote	Aboriginal and Torres Strait Islander	2 532	2 843	2 580	3 490	3 345
	Non-Indigenous[2]	346	369	369	400	401
Very remote	Aboriginal and Torres Strait Islander	2 991	3 049	2 809	3 069	3 053
	Non-Indigenous[2]	348	403	310	442	438
Total	**Aboriginal and Torres Strait Islander**	**1 545**	**1 629**	**1 552**	**1 881**	**1 996**
	Non-Indigenous[2]	**256**	**284**	**309**	**362**	**413**

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: National Notifiable Diseases Surveillance System

Table 3.2.6 Number and rate[1] of diagnosis of gonorrhoea, 2007 – 2011, by year, State/Territory[2] and Aboriginal and Torres Strait Islander status

		Year of diagnosis									
State/	**Aboriginal and Torres Strait**	**2007**		**2008**		**2009**		**2010**		**2011**	
Territory	**Islander status**	**Number**	**Rate**	**Number**	**Rate**	**Number**	**Rate**	**Number**	**Rate**	**Number**	**Rate**
NT	Aboriginal and Torres Strait Islander	1 413	1 983	1 382	1 955	1 412	1 980	1 770	2 478	1 803	2 505
	Non-Indigenous[3]	187	112	168	99	139	83	163	98	153	97
QLD	Aboriginal and Torres Strait Islander	561	283	679	356	520	262	753	377	1 318	664
	Non-Indigenous[3]	807	19	960	23	1 037	25	1 334	32	1 642	39
SA	Aboriginal and Torres Strait Islander	243	682	141	391	164	466	234	661	214	592
	Non-Indigenous[3]	219	14	352	23	209	14	239	15	231	15
TAS	Aboriginal and Torres Strait Islander	3	18	0	0	0	0	1	4	0	0
	Non-Indigenous[3]	35	8	25	6	21	5	19	4	19	4
VIC	Aboriginal and Torres Strait Islander	4	9	10	20	10	24	13	32	12	28
	Non-Indigenous[3]	986	18	919	17	1 477	27	1 735	32	1 867	34
WA	Aboriginal and Torres Strait Islander	1 328	1 569	1 222	1 463	913	1 054	839	968	1 153	1 315
	Non-Indigenous[3]	433	20	470	21	434	19	564	25	667	30
Total	**Aboriginal and Torres Strait Islander**	**3 552**	**546**	**3 434**	**530**	**3 019**	**460**	**3 610**	**549**	**4 500**	**673**
	Non-Indigenous[3]	**2 667**	**13**	**2 894**	**14**	**3 317**	**16**	**4 054**	**19**	**4 579**	**22**

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[1], 2007 – 2011, by year, Aboriginal and Torres Strait Islander status and age group

		Year of diagnosis				
Age group (years)	**Aboriginal and Torres Strait Islander status**	**2007**	**2008**	**2009**	**2010**	**2011**
0 – 4	Aboriginal and Torres Strait Islander	7	2	4	1	7
	Non-Indigenous[2]	2	1	4	2	2
5 – 14	Aboriginal and Torres Strait Islander	162	166	114	144	207
	Non-Indigenous[2]	20	11	13	25	22
15 – 19	Aboriginal and Torres Strait Islander	1 141	1 140	990	1 199	1 616
	Non-Indigenous[2]	302	354	425	499	456
20 – 29	Aboriginal and Torres Strait Islander	1 467	1 381	1 321	1 558	1 880
	Non-Indigenous[2]	1 100	1 180	1 459	1 745	1 977
30 – 39	Aboriginal and Torres Strait Islander	583	519	460	545	605
	Non-Indigenous[2]	631	686	739	858	996
40 – 49	Aboriginal and Torres Strait Islander	160	170	106	137	153
	Non-Indigenous[2]	380	417	387	562	677
50 – 59	Aboriginal and Torres Strait Islander	27	44	17	22	31
	Non-Indigenous[2]	172	181	203	236	319
60+	Aboriginal and Torres Strait Islander	5	12	7	4	1
	Non-Indigenous[2]	54	54	70	106	116
Total[3]	**Aboriginal and Torres Strait Islander**	**3 552**	**3 434**	**3 019**	**3 610**	**4 500**
	Non-Indigenous[2]	**2 667**	**2 894**	**3 317**	**4 054**	**4 579**

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[1], 2011, by Aboriginal and Torres Strait Islander status, sex and age group

		Age group (years)								
Aboriginal and Torres Strait Islander Status	**Sex**	**0 – 4**	**5 – 14**	**15 – 19**	**20 – 29**	**30 – 39**	**40 – 49**	**50 – 59**	**60+**	**Total[4]**
Aboriginal and Torres Strait Islander	Male	4	40	633	919	324	82	26	1	2 029
	Female	3	167	982	961	281	71	5	0	2 470
	Total[3]	**7**	**207**	**1 616**	**1 880**	**605**	**153**	**31**	**1**	**4 500**
Non-Indigenous[2]	Male	0	3	250	1 535	862	616	277	102	3 650
	Female	2	19	206	437	132	61	40	13	914
	Total[3]	**2**	**22**	**456**	**1 977**	**996**	**677**	**319**	**116**	**4 579**
Total	Male	4	43	883	2 454	1 186	698	303	103	5 679
	Female	5	186	1 188	1 398	413	132	45	13	3 384
	Total[3]	**9**	**229**	**2 072**	**3 857**	**1 601**	**830**	**350**	**117**	**9 079**

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, 2011, by State/Territory[1] and Aboriginal and Torres Strait Islander status

	Aboriginal and Torres Strait Islander status						
State/Territory	**Aboriginal and Torres Strait Islander**		**Non-Indigenous**		**Not reported**		**Total**
ACT	3	(2.3)	125	(97.7)	0	(0.0)	128
NSW	–		–		2 330	(80.9)	2 880
NT	1 803	(92.2)	123	(6.3)	30	(1.5)	1 956
QLD	1 318	(44.5)	782	(26.4)	860	(29.1)	2 960
SA	214	(48.1)	220	(49.4)	11	(2.5)	445
TAS	0	(0.0)	15	(78.9)	4	(21.1)	19
VIC	12	(0.6)	1 261	(67.1)	606	(32.3)	1 879
WA	1 153	(63.4)	661	(36.3)	6	(0.3)	1 820
Total	**4 535**	**(37.5)**	**3 705**	**(30.7)**	**3 847**	**(31.8)**	**12 087**

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

Source: National Notifiable Diseases Surveillance System

Table 3.2.10 Rate[1] of diagnosis of gonorrhoea, 2007 – 2011, by year, Aboriginal and Torres Strait Islander status and area of residence

		Year of diagnosis				
Area of residence	**Aboriginal and Torres Strait Islander status**	**2007**	**2008**	**2009**	**2010**	**2011**
Major cities	Aboriginal and Torres Strait Islander	241	185	132	151	239
	Non-Indigenous[2]	22	25	30	36	41
Inner regional	Aboriginal and Torres Strait Islander	42	45	59	79	130
	Non-Indigenous[2]	6	7	10	10	13
Outer regional	Aboriginal and Torres Strait Islander	742	862	675	921	1 482
	Non-Indigenous[2]	22	25	23	27	33
Remote	Aboriginal and Torres Strait Islander	2 258	2 315	2 016	2 563	2 626
	Non-Indigenous[2]	46	32	35	41	43
Very remote	Aboriginal and Torres Strait Islander	2 991	2 719	2 521	2 808	3 345
	Non-Indigenous[2]	78	67	51	98	100
Total	**Aboriginal and Torres Strait Islander**	**1 137**	**1 099**	**966**	**1 156**	**1 440**
	Non-Indigenous[2]	**21**	**23**	**26**	**32**	**36**

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: National Notifiable Diseases Surveillance System

Table 3.2.11 Number and rate[1] of diagnosis of infectious syphilis, 2007 – 2011, by year, State/Territory[2] and Aboriginal and Torres Strait Islander status

State/ Territory	Aboriginal and Torres Strait Islander status	Year of diagnosis 2007 Number	2007 Rate	2008 Number	2008 Rate	2009 Number	2009 Rate	2010 Number	2010 Rate	2011 Number	2011 Rate
NSW	Aboriginal and Torres Strait Islander	7	5	7	5	11	8	8	5	3	2
	Non-Indigenous[3]	451	7	421	6	519	8	412	6	419	6
NT	Aboriginal and Torres Strait Islander	105	156	66	118	37	72	40	75	28	43
	Non-Indigenous[3]	13	7	17	10	1	1	3	2	2	1
QLD	Aboriginal and Torres Strait Islander	33	20	21	12	29	18	69	38	118	60
	Non-Indigenous[3]	208	5	169	4	160	4	155	4	214	5
SA	Aboriginal and Torres Strait Islander	12	33	5	18	7	26	4	13	10	43
	Non-Indigenous[3]	37	2	44	3	47	3	19	1	37	2
TAS	Aboriginal and Torres Strait Islander	0	0	0	0	0	0	0	0	1	7
	Non-Indigenous[3]	8	2	8	2	10	2	6	1	5	1
VIC	Aboriginal and Torres Strait Islander	6	17	3	9	1	3	2	8	5	16
	Non-Indigenous[3]	425	8	376	7	387	7	298	5	325	6
WA	Aboriginal and Torres Strait Islander	28	35	77	87	33	39	19	26	31	44
	Non-Indigenous[3]	76	3	99	4	56	3	66	3	96	4
Total	**Aboriginal and Torres Strait Islander**	**191**	**32**	**179**	**30**	**118**	**22**	**142**	**25**	**196**	**32**
	Non-Indigenous[3]	**1 218**	**6**	**1 134**	**5**	**1 180**	**6**	**959**	**5**	**1 098**	**5**

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[1], 2007 – 2011, by year, Aboriginal and Torres Strait Islander status and age group

