

Communicable Diseases Weekly Report

Week 24, 13 June to 19 June 2016

In summary, we report:

- [Invasive pneumococcal disease](#) - increased activity
- [HIV](#) – quarter 1 2016 surveillance update
- [Summary of notifiable conditions activity in NSW](#)

For further information on infectious diseases on-line see [NSW Health Infectious Diseases](#). Also see [NSW Health Infectious Diseases Reports](#) for links to other surveillance reports.

Invasive pneumococcal disease

Notifications for invasive pneumococcal disease (IPD) during April and May 2016 (91) were above the historical three year average (81). The number of notifications so far this year have been highest in children aged less than 5 years with a total of 58 notifications which is usually the total number of notifications for the year. Sadly, this includes two recent fatal cases reported in children aged one year who were fully vaccinated. One of these cases was found to be due to infection with serotype 22F (not included in the current vaccine); serotype testing for the second fatal case is pending.

IPD activity tends to increase during winter, especially in older adults. Pneumococcal pneumonia is often a secondary complication for people who have had a recent influenza infection.

Pneumococcal infection can cause a variety of diseases including: pneumonia, blood infection, otitis media and meningitis. Symptoms depend on the site of infection and the age of the person however in persons with pneumonia symptoms include shortness of breath, fever, lack of energy, loss of appetite, headache, chest pain and cough.

People most at risk of the infection include children under two years of age, older adults, Aboriginal and Torres Strait Islander people, people with lung disease, heart disease, cancer, kidney disease, HIV infection, people whose spleen has been removed or doesn't work properly, and people who smoke.

Pneumococcal vaccine is recommended and is free for children at 6-8 weeks, 4 months and 6 months of age, for all people aged 65 years or older, and for all Aboriginal people aged 50 years or older. It is also free for children aged 2-5 years with certain medical conditions and for Aboriginal people aged 15-49 years who have a chronic medical condition. You should consult with your GP for more advice.

Follow the links for more information on [pneumococcal disease](#), [invasive pneumococcal notifications data](#) and [pneumococcal vaccination](#).

HIV

From January 2016 to March 2016 (quarter 1, 2016), there were 84 NSW residents notified with newly diagnosed HIV infection, which was a 9% reduction in notifications compared to the quarter 1 average for 2010-2015 (n=92) (Figure 1). Ninety-three per cent (78) were males and seven per cent (6) were females, a similar proportion to previous years.

HIV risk exposure was reported as male to male sex for 81% (68) of newly diagnosed people, heterosexual exposure only for 12% (10), injecting drug use for 1% (1), vertical transmission (overseas-acquired) for 1% (1) and another type or unknown exposure for 5% (4). This was a similar breakdown of reported risk exposures to that seen in previous years.

Figure 1: Number of NSW residents notified with newly diagnosed HIV infection from 1 January 2010 to 31 March 2016

Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 11 May 2016.

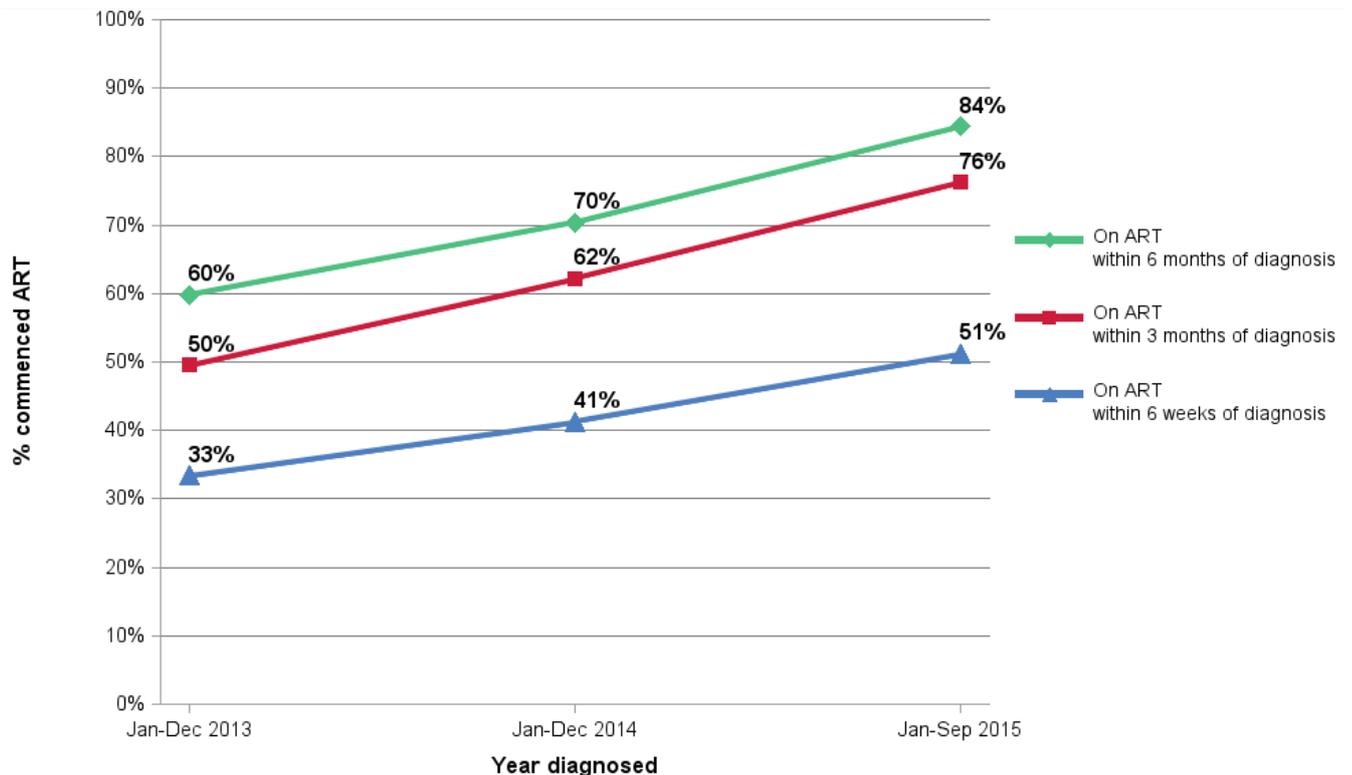
The clinical characteristics of the 84 people newly diagnosed with HIV infection include the following:

- 38% (32) had a CD4 count at diagnosis of less than 350 cells/ μ L, indicative of late diagnosis, compared with 35% for quarter 1 in 2010-2015
- 40% (34) had evidence of early stage infection, compared to 47% for quarter 1 in 2010-2015.

This is against a background of large increases in HIV testing in NSW during the last three years.

In 2013, HIV surveillance in NSW was enhanced to collect information on the patient's retention in care, antiretroviral therapy (ART) commencement, latest HIV viral load and CD4 count six months after diagnosis. The latest available six months post-diagnosis data are for those newly diagnosed in quarter 3 2015. Of the 89 new diagnoses from July to September 2015, 57% (49) had commenced ART within six weeks, 84% (72) within three months, and 88% (76) within six months of diagnosis. Of all 941 NSW residents newly diagnosed with HIV infection from 1 January 2013 to 30 September 2015 who were followed up six months post diagnosis, 41% (385) had commenced ART within six weeks of diagnosis, 61% (575) within three months, and 70% (n=659) within six months of diagnosis (Figure 2). More detailed data can be found in the NSW HIV Strategy 2016 – 2020 [Quarter 1 2016 Data Report](#).