		Year of diagnosis				
Age group (years)	**Aboriginal and Torres Strait Islander status**	**2007**	**2008**	**2009**	**2010**	**2011**
0 – 4	Aboriginal and Torres Strait Islander	0	0	0	0	0
	Non-Indigenous[2]	0	0	0	0	0
5 – 14	Aboriginal and Torres Strait Islander	6	8	2	1	12
	Non-Indigenous[2]	1	0	0	0	3
15 – 19	Aboriginal and Torres Strait Islander	49	50	18	25	67
	Non-Indigenous[2]	14	25	22	19	22
20 – 29	Aboriginal and Torres Strait Islander	74	58	39	56	60
	Non-Indigenous[2]	218	265	288	241	278
30 – 39	Aboriginal and Torres Strait Islander	37	29	36	33	32
	Non-Indigenous[2]	397	372	328	278	298
40 – 49	Aboriginal and Torres Strait Islander	18	25	14	18	18
	Non-Indigenous[2]	362	310	359	263	317
50 – 59	Aboriginal and Torres Strait Islander	6	8	8	9	6
	Non-Indigenous[2]	156	118	130	106	117
60+	Aboriginal and Torres Strait Islander	1	1	1	0	1
	Non-Indigenous[2]	65	44	49	47	51
Total[3]	**Aboriginal and Torres Strait Islander**	**191**	**179**	**118**	**142**	**196**
	Non-Indigenous[2]	**1 218**	**1 134**	**1 180**	**959**	**1 098**

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[1], 2011, by Aboriginal and Torres Strait Islander status, sex and age group

		Age group (years)								
Aboriginal and Torres Strait Islander status	**Sex**	**0 – 4**	**5 – 14**	**15 – 19**	**20 – 29**	**30 – 39**	**40 – 49**	**50 – 59**	**60+**	**Total[4]**
Aboriginal and	Male	0	4	26	27	21	13	4	0	95
Torres Strait Islander	Female	0	8	41	33	11	5	2	1	101
	Total	0	12	67	60	32	18	6	1	196
Non-Indigenous[2]	Male	0	3	20	247	283	304	114	48	1 019
	Female	0	0	2	29	15	13	3	3	65
	Total[3]	0	3	22	278	298	317	117	51	1 098
Total	Male	0	7	46	274	304	317	118	48	1 114
	Female	0	8	43	62	26	18	5	4	166
	Total[3]	**0**	**15**	**89**	**338**	**330**	**335**	**123**	**52**	**1 294**

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 3.2.14 Number (percent) of diagnoses of infectious syphilis, 2011, by State/Territory[1] and Aboriginal and Torres Strait Islander status

	Aboriginal and Torres Strait Islander status						
State/Territory	**Aboriginal and Torres Strait Islander**		**Non-Indigenous**		**Not reported**		**Total**
ACT	0	(0.0)	9	(100.0)	0	(0.0)	9
NSW	3	(0.7)	399	(94.5)	20	(4.7)	422
NT	28	(93.3)	2	(6.7)	0	(0.0)	30
QLD	118	(35.5)	210	(63.3)	4	(1.2)	332
SA	10	(21.3)	27	(57.4)	10	(21.3)	47
TAS	1	(16.7)	5	(83.3)	0	(0.0)	6
VIC	5	(1.5)	290	(87.9)	35	(10.6)	330
WA	31	(24.4)	96	(75.6)	0	(0.0)	127
Total	**196**	**(15.0)**	**1 038**	**(79.7)**	**69**	**(5.3)**	**1 303**

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

Source: National Notifiable Diseases Surveillance System

Table 3.2.15 Rate[1] of diagnosis of infectious syphilis, 2007 – 2011, by year, Aboriginal and Torres Strait Islander status and area of residence

		Year of diagnosis				
Area of residence	**Aboriginal and Torres Strait Islander status**	**2007**	**2008**	**2009**	**2010**	**2011**
Major cities	Aboriginal and Torres Strait Islander	15	10	10	6	18
	Non-Indigenous[2]	8	7	8	6	7
Inner regional	Aboriginal and Torres Strait Islander	8	8	4	2	8
	Non-Indigenous[2]	2	1	2	1	2
Outer regional	Aboriginal and Torres Strait Islander	19	16	26	45	36
	Non-Indigenous[2]	1	3	2	3	1
Remote	Aboriginal and Torres Strait Islander	71	96	53	81	119
	Non-Indigenous[2]	0	1	0	2	1
Very remote	Aboriginal and Torres Strait Islander	166	148	76	79	112
	Non-Indigenous[2]	0	6	8	7	6
Total	**Aboriginal and Torres Strait Islander**	**42**	**40**	**26**	**31**	**43**
	Non-Indigenous[2]	**6**	**6**	**6**	**5**	**6**

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: 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 2011 by State/Territory, sex and site and antibiotic sensitivity

	State/Territory								
Sex and Site	**ACT**	**NSW**	**NT**	**QLD**	**SA[1]**	**TAS[2]**	**VIC**	**WA**	**Total**
Male									
Urethra	21	689	304	453	74	4	499	271	2 315
Rectal	20	248	2	73	27	1	228	24	623
Pharynx	10	201	0	37	17	1	120	17	403
DGI[3]	1	2	4	3	0	0	0	2	12
Other/Not Specified	5	5	13	4	14	0	3	6	50
Total	**57**	**1 145**	**323**	**570**	**132**	**6**	**850**	**320**	**3 403**
Female									
Cervix	5	135	140	204	33	0	69	121	707
Rectal	0	8	0	2	3	0	3	0	16
Pharynx	0	41	0	5	2	0	13	5	66
DGI[3]	0	0	4	4	0	0	0	7	15
Other/Not Specified	2	3	5	4	5	0	2	1	22
Total	**7**	**187**	**149**	**219**	**43**	**0**	**87**	**134**	**826**
Antibiotic Sensitivity (%)									
PPNG	7.8	13.8	2.6	10.3	9.8	–	12.5	14.2	11.5
CMRP	3.1	14.2	1.5	8.2	7.2	–	31.3	3.4	14
LS	79.7	69.2	94.7	80.7	81	–	56	78.1	72.7
FS	9.4	2.7	1.1	0.8	2	–	0.2	4.3	1.8
Total	**64**	**1 332**	**472**	**789**	**176**	**6**	**937**	**454**	**4 230**

1 Total includes1 case whose sex and site of isolation was not reported.

2 Antibiotic sensitivity for Tasmania was not reported.

3 Disseminated gonococcal infection.

PPNG penicillinase producing *N. gonorrhoeae,* **CMRP** chromosomally mediated resistance to penicillin, **LS** less sensitive, **FS** fully sensitive

Source: Australian Gonococcal Surveillance Programme

Table 3.3.2 Number of gonococcal isolates in New South Wales referred to the Australian Gonococcal Surveillance Programme, 2007 – 2011, by sex, site and year

	Year of diagnosis				
Sex and Site	**2007**	**2008**	**2009**	**2010**	**2011**
Males					
Urethra	572	457	523	644	689
Rectal	178	181	193	328	248
Pharynx	106	99	101	184	201
Other/not specified	17	3	8	39	7
Total	**873**	**740**	**825**	**1 195**	**1 145**
Females					
Cervix	82	102	100	113	135
Rectal	2	1	4	2	8
Pharynx	14	11	15	11	41
Other/not specified	2	3	5	7	3
Total	**100**	**117**	**124**	**133**	**187**
Total	**973**	**857**	**949**	**1 328**	**1 332**

Source: Australian Gonococcal Surveillance Programme

Tables

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

4.1 HIV seroprevalence among people seen at sexual health clinics

4.2 HIV and hepatitis C seroprevalence among people who inject drugs

4.3 Incidence of hepatitis C infection among people who inject drugs

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

4.5 Chlamydia positivity among people seen through the Australian Collaboration for Chlamydia Enhanced Sentinel Surveillance (ACCESS)

4.6 Genital Warts Surveillance Network

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, 2007 – 2011, 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

		Sexual health clinic						
Year		Sydney Sexual Health Centre, NSW	RPA Sexual Health Clinic, NSW[1]	Brisbane Sexual Health Clinic, QLD	Gold Coast Sexual Health Service, QLD	Clinic 275 Adelaide, SA	Melbourne Sexual Health Centre, VIC	Total
2007	Men seen	4 735	–	3 413	1 682	4 084	6 596	21 431
	Tested	2 458	–	2 124	750	3 350	3 842	12 987
	Newly diagnosed (%)	24 (1.0)	–	8 (0.4)	9 (1.2)	7 (0.2)	40 (1.0)	89 (0.7)
	Previously negative(%)	21 (1.1)	–	6 (0.7)	1 (0.5)	6 (0.3)	30 (1.1)	64 (0.8)
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 (0.0)	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)

		Sexual health clinic						
Year		Sydney Sexual Health Centre, NSW	RPA Sexual Health Clinic, NSW[1]	Brisbane Sexual Health Clinic, QLD	Gold Coast Sexual Health Service, QLD	Clinic 275 Adelaide, SA	Melbourne Sexual Health Centre, VIC	Total
2007	Women seen	2 643	–	2 407	1 268	2 497	4 307	13 574
	Tested	1 232	–	1 228	533	1 964	2 161	7 255
	Newly diagnosed (%)	1 (0.1)	–	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.1)	4 (0.1)
	Previously negative (%)	1 (0.1)	–	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.07)	2 (0.05)
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)

1 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, 2007 – 2011, 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, HIV exposure category and year

		HIV exposure category						
Year		Men who have sex with men[1]	Men who have sex with men[1] age < 25 years	Injecting drug use	Heterosexual contact overseas	Heterosexual contact in Australia	Other men	Total
2007	Men seen	7 972	1 707	550	3 324	8 648	937	21 431
	Tested	6 100	1 402	356	1 964	4 388	179	12 987
	Newly diagnosed (%)	81 (1.3)	17 (1.2)	0 (0.0)	3 (0.2)	1 (0.02)	4 (2.2)	89 (0.7)
	Previously negative (%)	62 (1.4)	12 (1.4)	0 (0.0)	0 (0.0)	4 (0.2)	0 (0.0)	64 (0.8)
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)	2 (0.04)	2 (1.5)	134(0.8)
	Previously negative (%)	95 (1.3)	5 (0.4)	0 (0.0)	0 (0.0)	1 (0.08)	0 (0.0)	96 (0.7)

		HIV exposure category					
Year		**Sex worker[2]**	**Injecting drug use**	**Heterosexual contact overseas**	**Heterosexual contact in Australia**	**Other women**	**Total**
2007	Women seen	2 058	373	2 308	7 970	865	13 574
	Tested	1 740	268	1 233	3 739	275	7 255
	Newly diagnosed (%)	0 (0.0)	2 (0.7)	0 (0.0)	2 (0.03)	0 (0.0)	4 (0.06)
	Previously negative (%)	0 (0.0)	1 (0.6)	0 (0.0)	1 (0.05)	0 (0.0)	2 (0.05)
2008	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)
2009	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)
2010	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)
2011	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)

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

2 Includes women who also reported 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, 2007 – 2011, 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, age group and year