Figure 2: ART commencement status at six weeks, three and six months post diagnosis, for 941 NSW residents newly diagnosed from 1 Jan 2013 to 30 Sept 2015



HIV is a retrovirus that was first identified in 1983 as the cause of Acquired Immune Deficiency Syndrome (AIDS). HIV damages the immune system so that organisms that don't normally cause disease in HIV-negative people can cause severe illness. Additionally certain types of cancer can develop. If these infections or cancers occur in a person with HIV infection, the person is considered to have AIDS. AIDS is now a rare event due to widespread uptake of ART, which is highly effective in preventing immune deficiency in people infected with HIV.

ART is safe and effective and has made HIV a manageable chronic disease. Recent research has proven that ART initiated immediately after HIV diagnosis results in better health outcomes than delaying ART initiation until the CD4 count falls or symptoms develop. ART reduces the infected person's HIV viral load and greatly reduces the risk of transmitting HIV to others. People living with HIV on ART can now have a similar life expectancy as someone who is HIV-negative.

HIV is predominantly transmitted by unprotected anal or vaginal sexual intercourse. It is also spread via contaminated drug injecting equipment and from mother to child during pregnancy, child birth or breast feeding. HIV can also be acquired where there is poor infection control in health care settings or other settings where skin penetration occurs such as with tattooing or body piercing.

HIV can be prevented by consistent condom use, not sharing injecting equipment, people with HIV taking treatment (treatment as prevention), pre-exposure prophylaxis (PrEP) taken by HIV-negative people at high risk of acquisition of HIV, and post-exposure prophylaxis (PEP) taken within 72 hours of exposure to HIV.

Follow the links for more information on [HIV](#) and on [HIV resources and data](#).

Summary of notifiable conditions activity in NSW

The following table summarises notifiable conditions activity over the reporting period (Table 1).

Table 1. NSW notifiable conditions from 13 to 19 June 2016, by date received

		Weekly		Year to date			Full Year	
		This week	Last week	2016	2015	2014	2015	2014
Enteric Diseases	Cryptosporidiosis	14	29	698	579	241	1038	429
	Giardiasis	52	79	2000	1816	1509	3415	2942
	Hepatitis A	1	0	23	48	39	71	80
	Listeriosis	2	1	25	14	16	26	23
	Rotavirus	7	9	236	162	179	1036	714
	Salmonellosis	73	65	2621	2382	2499	4044	4274
	Shigellosis	5	11	145	78	116	172	212
Respiratory Diseases	Influenza	211	236	3693	2158	1372	30302	20888
	Legionellosis	2	2	66	51	37	96	72
	Tuberculosis	7	7	202	190	192	445	475
Sexually Transmissible Infections	Chlamydia	345	454	11962	10525	10907	22548	22899
	Gonorrhoea	108	150	3172	2412	2275	5402	4877
Vaccine Preventable Diseases	Adverse Event Following Immunisation	6	7	125	95	157	182	256
	Meningococcal Disease	2	1	25	17	15	46	37
	Mumps	2	0	15	24	45	63	82
	Pertussis	112	165	5371	3114	866	12079	3051
	Pneumococcal Disease (Invasive)	17	9	189	163	154	494	511
Vector Borne Diseases	Dengue	7	8	260	178	229	342	378
	Ross River	7	9	319	1250	299	1638	673
Zoonotic Diseases	Q fever	1	0	104	107	81	265	190

Notes on Table 1: NSW notifiable conditions activity

- Data cells represent the number of case reports received by NSW Public Health Units and recorded on the NSW Notifiable Conditions Information Management System (NCIMS) in the relevant period.
- Data cells in the 'Adverse Event Following Immunisation' category refer to suspected cases only. These reports are referred to the Therapeutic Goods Administration (TGA) for assessment. Data on adverse events following immunisation is available online from the TGA [Database of Adverse Event Notifications](#).
- Only conditions for which at least one case report was received appear in the table. HIV and other blood-borne virus case reports are not included here but are available from the [infectious diseases data](#) webpage.