		Age group (years)						
Year		**13 – 19**	**20 – 29**	**30 – 39**	**40 – 49**	**50 – 59**	**60+**	**Total**
2007	Men seen	853	9 487	5 911	3 143	1 362	675	21 431
	Tested	472	5 811	3 657	1 847	820	380	12 987
	Newly diagnosed (%)	2 (0.4)	33 (0.6)	26 (0.7)	20 (1.1)	7 (0.9)	1 (0.3)	89 (0.7)
	Previously negative (%)	0 (0.0)	26 (0.8)	19 (0.8)	13 (1.0)	5 (0.9)	1 (0.4)	64 (0.8)
2008	Men seen	846	10 483	6 130	3 054	1 394	723	22 630
	Tested	464	5 554	3 188	1 511	707	380	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)
	Previously negative (%)	0 (0.0)	27 (0.8)	25 (1.0)	16 (1.4)	3 (0.6)	3 (1.1)	74 (1.0)
2009	Men seen	981	11 315	6 315	3 254	1 465	703	24 033
	Tested	515	6 574	3 635	1 777	783	365	13 649
	Newly diagnosed (%)	3 (0.6)	45 (0.7)	39 (1.1)	17 (1.0)	9 (1.1)	1 (0.3)	114 (0.8)
	Previously negative (%)	2 (1.1)	39 (0.9)	32 (1.1)	13 (0.9)	9 (1.5)	1 (0.4)	96 (1.0)
2010	Men seen	1 153	12 761	7 078	3 974	1 715	882	27 563
	Tested	690	7 723	4 247	2 305	992	473	16 430
	Newly diagnosed (%)	0 (0.0)	34 (0.4)	30 (0.7)	21 (0.9)	7 (0.7)	2 (0.7)	94 (0.6)
	Previously negative (%)	0 (0.0)	25 (0.5)	24 (0.7)	17 (1.0)	6 (0.9)	2 (0.6)	74 (0.7)
2011	Men seen	1 283	13 997	7 869	3 990	1 799	918	29 856
	Tested	722	7 833	4 453	2 091	966	503	16 568
	Newly diagnosed (%)	1 (0.2)	57 (0.7)	39 (0.9)	28 (1.3)	8 (0.8)	1 (0.2)	134 (0.8)
	Previously negative (%)	0 (0.0)	25 (0.5)	24 (0.7)	17 (1.0)	6 (0.9)	2 (0.6)	74 (0.7)

		Age group (years)						
Year		**13 – 19**	**20 – 29**	**30 – 39**	**40 – 49**	**50 – 59**	**60+**	**Total**
2007	Women seen	1 481	7 456	3 057	1 153	340	87	13 574
	Tested	579	3 927	1 812	706	192	39	7 255
	Newly diagnosed (%)	1 (0.2)	1 (0.03)	0 (0.0)	2 (0.3)	0 (0.0)	0 (0.0)	4 (0.1)
	Previously negative (%)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.4)	0 (0.0)	0 (0.0)	2 (0.05)
2008	Women seen	1 520	8 379	3 804	1 507	415	91	15 716
	Tested	548	3 475	1 650	630	162	27	6 492
	Newly diagnosed (%)	0 (0.0)	2 (0.06)	1 (0.06)	1 (0.2)	0 (0.0)	1 (3.8)	5 (0.08)
	Previously negative (%)	0 (0.0)	1 (0.05)	1 (0.08)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.05)
2009	Women seen	1 490	8 744	3 990	1 562	409	92	16 287
	Tested	515	3 390	1 910	772	149	32	6 768
	Newly diagnosed (%)	0 (0.0)	3 (0.09)	0 (0.0)	1 (0.1)	0 (0.0)	0 (0.0)	4 (0.06)
	Previously negative (%)	0 (0.0)	3 (0.1)	0 (0.0)	1 (0.1)	0 (0.0)	0 (0.0)	4 (0.08)
2010	Women seen	1 557	9 795	4 739	1 735	491	127	18 444
	Tested	675	4 661	2 540	934	248	66	9 124
	Newly diagnosed (%)	0 (0.0)	1 (0.02)	1 (0.04)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.02)
	Previously negative (%)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
2011	Women seen	1 663	10 129	4 622	1 553	445	120	18 532
	Tested	659	4 581	2 386	859	230	38	8 753
	Newly diagnosed (%)	0 (0.0)	3 (0.1)	2 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	6 (0.1)
	Previously negative (%)	0 (0.0)	2 (0.1)	1 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	4 (0.1)

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), 2007 – 2011, 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

2007

State/ Territory	Number of NSP	Number of clients tested (% of clients seen)[1]			Number (%) with HIV antibody			Number (%) with hepatitis C antibody[3]		
		Male	Female	Total[2]	Male	Female	Total[2]	Male	Female	Total[2]
ACT[4]	1	10	8	18 (–)	0 (0.0)	0 (0.0)	0 (0.0)	10 (100)	6 (75)	16 (89)
NSW	21	439	240	683 (40)	12 (2.7)	2 (0.8)	15 (2.2)	289 (68)	169 (73)	460 (69)
NT	3	20	9	29 (39)	0 (0.0)	0 (0.0)	0 (0.0)	13 (65)	5 (56)	18 (62)
QLD	7	279	130	413 (40)	10 (3.6)	0 (0.0)	10 (2.4)	158 (57)	85 (66)	247 (60)
SA	7	120	89	211 (72)	2 (1.7)	0 (0.0)	2 (1.0)	50 (42)	31 (35)	82 (39)
TAS	5	110	56	166 (57)	0 (0.0)	0 (0.0)	0 (0.0)	52 (57)	30 (70)	82 (61)
VIC[4]	7	163	76	240 (–)	0 (0.0)	0 (0.0)	0 (0.0)	100 (72)	48 (74)	149 (73)
WA	2	54	31	85 (39)	1 (1.9)	0 (0.0)	1 (1.2)	23 (43)	14 (45)	37 (44)
Total	**53**	**1 195**	**639**	**1 845 (51)**	**25 (2.1)**	**2 (0.3)**	**28 (1.5)**	**695 (61)**	**388 (64)**	**1 091 (62)**

2008

State/ Territory	Number of NSP	Number of clients tested (% of clients seen)[1]			Number (%) with HIV antibody			Number (%) with hepatitis C antibody[3]		
		Male	Female	Total[2]	Male	Female	Total[2]	Male	Female	Total[2]
ACT[4]	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)
Total	**52**	**1 396**	**764**	**2 170 (36)**	**29 (2.1)**	**3 (0.4)**	**33 (1.5)**	**852 (63)**	**453 (61)**	**1 311 (62)**

2009

State/ Territory	Number of NSP	Number of clients tested (% of clients seen)[1]			Number (%) with HIV antibody			Number (%) with hepatitis C antibody[3]		
		Male	Female	Total[2]	Male	Female	Total[2]	Male	Female	Total[2]
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[4]	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)
Total	**51**	**1 725**	**915**	**2 657 (45)**	**28 (1.6)**	**2 (0.2)**	**31 (1.2)**	**840 (49)**	**471 (52)**	**1 318 (50)**

2010

State/ Territory	Number of NSP	Number of clients tested (% of clients seen)[1]			Number (%) with HIV antibody			Number (%) with hepatitis C antibody[3]		
		Male	Female	Total[2]	Male	Female	Total[2]	Male	Female	Total[2]
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)
Total	**53**	**1 580**	**759**	**2 353 (38)**	**21 (1.3)**	**2 (0.3)**	**23 (1.0)**	**838 (53)**	**398 (53)**	**1 244 (53)**

2011

State/ Territory	Number of NSP	Number of clients tested (% of clients seen)[1]			Number (%) with HIV antibody			Number (%) with hepatitis C antibody[3]		
		Male	Female	Total[2]	Male	Female	Total[2]	Male	Female	Total[2]
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)
Total	**53**	**1 560**	**764**	**2 337 (41)**	**21 (1.4)**	**7 (0.9)**	**29 (1.2)**	**826 (54)**	**386 (52)**	**1 216 (53)**

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, 2007 – 2011, 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

2007

	Number tested			Percent with HIV antibody			Percent with hepatitis C antibody		
	Male	Female	Total[1]	Male	Female	Total[1]	Male	Female	Total[1]
Age group									
Less than 20 years	18	16	34	0.0	0.0	0.0	22	36	28
20 to 24 years	72	69	142	0.0	0.0	0.0	34	51	43
25 to 34 years	453	236	693	1.3	0.0	0.9	55	59	56
35 to 44 years	434	219	654	2.5	0.5	2.0	65	69	67
45+ years	216	99	320	3.7	1.0	2.8	77	78	77
Not reported	2	0	2	0.0	0.0	0.0	100	0	67
Time since first injection									
Less than 5 years	100	74	175	3.0	0.0	1.7	20	38	28
5 to 9 years	185	116	304	1.1	0.0	0.7	39	57	45
10 to 14 years	259	155	416	1.2	0.0	1.0	61	63	62
15 to 19 years	217	113	333	2.3	0.9	1.8	64	67	65
20+ years	403	164	569	2.7	0.6	2.1	79	79	79
Not reported	31	17	48	3.2	0.0	2.0	71	76	73
Total	**1 195**	**639**	**1 845**	**2.1**	**0.3**	**1.5**	**61**	**64**	**62**
Last drug injected among those reporting less than 3 years since first injection									
Amphetamines	35	19	54	2.9	0.0	1.9	15	28	19
Heroin	10	11	21	0.0	0.0	0.0	10	45	29
Other opiates	7	5	12	0.0	0.0	0.0	33	20	27
All other drugs	8	3	11	0.0	0.0	0.0	0	0	0
Not reported	1	0	1	0.0	0.0	0.0	0	0	0
Total	**61**	**38**	**99**	**1.6**	**0.0**	**1.0**	**14**	**30**	**20**

2008

	Number tested			Percent with HIV antibody			Percent with hepatitis C antibody		
	Male	Female	Total[1]	Male	Female	Total[1]	Male	Female	Total[1]
Age group									
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
Time since first injection									
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
Total	**1 396**	**764**	**2 170**	**2.1**	**0.4**	**1.5**	**63**	**61**	**62**
Last drug injected among those reporting less than 3 years since first injection									
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
Total	**67**	**43**	**110**	**7.5**	**0.0**	**4.6**	**18**	**38**	**26**

2009

Number tested	Percent with HIV antibody			Percent with hepatitis C antibody					
	Male	Female	Total[1]	Male	Female	Total[1]	Male	Female	Total[1]
Age group									
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
Time since first injection									
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
Total	**1 725**	**915**	**2 657**	**1.6**	**0.2**	**1.2**	**49**	**52**	**50**
Last drug injected among those reporting less than 3 years since first injection									
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
Total	**90**	**67**	**158**	**2.2**	**0.0**	**1.3**	**7**	**23**	**13**

2010

Number tested	Percent with HIV antibody			Percent with hepatitis C antibody					
	Male	Female	Total[1]	Male	Female	Total[1]	Male	Female	Total[1]
Age group									
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
Time since first injection									
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
Total	**1 580**	**759**	**2 353**	**1.3**	**0.3**	**1.0**	**53**	**53**	**53**
Last drug injected among those reporting less than 3 years since first injection									
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
Total	**87**	**37**	**125**	**2.3**	**0.0**	**1.6**	**10**	**27**	**15**

2011

Number tested	Percent with HIV antibody			Percent with hepatitis C antibody					
	Male	Female	Total[1]	Male	Female	Total[1]	Male	Female	Total[1]
Age group									
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
Time since first injection									
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
Total	**1 560**	**764**	**2 337**	**1.4**	**0.9**	**1.2**	**54**	**52**	**53**
Last drug injected among those reporting less than 3 years since first injection									
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
Total	**114**	**48**	**163**	**1.8**	**0.0**	**1.2**	**11**	**28**	**15**

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 4.2.3 Number of people who inject drugs seen at needle and syringe programs who were tested for HIV or hepatitis C antibody, 2007 – 2011, 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

2007

	Number tested			Percent with HIV antibody			Percent with hepatitis C antibody		
	Male	Female	Total[1]	Male	Female	Total[1]	Male	Female	Total[1]
Sexual identity									
Heterosexual	1 055	458	1 514	0.5	0.4	0.5	62	65	63
Bisexual	47	120	170	4.3	0.0	1.8	56	66	64
Homosexual	69	42	114	26.1	0.0	15.8	48	51	50
Not reported	24	19	47	0.0	0.0	0.0	57	71	63
Sex work last month									
No	1 108	541	1 656	2.1	0.4	1.5	62	64	62
Yes	34	76	114	2.9	0.0	1.8	58	63	58
Not reported	53	22	75	1.9	0.0	1.3	47	73	55
Country/region of birth									
Australia	1 023	557	1 590	2.2	0.4	1.6	61	64	62
Overseas born	145	75	221	2.1	0.0	1.4	64	68	65
Other Oceania	*25*	*19*	*45*	*4.0*	*0.0*	*2.2*	*67*	*53*	*60*
Asia	*13*	*9*	*22*	*0.0*	*0.0*	*0.0*	*75*	*75*	*75*
United Kingdom and Ireland	*56*	*28*	*84*	*3.6*	*0.0*	*2.4*	*62*	*71*	*65*
Other	*51*	*19*	*70*	*0.0*	*0.0*	*0.0*	*62*	*74*	*65*
Not reported	27	7	34	0.0	0.0	0.0	54	71	58
Main language spoken at home by parents									
English	1 100	609	1 719	2.2	0.3	1.6	61	64	62
Other language	70	27	98	1.4	0.0	1.0	60	65	62
Not reported	25	3	28	0.0	0.0	0.0	50	67	52
Total	**1 195**	**639**	**1 845**	**2.1**	**0.3**	**1.5**	**61**	**64**	**62**

2008

	Number tested			Percent with HIV antibody			Percent with hepatitis C antibody		
	Male	Female	Total[1]	Male	Female	Total[1]	Male	Female	Total[1]
Sexual identity									
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
Sex work last month									
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
Country/region of birth									
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
Other Oceania	*34*	*27*	*63*	*8.8*	*0.0*	*6.4*	*41*	*50*	*44*
Asia	*21*	*7*	*28*	*4.8*	*0.0*	*3.6*	*89*	*50*	*80*
United Kingdom and Ireland	*68*	*43*	*113*	*0.0*	*0.0*	*0.0*	*61*	*72*	*65*
Other	*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
Main language spoken at home by parents									
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
Total	**1 396**	**764**	**2 170**	**2.1**	**0.4**	**1.5**	**63**	**61**	**62**

2009

	Number tested			Percent with HIV antibody			Percent with hepatitis C antibody		
	Male	Female	Total[1]	Male	Female	Total[1]	Male	Female	Total[1]
Sexual identity									
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
Sex work last month									
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
Country/region of birth									
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
Other Oceania	*54*	*30*	*84*	*0.0*	*0.0*	*0.0*	*43*	*57*	*48*
Asia	*24*	*7*	*32*	*4.2*	*0.0*	*3.1*	*42*	*43*	*41*
United Kingdom and Ireland	*82*	*37*	*120*	*0.0*	*0.0*	*0.0*	*51*	*57*	*53*
Other	*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
Main language spoken at home by parents									
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
Total	**1 725**	**915**	**2 657**	**1.6**	**0.2**	**1.2**	**49**	**52**	**50**

2010

	Number tested			Percent with HIV antibody			Percent with hepatitis C antibody		
	Male	Female	Total[1]	Male	Female	Total[1]	Male	Female	Total[1]
Sexual identity									
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
Sex work last month									
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
Country/region of birth									
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
Other Oceania	*47*	*28*	*76*	*2.1*	*0.0*	*1.3*	*52*	*68*	*57*
Asia	*23*	*6*	*29*	*0.0*	*0.0*	*0.0*	*57*	*83*	*62*
United Kingdom and Ireland	*64*	*29*	*93*	*0.0*	*0.0*	*0.0*	*64*	*48*	*59*
Other	*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
Main language spoken at home by parents									
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
Total	**1 580**	**759**	**2 353**	**1.3**	**0.3**	**1.0**	**53**	**53**	**53**

2011

	Number tested			Percent with HIV antibody			Percent with hepatitis C antibody		
	Male	**Female**	**Total[1]**	**Male**	**Female**	**Total[1]**	**Male**	**Female**	**Total[1]**
Sexual identity									
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
Sex work last month									
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
Country/region of birth									
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
Other Oceania	*46*	*34*	*80*	*0.0*	*0.0*	*0.0*	*50*	*58*	*53*
Asia	*24*	*7*	*31*	*4.2*	*0.0*	*3.2*	*67*	*14*	*55*
United Kingdom and Ireland	*73*	*34*	*108*	*0.0*	*0.0*	*0.0*	*58*	*50*	*55*
Other	*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
Main language spoken at home by parents									
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
Total	**1 560**	**764**	**2 337**	**1.4**	**0.9**	**1.2**	**54**	**52**	**53**

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, 2007 – 2011

Year/ Age group	Person years at risk	Number newly diagnosed	Incidence per 100 person years
2007			
Less than 20 years	5.2	0	0.0
20-29 years	23.0	3	13.0
30+ years	42.0	3	7.1
Total	**70.2**	**6**	**8.5**
2008			
Less than 20 years	2.5	0	0
20-29 years	17.0	1	5.9
30+ years	40.0	5	12.5
Total	**59.5**	**6**	**10.1**
2009			
Less than 20 years	2.3	1	42.5
20-29 years	16.8	2	11.9
30+ years	39.0	1	2.6
Total	**58.1**	**4**	**6.9**
2010			
Less than 20 years	0.8	0	0.0
20-29 years	13.7	3	21.9
30+ years	31.8	2	6.3
Total	**46.3**	**5**	**10.8**
2011			
Less than 20 years	0.7	2	2.5
20-29 years	10.0	2	20.0
30+ years	19.0	1	5.3
Total	**29.7**	**5**	**16.8**

Source: Kirketon Road Centre

Table 4.3.2 Incidence of hepatitis C infection among people who inject drugs enrolled in the Hepatitis C Incidence and Transmission Study – community (HITS-c), Sydney, 2009 – 2011

Year/ Age group	Person years at risk	Number newly diagnosed	Incidence per 100 person years
2009			
Less than 20 years	4.2	1	23.8
20-29 years	36.0	4	11.1
30+ years	19.8	1	5.1
Total	**60.0**	**6**	**10.0**
2010			
Less than 20 years	3.6	0	0.0
20-29 years	46.5	5	10.7
30+ years	38.5	1	2.6
Total	**88.6**	**6**	**6.8**
2011			
Less than 20 years	1.6	1	62.5
20-29 years	54.3	3	5.5
30+ years	45.1	5	11.1
Total	**101.0**	**9**	**8.9**

Source: Kirketon Road Centre

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[1], 1985 – 2011, by State/Territory and years of donation

State/Territory	1985[2] – 2001			2002 – 2003			2004 – 2005		
	Tests	Positive	Prevalence	Tests	Positive	Prevalence	Tests	Positive	Prevalence
ACT[3]	195 633	1	0.5	–	–	–	–	–	–
NSW	4 848 333	40	0.8	644 544	3	0.5	685 767	3	0.4
NT	145 744	1	0.7	16 950	0	0.0	20 939	0	0.0
QLD	2 917 098	30	1.0	426 959	2	0.5	473 053	2	0.4
SA	1 547 893	6	0.4	182 549	0	0.0	204 178	1	0.5
TAS	384 825	1	0.3	49 454	0	0.0	52 805	0	0.0
VIC	4 152 210	17	0.4	513 206	0	0.0	522 699	1	0.2
WA	1 382 987	10	0.7	215 146	3	1.4	232 349	0	0.0
Total	**15 574 723**	**106**	**0.7**	**2 048 808**	**8**	**0.4**	**2 191 790**	**7**	**0.3**

State/Territory	2006 – 2007			2008 – 2009			2010 – 2011			All years		
	Tests	Positive	Prevalence	Tests	Positive	Prevalence	Tests	Positive	Prevalence	Tests	Positive	Prevalence
ACT[3]	–	–	–	–	–	–	–	–	–	195 633	1	0.5
NSW	767 349	2	0.3	812 296	2	0.2	870 127	3	0.3	8 628 416	53	0.6
NT	20 292	0	0.0	24 104	0	0.0	22 823	1	4.4	250 852	2	0.8
QLD	482 500	2	0.4	527 114	6	1.1	546 748	7	1.3	5 373 472	49	0.9
SA	244 895	2	0.8	272 639	0	0.0	267 234	0	0.0	2 719 388	9	0.3
TAS	62 294	0	0.0	78 267	0	0.0	92 954	0	0.0	720 599	1	0.1
VIC	536 212	1	0.2	600 306	5	0.8	624 088	2	0.3	6 948 721	26	0.4
WA	231 209	1	0.4	255 295	0	0.0	263 844	1	0.4	2 580 830	15	0.6
Total	**2 344 751**	**8**	**0.3**	**2 570 021**	**13**	**0.5**	**2 687 818**	**14**	**0.5**	**27 417 911**	**156**	**0.6**

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; National Serology Reference Laboratory, Australia

Table 4.4.2 Number of blood donors in Australia with HIV antibody, 1985 – 2011, 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

	1985 – 2001		2002 – 2003		2004 – 2005		2006 – 2007		2008 – 2009		2010 – 2011		All years		
HIV exposure category	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**Total**
Men who have sex with men[1]	20	–	2	–	3	–	0	–	6	–	3	–	34	–	34
Injecting drug use	4	0	0	0	1	0	1	0	0	0	0	0	6	0	6
Heterosexual contact	23	22	1	4	1	1	3	2	3	3	6	3	37	35	72
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	1	0	1	0	2	0	1	0	1	1	32	4	36
Total	**74**	**32**	**4**	**4**	**6**	**1**	**6**	**2**	**10**	**3**	**10**	**4**	**110**	**46**	**156**
New HIV infection[2]	**30**	**16**	**5**	**1**	**0**	**2**	**2**	**1**	**4**	**1**	**4**	**2**	**45**	**23**	**68**

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[1], by State/Territory and year of donation

State/Territory	2007 Tests	2007 Positive	2007 Prevalence	2008 Tests	2008 Positive	2008 Prevalence	2009 Tests	2009 Positive	2009 Prevalence
NSW/ACT	389 600	40	10.3	387 669	46	11.9	424 627	46	10.8
NT	10 973	3	27.3	11 981	0	0.0	12 123	2	16.5
QLD	238 131	20	8.4	256 224	16	6.2	270 890	13	4.8
SA	125 504	9	7.2	134 384	9	6.7	138 255	9	6.5
TAS	30 669	0	0.0	37 257	1	2.7	41 010	0	0.0
VIC	275 512	43	15.6	289 338	44	15.2	310 968	35	11.3
WA	120 717	8	6.6	124 581	8	6.4	130 714	20	15.3
Total	**1 191 106**	**123**	**10.3**	**1 241 434**	**124**	**10.0**	**1 328 587**	**125**	**9.4**

State/Territory	2010 Tests	2010 Positive	2010 Prevalence	2011 Tests	2011 Positive	2011 Prevalence
NSW/ACT	428 144	44	10.3	441 983	46	10.4
NT	11 269	1	8.9	11 554	3	26.0
QLD	271 934	22	8.1	274 814	16	5.8
SA	132 871	6	4.5	134 363	6	4.5
TAS	44 706	1	2.2	48 248	1	2.1
VIC	304 717	38	12.5	319 371	31	9.7
WA	131 795	11	8.3	132 049	15	11.4
Total	**1 325 436**	**123**	**9.3**	**1 362 382**	**118**	**8.7**

1 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[1], by State/Territory and year of donation

State/Territory	2007 Tests	2007 Positive	2007 Prevalence	2008 Tests	2008 Positive	2008 Prevalence	2009 Tests	2009 Positive	2009 Prevalence
NSW/ACT	389 600	41	10.5	387 669	61	15.7	424 627	52	12.2
NT	10 973	0	0.0	11 981	0	0.0	12 123	1	8.2
QLD	238 131	34	14.3	256 224	31	12.1	270 890	22	8.1
SA	125 504	7	5.6	134 384	9	6.7	138 255	14	10.1
TAS	30 669	2	6.5	37 257	4	10.7	41 010	5	12.2
VIC	275 512	28	10.2	289 338	20	6.9	310 968	24	7.7
WA	120 717	9	7.5	124 581	5	4.0	130 714	10	7.7
Total	**1 191 106**	**121**	**10.2**	**1 241 434**	**130**	**10.5**	**1 328 587**	**128**	**9.6**

State/Territory	2010 Tests	2010 Positive	2010 Prevalence	2011 Tests	2011 Positive	2011 Prevalence
NSW/ACT	428 144	40	9.3	441 983	33	7.5
NT	11 269	1	8.9	11 554	1	8.7
QLD	271 934	16	5.9	274 814	16	5.8
SA	132 871	7	5.3	134 363	5	3.7
TAS	44 706	1	2.2	48 248	1	2.1
VIC	304 717	16	5.3	319 371	14	4.4
WA	131 795	4	3.0	132 049	11	8.3
Australia	**1 325 436**	**85**	**6.4**	**1 362 382**	**81**	**5.9**

1 Prevalence per 100 000 donations.

Source: Australian Red Cross Blood Service

4.5 Chlamydia positivity among people seen through the Australian Collaboration for Chlamydia Enhanced Sentinel Surveillance (ACCESS)

Table 4.5.1 Number of people seen for the first time at sexual health services participating in ACCESS, 2007 – 2011, number (percent) tested for chlamydia and number (percent) tested positive with chlamydia, by priority population and year

	Chlamydia priority population[1]					
Year	Heterosexual males aged less than 25 years	Heterosexual females aged less than 25 years	Men who have sex with men[2]	Female sex workers	Aboriginal & Torres Strait Islander males	Aboriginal & Torres Strait Islander females
2007						
Seen	3 014	4 567	3 516	1 322	541	783
Tested (%)	2 632 (87.3)	3 828 (83.8)	3 029 (86.1)	1 250 (94.6)	413 (76.3)	522 (66.7)
Positive (%)	409 (15.5)	491 (12.8)	184 (6.1)	60 (4.8)	55 (13.3)	86 (16.5)
2008						
Seen	3 433	4 712	3 602	1 491	567	795
Tested (%)	2 968 (86.5)	3 964 (84.1)	3 168 (88.0)	1 409 (94.5)	423 (74.6)	560 (70.4)
Positive (%)	468 (15.8)	578 (14.6)	230 (7.3)	65 (4.6)	84 (19.9)	76 (13.6)
2009						
Seen	4 028	5 093	4 181	1 786	531	843
Tested (%)	3 473 (86.2)	4 215 (82.8)	3 731 (89.2)	1 684 (94.3)	423 (79.7)	597 (70.8)
Positive (%)	569 (16.4)	617 (14.6)	345 (9.2)	94 (5.6)	70 (16.5)	95 (15.9)
2010						
Seen	4 405	5 328	4 513	1 723	638	827
Tested (%)	3 975 (90.2)	4 668 (87.6)	4 115 (91.2)	1 670 (96.9)	498 (78.1)	596 (72.1)
Positive (%)	661 (16.6)	739 (15.8)	365 (8.9)	95 (5.7)	107 (21.5)	124 (20.8)
2011						
Seen	4 757	5 596	4 412	1 423	693	822
Tested (%)	4 230 (88.9)	4 674 (83.5)	3 944 (89.4)	1 346 (94.6)	540 (77.9)	551 (67.0)
Positive (%)	693 (16.4)	723 (15.5)	312 (7.9)	84 (6.2)	86 (15.9)	104 (18.9)

1 Data from 20 services in New South Wales, Northern Territory, Queensland, Victoria, Tasmania and Western Australia.

2 Includes men who have sex only with men, and with both men and women.

Source: Australian Collaboration for Chlamydia Enhanced Sentinel Surveillance – Sexual Health Services Network

Table 4.5.2 Number of people seen for the first time in 2008 – 2010, number (percent) tested for chlamydia and number (percent) tested positive, by ACCESS network, year, sex and age group

	2008			2009			2010		
	Seen	Tested	Positive	Seen	Tested	Positive	Seen	Tested	Positive
General Practice Network[1]	n	n (%)	n (%)	n	n (%)	n (%)	n	n (%)	n (%)
Males									
16-19	2 063	63 (3.1)	9 (19.6)	2 384	79 (3.3)	12 (20.7)	2 417	71 (2.9)	11 (19.0)
20-24	2 550	172 (6.8)	20 (16.0)	3 257	221 (6.8)	24 (13.5)	3 131	263 (8.4)	37 (16.7)
25-29	2 531	173 (6.8)	13 (11.6)	3 268	193 (5.9)	13 (8.7)	3 331	233 (7.0)	30 (16.0)
16-29	**7 144**	**408 (5.7)**	**42 (14.8)**	**8 909**	**493 (5.5)**	**49 (12.7)**	**8 879**	**567 (6.4)**	**78 (16.7)**
Females									
16-19	3 176	326 (10.3)	25 (8.7)	3 668	379 (10.3)	34 (9.9)	3 632	429 (11.8)	50 (12.6)
20-24	4 196	521 (12.4)	39 (8.5)	5 458	660 (12.1)	46 (7.7)	5 269	747 (14.2)	71 (10.3)
25-29	4 130	351 (8.5)	14 (4.6)	5 103	475 (9.3)	15 (3.4)	5 133	505 (9.8)	22 (4.7)
16-29	**11 502**	**1 198 (10.4)**	**78 (7.4)**	**14 229**	**1 514 (10.6)**	**95 (6.9)**	**14 034**	**1 681 (12.0)**	**143 (9.2)**
Total	**18 646**	**1 606 (8.6)**	**120 (7.5)**	**23 138**	**2 007 (8.7)**	**144 (8.2)**	**22 913**	**2 248 (9.8)**	**221 (9.8)**
Family Planning Clinic Network[2]									
Males									
16-19	117	35 (29.9)	9 (25.7)	123	30 (24.4)	7 (24.1)	136	37 (27.2)	13 (36.1)
20-24	107	67 (62.6)	13 (19.7)	119	81 (68.1)	17 (21.3)	128	78 (60.9)	21 (28.0)
25-29	48	27 (56.3)	4 (15.4)	60	32 (53.3)	4 (12.9)	54	35 (64.8)	6 (18.8)
16-29	**272**	**129 (47.4)**	**26 (20.5)**	**302**	**143 (47.4)**	**28 (20.0)**	**318**	**150 (47.2)**	**40 (28.0)**
Females									
16-19	1 393	551 (39.6)	50 (9.2)	1 423	549 (38.6)	67 (12.3)	1 651	720 (43.6)	106 (15.2)
20-24	2 248	922 (41.0)	66 (7.3)	2 180	924 (42.4)	63 (6.9)	2 171	964 (44.4)	86 (9.0)
25-29	1 674	535 (32.0)	17 (3.3)	1 812	571 (31.5)	14 (2.5)	1 712	579 (33.8)	23 (4.0)
16-29	**5 315**	**2 008 (37.8)**	**133 (6.8)**	**5 415**	**2 044 (37.8)**	**144 (7.1)**	**5 534**	**2 263 (40.9)**	**215 (9.7)**
Total	**5 587**	**2 137 (38.2)**	**159 (7.6)**	**5 717**	**2 187 (38.3)**	**172 (8.0)**	**5 852**	**2 413 (41.2)**	**255 (10.8)**

Laboratory Network[3]						
Males						
16-19	6 026	857 (14.2)	7 365	1 085 (14.7)	6 747	1 102 (16.1)
20-24	11 745	1 612 (13.7)	14 109	1 940 (13.8)	12 947	1 788 (13.1)
25-29	13 455	1 263 (9.4)	15663	1 398 (8.9)	13 965	1 256 (8.8)
30-39	8 081	488 (6.0)	12 561	777 (6.2)	9 644	591 (5.6)
40+	8 432	287 (3.4)	13 792	512 (3.7)	10 247	319 (2.8)
Females						
16-19	21 043	2 539 (12.1)	25 301	2 938 (11.6)	22 196	2 824 (12.7)
20-24	32 237	2 774 (8.6)	38 767	3 219 (8.3)	34 760	3 061 (8.8)
25-29	32 570	1 468 (4.5)	38 969	1 728 (4.4)	34 186	1 460 (4.3)
30-39	16 161	382 (2.4)	27 834	628 (2.6)	19 998	550 (2.8)
40+	8 708	93 (1.1)	16 715	223 (1.3)	11 756	126 (1.1)
Total	**158 818**	**11 763 (7.4)**	**211 076**	**14 448 (6.8)**	**176 446**	**13 077 (7.4)**

1 Data from 17 General Practice sites.

2 Data from 4 Family Planning Clinic sites.

3 Data from 13 Laboratory Network sites.

4 Data from the General Practice Network and the Family Planning Network is presented by person per year.

5 Data from the Laboratory Network is presented by person per day (tests from more than one anatomical sites on one day are counted once).

Source: Australian Collaboration for Chlamydia Enhanced Sentinel Surveillance

4.6 Genital Warts Surveillance Network

Table 4.6.1 Number of women seen for the first time at sexual health services participating in the Genital Wart Surveillance Network, 2004 – 2011, number (percent) diagnosed with genital warts, by resident status, age group, and year

Year of diagnosis[1]		Australian resident women aged ≤21 years in July 2007[2]	Australian resident women aged 22 – 26 years in July 2007[2]	Non-resident women aged ≤26 years in July 2007[2]	Older Australian resident women	Older non-resident women
2004	Seen	1 039	2 188	794	2 018	447
	Positive (%)	116 (11.2)	257 (11.7)	90 (11.3)	121 (6.0)	25 (5.6)
2005	Seen	1 050	2 376	845	2 215	478
	Positive (%)	112 (10.7)	264 (11.1)	83 (9.8)	135 (6.1)	27 (5.7)
2006	Seen	1 314	2 840	894	2 451	480
	Positive (%)	145 (11.0)	319 (11.2)	74 (8.3)	136 (5.6)	25 (5.2)
2007	Seen	1 529	3 087	1 243	2 846	689
	Positive (%)	185 (12.1)	350 (11.3)	105 (8.5)	156 (5.5)	32 (4.6)
2008	Seen	1 850	3 262	1 772	2 338	795
	Positive (%)	117 (6.3)	205 (6.3)	115 (6.5)	102 (4.4)	29 (3.7)
2009	Seen	2 203	3 471	2 338	2 093	820
	Positive (%)	96 (4.4)	179 (5.2)	138 (5.9)	107 (5.1)	29 (3.5)
2010	Seen	2 584	3 780	2 586	1 748	694
	Positive (%)	60 (2.3)	110 (2.9)	157 (6.1)	114 (6.5)	24 (3.5)
2011	Seen	3 077	4 149	2 622	1 632	441
	Positive (%)	69 (2.2)	108 (2.6)	169 (6.5)	72 (4.4)	16 (3.6)

1 Data from 8 services from New South Wales, the Northern Territory, Queensland, Tasmania, Victoria and Western Australia.

2 Australian resident women aged 26 years or younger in July 2007 were eligible for the free national Human Papilloma Virus vaccination catch-up program.

Source: Genital Warts Surveillance Network

Table 4.6.2 Number of men seen for the first time at sexual health services participating in the Genital Wart Surveillance Network, 2004 – 2011, number (percent) diagnosed with genital warts, by resident status, age group, gender of sexual partners, and year

Year of diagnosis[1]		Australian resident heterosexual men aged ≤21 years in July 2007[2]	Australian resident heterosexual men aged 22 – 26 years in July 2007[2]	Older Australian resident heterosexual men	Men who have sex with men
2004	Seen	376	2 290	3 747	2 408
	Positive (%)	34 (9.0)	298 (13.0)	534 (14.3)	202 (8.4)
2005	Seen	352	2 400	3 708	2 519
	Positive (%)	34 (9.7)	337 (14.0)	484 (13.1)	218 (8.7)
2006	Seen	462	2 363	3 430	2 666
	Positive (%)	67 (14.5)	340 (14.4)	433 (12.6)	172 (6.5)
2007	Seen	590	2 798	3 678	2 780
	Positive (%)	78 (13.2)	396 (14.2)	424 (11.5)	203 (7.3)
2008	Seen	960	3 603	3 564	2 874
	Positive (%)	98 (10.2)	438 (12.2)	349 (9.8)	189 (6.6)
2009	Seen	1 390	4 819	3 674	3 296
	Positive (%)	124 (8.9)	486 (10.1)	379 (10.3)	194 (5.9)
2010	Seen	1 874	5 398	3 418	3 583
	Positive (%)	105 (5.6)	475 (8.8)	341 (10.0)	219 (6.1)
2011	Seen	2 284	5 833	3 050	3 346
	Positive (%)	131 (5.7)	478 (8.2)	274 (9.0)	180 (5.4)

1 Data from 8 services in New South Wales, the Northern Territory, Queensland, Tasmania, Victoria and Western Australia.

2 Men were not eligible for the free national Human Papilloma Virus vaccination catch-up program.

Source: Genital Warts Surveillance Network

Tables

5 Risk behaviour

5.1 Sexual, injecting and HIV antibody testing behaviour in gay and other homosexually active men

5.2 Sexual and injecting behaviour among people who inject drugs

5 Risk behaviour

5.1 Sexual, injecting and HIV antibody testing behaviour in gay and other homosexually active men

Table 5.1.1 Number of men who have sex with men participating in the Gay Community Periodic Surveys, 2007 – 2011, 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[1,2]					Queensland[1]					Melbourne[1]				
	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
Sample size	**2 296**	**2 186**	**2 240**	**2 707**	**3 176**	**1 399**	**1 223**	**1257**	**1 641**	**1 660**	**2 017**	**2 002**	**2 061**	**2 425**	**1 919**
Unprotected anal intercourse with regular partners[1]	32.5	31.2	32.6	34.0	27.6	34.6	33.3	33.9	30.1	28.5	26.4	33.6	32.5	35.0	34.8
Unprotected anal intercourse with casual partners[1]	23.6	23.1	27.6	25.6	22.4	22.9	24.9	24.2	24.5	23.4	17.8	24.3	24.8	27.1	26.3
Injecting drug use[1,3]	8.4	8.1	7.8	6.9	5.2	2.9	5.1	6.1	5.3	5.9	4.9	6.2	6.7	4.5	4.9
Sample size	**2 009**	**1 888**	**1 973**	**2 421**	**2 825**	**1 309**	**1 138**	**1 183**	**1 518**	**1 535**	**1 863**	**1 850**	**1 916**	**2 211**	**1 757**
HIV antibody testing[4]	71.3	71.0	70.4	59.3	62.3	62.1	65.8	59.9	58.0	58.5	62.4	63.9	67.8	62.4	61.5

	Adelaide				Canberra		Perth	
	2007	2009	2010	2011	2009	2011	2008	2010
Sample size	**504**	**896**	**1 031**	**697**	**289**	**269**	**717**	**912**
Unprotected anal intercourse with regular partners[1]	31.9	27.5	30.9	29.5	38.9	42.2	34.6	34.8
Unprotected anal intercourse with casual partners[1]	20.3	22.5	16.4	22.1	34.7	17.7	26.9	31.4
Sample size	**462**	**858**	**965**	**654**	**281**	**259**	**686**	**882**
HIV antibody testing[4]	64.3	66.3	50.5	51.9	67.1	67.3	57.3	62.9

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

Source: National Centre in HIV Social Research; 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, 2007 – 2011, percent reporting HIV and hepatitis C tests within the past twelve months, number reporting injecting drug use (IDU) in the last month, and percent reporting use of a needle and syringe after someone else in the last month by year, time since first injection, last drug injected and sex

2007

	Number tested			% reporting recent HIV test			% reporting recent hepatitis C test			Number reporting IDU last month			% using after someone else		
	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]
Time since first injection															
Less than 5 years	100	74	175	43	59	50	47	66	55	94	64	159	14	12	13
5 to 9 years	185	116	304	55	66	59	64	70	66	171	106	279	15	15	15
10 to 14 years	259	155	416	62	62	62	62	63	62	240	144	386	17	15	17
15 to 19 years	217	113	333	56	64	59	58	65	61	193	103	299	12	12	12
20+ years	403	164	569	55	47	53	59	52	57	364	140	506	12	8	11
Not reported	31	17	48	48	50	49	55	67	59	23	11	34	13	17	14
Last drug injected															
Amphetamine	348	204	552	53	55	54	52	62	55	300	178	478	12	12	12
Heroin	348	222	574	56	64	59	61	59	60	319	196	518	17	14	16
Other opiates	372	161	538	58	53	57	64	67	65	356	151	512	12	12	12
All other drugs	103	45	150	49	67	54	56	67	59	86	36	124	10	4	9
Not reported	24	7	31	63	63	63	63	75	66	24	7	31	33	38	34
Total	**1 195**	**639**	**1 845**	**55**	**58**	**57**	**59**	**63**	**60**	**1 085**	**568**	**1 663**	**14**	**13**	**13**

2008

	Number tested			% reporting recent HIV test			% reporting recent hepatitis C test			Number reporting IDU last month			% using after someone else		
	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]
Time since first injection															
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
Last drug injected															
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
Total	**1 396**	**764**	**2 170**	**50**	**48**	**50**	**58**	**52**	**55**	**1 248**	**672**	**1 929**	**14**	**16**	**15**

2009

	Number tested			% reporting recent HIV test			% reporting recent hepatitis C test			Number reporting IDU last month			% using after someone else		
	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]
Time since first injection															
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
Last drug injected															
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
Total	**1 725**	**915**	**2 657**	**49**	**53**	**51**	**55**	**61**	**58**	**1 541**	**805**	**2 362**	**14**	**15**	**14**

2010

	Number tested			% reporting recent HIV test			% reporting recent hepatitis C test			Number reporting IDU last month			% using after someone else		
	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]
Time since first injection															
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
Last drug injected															
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
Total	**1 580**	**759**	**2 353**	**46**	**51**	**48**	**52**	**56**	**54**	**1 403**	**660**	**2 073**	**12**	**13**	**12**

2011

	Number tested			% reporting recent HIV test			% reporting recent hepatitis C test			Number reporting IDU last month			% using after someone else		
	M	**F**	**T[1]**	**M**	**F**	**T[1]**	**M**	**F**	**T[1]**	**M**	**F**	**T[1]**	**M**	**F**	**T[1]**
Time since first injection															
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
Last drug injected															
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
Total	**1 560**	**764**	**2 337**	**48**	**51**	**49**	**51**	**58**	**54**	**1 371**	**675**	**2 056**	**15**	**15**	**15**

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, 2007 – 2011, 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

2007

	Number tested			% reporting recent HIV test			% reporting recent hepatitis C test			Number reporting sexual intercourse			%reporting condom use last month[2]		
	M	F	T[1]	M	F	T[1]	M	F	T1	M	F	T[1]	M	F	T[1]
Age group															
Less than 20 years	18	16	34	56	56	56	56	69	62	12	12	24	42	25	33
20 to 24 years	72	69	142	57	67	61	63	81	71	55	51	107	45	39	42
25 to 34 years	453	236	693	60	66	62	64	64	64	283	185	471	36	30	34
35 to 44 years	434	219	654	56	57	56	56	60	58	240	134	375	25	23	25
45+ years	216	99	320	45	39	44	52	52	52	88	45	135	23	27	24
Not reported	2	0	2	50	0	33	50	100	67	2	0	2	50	0	50
Sexual identity															
Heterosexual	1 055	458	1 514	54	55	54	58	59	59	599	304	904	29	24	28
Bisexual	47	119	170	66	69	68	68	70	70	29	88	121	34	49	46
Homosexual	69	42	114	61	67	63	61	67	63	40	23	63	53	22	41
Not reported	24	20	47	67	65	66	71	80	74	12	12	26	50	92	69
Total	**1 195**	**639**	**1 845**	**55**	**58**	**57**	**59**	**63**	**60**	**680**	**427**	**1 114**	**31**	**28**	**30**

2008

	Number tested			% reporting recent HIV test			% reporting recent hepatitis C test			Number reporting sexual intercourse			%reporting condom use last month[2]		
	M	F	T[1]	M	F	T	M	F	T[1]	M	F	T[1]	M	F	T[1]
Age group															
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
Sexual identity															
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
Total	**1 396**	**764**	**2 170**	**50**	**48**	**50**	**58**	**52**	**55**	**783**	**507**	**1 295**	**34**	**33**	**34**

2009

	Number tested			% reporting recent HIV test			% reporting recent hepatitis C test			Number reporting sexual intercourse			% using condoms at last intercourse[2]		
	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]
Age group															
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	1
Sexual identity															
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
Total	**1 725**	**915**	**2 657**	**49**	**53**	**51**	**55**	**61**	**58**	**930**	**608**	**1 546**	**32**	**28**	**31**

2010

	Number tested			% reporting recent HIV test			% reporting recent hepatitis C test			Number reporting sexual intercourse			% using condoms at last intercourse[2]		
	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]
Age group															
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
Sexual identity															
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
Total	**1 580**	**759**	**2 353**	**46**	**51**	**48**	**52**	**56**	**54**	**852**	**487**	**1 346**	**32**	**31**	**32**

2011

	Number tested			% reporting recent HIV test			% reporting recent hepatitis C test			Number reporting sexual intercourse			% using condoms at last intercourse[2]		
	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]	M	F	T[1]
Age group															
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
Sexual identity															
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
Total	**1 560**	**764**	**2 337**	**48**	**51**	**49**	**51**	**58**	**54**	**802**	**465**	**1 273**	**34**	**29**	**32**

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

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

6.2 Estimates of the number of people living with viral hepatitis

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 2011 by State/Territory of HIV diagnosis and sex

State/Territory	Male	Female	Total	%
ACT	243	27	270	1.1
NSW	11 185	1 129	12 314	49.8
NT	126	21	147	0.6
QLD	3 068	385	3 453	14.0
SA	937	119	1 056	4.3
TAS	136	16	152	0.6
VIC	5 288	511	5 799	23.4
WA	1 347	193	1 540	6.2
Total	**22 330**	**2 401**	**24 731**	**100.0**

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 2011

Characteristic	Number	Plausible range
Hepatitis B prevalence in 2011	209 000	184 000 – 241 000
During 2011		
Deaths attributable to chronic hepatitis B infection	382	294 – 621

Source: Hepatitis B Program, Epidemiology Unit, Victorian Infectious Diseases Reference Laboratory

Table 6.2.2 Estimated number of people living with hepatitis C virus infection in 2011 by stage of liver disease

Characteristic	Number	Plausible range
Hepatitis C virus prevalence in 2011	304 000	231 000 – 376 000
Exposed to hepatitis C virus but not chronically infected	*77 300*	*58 900 – 95 400*
Chronic hepatitis C infection with stage F0/1 liver disease	*170 900*	*128 600 – 213 400*
Chronic hepatitis C infection with stage F2/3 liver disease	*49 500*	*38 800 – 59 400*
Living with hepatitis C-related cirrhosis	*6 300*	*4 400 – 8 000*
During 2011		
Hepatitis C-related liver failure	253	177 – 321
Hepatitis C-related hepatocellular carcinoma	127	89 – 161

Source: Linear extrapolations of estimates from Hepatitis C Virus Projections Working Group 2006

Tables

7 Uptake of treatment for HIV infection and viral hepatitis

7.1 Uptake of antiretroviral treatment for HIV infection

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 2011

	Current antiretroviral treatment[1]						
	None	Mono/ double therapy	3+ NRTI ±PI (not NNRTI, not II)	3+ NRTI +NNRTI (not PI, not II)	3+NNRTI +PI,±NRTI (not II)	3+ II, ±NNRTI, ±PI	Total
Total	**170**	**145**	**513**	**802**	**77**	**325**	**2 032**
Sex							
Male	156 (92)	139 (96)	477 (93)	752 (94)	75 (97)	312 (96)	1 911
Female	14 (8)	6 (4)	36 (7)	50 (6)	2 (3)	13 (4)	121
Age at enrolment (years)							
Less than 30	32 (19)	6 (4)	49 (10)	83 (10)	3 (4)	20 (6)	193
30 – 39	86 (51)	44 (30)	183 (36)	254 (32)	23 (30)	85 (26)	675
40 – 49	36 (21)	62 (43)	178 (35)	274 (34)	36 (47)	126 (39)	712
50+	16 (9)	33 (23)	103 (20)	191 (24)	15 (19)	94 (29)	452
Exposure category							
Male homosexual contact	134 (79)	125 (86)	401 (78)	589 (73)	61 (79)	261 (80)	1 571
Other/not reported	36 (21)	20 (14)	112 (22)	213 (27)	16 (21)	64 (20)	461
Viral load at enrolment (copies/ml)							
Less than 400	45 (27)	101 (72)	323 (65)	532 (70)	39 (51)	195 (63)	1 235
400 – 10,000	57 (35)	28 (20)	87 (18)	79 (10)	24 (32)	51 (17)	326
10,000+	63 (38)	12 (9)	85 (17)	145 (19)	13 (17)	63 (20)	381
Not reported	5	4	18	46	1	16	90
CD4+ count at enrolment (cells/µl)							
Less than 200	5 (3)	14 (10)	46 (9)	61 (8)	9 (12)	45 (15)	180
200 – 500	53 (32)	60 (42)	229 (46)	320 (42)	35 (46)	124 (40)	821
500+	107 (65)	68 (48)	218 (44)	382 (50)	32 (42)	140 (45)	947
Not reported	5	3	20	39	1	16	84
AIDS prior to enrolment							
No	166 (98)	112 (77)	431 (84)	677 (84)	53 (69)	238 (73)	1 677
Yes	4 (2)	33 (23)	82 (16)	125 (16)	24 (31)	87 (27)	355
Hepatitis C antibody positive							
No	142 (84)	124 (86)	398 (78)	659 (82)	68 (88)	266 (82)	1657
Yes	14 (8)	11 (8)	64 (12)	57 (7)	6 (8)	39 (12)	191
No test done	14 (8)	10 (7)	51 (10)	86 (11)	3 (4)	20 (6)	184
Regimen of longest duration in 2010							
None	156 (92)	5 (3)	27 (5)	66 (8)	0 (0)	16 (5)	270
Mono and Double therapy	2 (1)	128 (88)	5 (1)	3 (0)	0 (0)	4 (1)	142
3+ NRTI±PI (not NNRTI, not II)	5 (3)	7 (5)	462 (90)	7 (1)	2 (3)	38 (12)	521
3+ NRTI+NNRTI (not PI,not II)	4 (2)	1 (1)	10 (2)	726 (91)	1 (1)	14 (4)	756
3+ NNRTI+PI, ±NRTI (not II)	0 (0)	2 (1)	4 (1)	0 (0)	73 (95)	5 (2)	84
3+ II, ±NRTI, ±NNRTI, ±PI	3 (2)	2 (1)	5 (1)	0 (0)	1 (1)	248 (76)	259

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, 2007 – 2011 and proportion[1] reporting use of antiretroviral treatment for HIV infection, by city and year

	Year of survey				
City	**2007**	**2008**	**2009**	**2010**	**2011**
Melbourne					
Sample size	154	152	145	214	162
Proportion reporting use of antiretroviral therapy	51.5	63.3	61.3	69.7	72.6
Queensland					
Sample size	90	85	74	123	125
Proportion reporting use of antiretroviral therapy	64.4	66.1	61.5	68.5	69.7
Sydney[2]					
Sample size	287	298	267	286	351
Proportion reporting use of antiretroviral therapy	53.2	70.6	73.5	68.9	70.6
Adelaide, Canberra & Perth (combined)[3]					
Sample size	42	31	46	96	53
Proportion reporting use of antiretroviral therapy	81.2	72.7	62.9	76.4	89.1

1 Age standardised and venue adjusted prevalence.

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

3 Adelaide, Canberra and Perth data combined includes data from Adelaide only in 2007, from Perth only in 2008, from Adelaide and Canberra in 2009, from Adelaide and Perth in 2010 and from Adelaide and Canberra in 2011.

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

Methodological notes

1 National surveillance for newly diagnosed HIV infection

1.1 National HIV Registry

National surveillance for newly diagnosed HIV infection

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

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 the Australian Capital Territory, New South Wales, Queensland, South Australia, Victoria and Western Australia, were tested for incident HIV infection using the BED capture enzyme immunoassay (BED-EIA; 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 NCHECR 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 2002 – 2011, 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 Australian born cases. Further information is available in Guthrie *et al* (2000).

Population rates of newly diagnosed HIV infection by Aboriginal and Torres Strait Islander status were calculated using the 2011 census population distribution available through the Australian Bureau of Statistics. The 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. Diagnoses of 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 for HIV

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, 3(A). Centers for Disease Control and Prevention, Atlanta, Georgia. 2012
- Health Protection Agency. HIV in the United Kingdom: 2011 Report: London: Health Protection Agency, Centre for Infections. November 2011
- Joint United Nations Programme on HIV/AIDS (UNAIDS). Report on the global AIDS epidemic 2010. UNAIDS, 2010. http://www.unaids.org

2 National surveillance for viral hepatitis

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

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

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

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

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

Information was sought on Aboriginal and Torres Strait Islander status for diagnoses of hepatitis A, prevalent and newly acquired hepatitis B, and prevalent and newly acquired Hepatitis C cases notified to the National Notifiable Diseases Surveillance System. Population rates of diagnoses of viral hepatitis were calculated by year and State/Territory of diagnosis (in those jurisdictions for which Aboriginal and Torres Strait Islander status was reported in more than 50% of diagnoses in each year 2007 – 2011) using the 2011 census population distribution available through the Australian Bureau of Statistics.

2.3 Long term outcomes among people with chronic viral hepatitis

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

2.4 Global comparisons for hepatitis B

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

- Kowdley K, Wang C, Welch S, Roberts H. Prevalence of chronic Hepatitis B among foreign-born persons living in the United States by country of origin. Hepatology. Epub 2012 Feb 16
- Turnour CE, Cretikos MA, Conaty SJ. Prevalence of chronic Hepatitis B in South Western Sydney: evaluation of the country of birth method using maternal seroprevalence data. *Aust N Z J Public Health*. 2011;35(1):22-26.

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

3 National surveillance for sexually transmissible infections

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

Diagnoses of specific sexually transmissible infections were notified by State/Territory health authorities to the National Notifiable Disease Surveillance System, maintained by the Australian Government Department of Health 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 2007 (52 sites), 2008 (52 sites), 2009 (51 sites), 2010 (53 sites) and 2011 (53 sites) were asked to complete a brief, self-administered questionnaire and to provide a finger prick blood spot sample for HIV and Hepatitis C antibody testing. NSP sites were selected on the basis of large numbers of clients and representation from all State/Territory health jurisdictions. Further information is available in MacDonald *et al* (1997 and 2000).

4.3 Incidence of Hepatitis C infection among people who inject drugs

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

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

4.4 HIV, Hepatitis B surface antigen and Hepatitis C antibody among blood donors

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

4.5 Chlamydia prevalence among people seen through the Australian Collaboration of Chlamydia Enhanced Sentinel Surveillance (ACCESS)

The Australian Collaboration of Chlamydia Enhanced Sentinel Surveillance system monitors the uptake and outcome of chlamydia testing in Australia, and was funded through the Australian Government Department of Health and Ageing Chlamydia Pilot Testing Program till 2010. Currently, the system is in a maintenance mode till alternate funding is obtained.

The objectives of ACCESS are to provide enhanced data management systems at clinical sites with a view to routinely monitor the extent of testing and positivity rates in a range of chlamydia priority populations (Guy R et al, 2010). The priority populations include young heterosexual men and women, men who have sex with men, Aboriginal and/or Torres Strait Islander people, and women currently involved in sex work.

ACCESS is a collaboration involving the Burnet Institute, the National Serology Reference Laboratory (NRL), the National Perinatal Statistics Unit (NPSU) and the Kirby Institute. ACCESS includes five networks: (1) sexual health services (SHS) (2) family planning clinics (FPC) (3) Aboriginal community controlled health services (ACCHS) (4) general practice clinics (GP) and (5) diagnostic laboratories. The Burnet Institute has responsibility for managing the network of family planning clinics and the general practice clinics. Kirby Institute has responsibility for managing the sexual health service network and Aboriginal community controlled health service network in partnership with the National Aboriginal Community Controlled Health Organisation (NACCHO). The diagnostic laboratory network is managed by NRL and the Burnet Institute.

For all networks, analyses were based on routine testing for chlamydia with no additional testing carried out due to participation in ACCESS. Routine chlamydia testing data were extracted directly from patient information management systems at each site and collated at a central location. For the GP and FPC network the data presented is by patient per year, whereas for the Laboratory Network the data presented is by patient per day. For these networks chlamydia testing rates were calculated by dividing the number of patients with at least one chlamydia test by the total number of patients attending the clinic in that year, multiplied by 100. The positivity rates were calculated by dividing the number of patients returning a positive result by the number of patients tested in that year (where a result is known), multiplied by 100. For SHS network, only patients seen for the first time ever at the clinic - defined as new patients, were included in analyses. For this network chlamydia testing rates were calculated by dividing the number of chlamydia tests by the number of new patients seen, multiplied by 100. Chlamydia positivity rates were calculated by dividing the number of positive results by the number of new patients tested, multiplied by 100.

4.6 Genital warts surveillance network

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

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

5 Risk behaviour

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

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

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

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

Information on sexual behaviour, history of injecting drug use and HIV and Hepatitis C testing history was obtained by client completion of a questionnaire administered at 52 needle and syringe programs in 2007, 52 in 2008, 51 in 2009, 53 in 2010 and 53 in 2011. 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 by the Hepatitis B Program, Epidemiology Unit, Victorian Infectious Diseases Reference Laboratory. These estimates were derived from two sources:

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

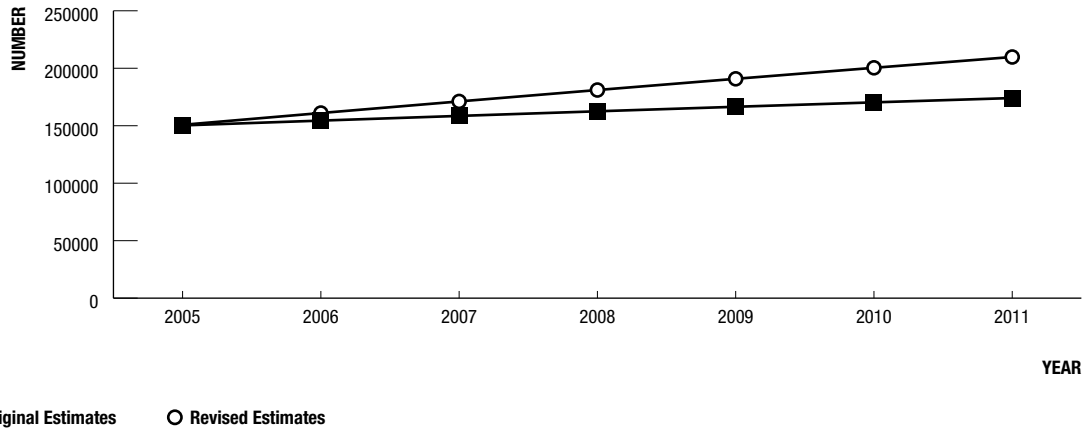
The model was parameterised using a wide range of data sources including the ABS, existing mathematical models, surveillance notifications, epidemiological research and clinical studies. Important factors such as migration, attributable and all-cause mortality, the ageing of the population, the variable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

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

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

This re-calculation also retrospectively affects estimates previously reported for years subsequent to the last Census in 2006, as demonstrated in Figure 45.

Figure 45 Number of people living in Australia with chronic hepatitis B infection, 2006 – 2011, based on original and recently revised calculations of net overseas migration



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 2012, 27 participating clinical sites enrolled a total of 3 572 people into the AHOD.

Data from 24 of the 25 currently participating clinical sites were included in the analysis in Table 7.1.1. A person with HIV infection was classified as not on treatment if they were under active follow up in 2011 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.

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.

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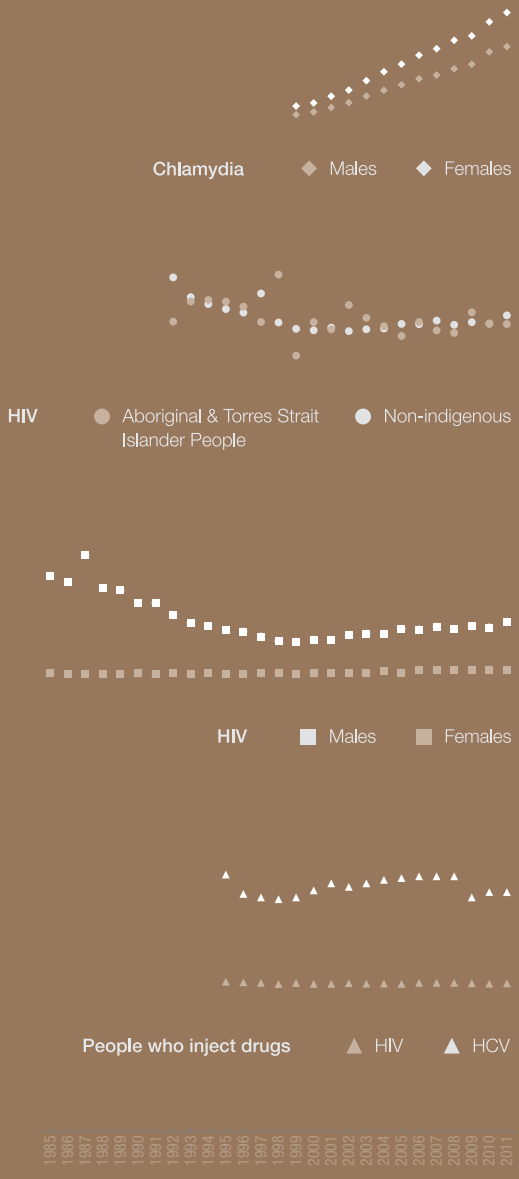
Design: **Il Razzo** Telephone: **02 48 211136** E- mail: **admin@ilrazzo.com.au**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