

Communicable Diseases Weekly Report

Week 38 14 to 20 September 2015

In summary, we report:

- [Gastroenteritis in Institutions and Rotavirus](#)
- [Human Immunodeficiency Virus Quarter 2 2015 report](#)
- [Emergency Department surveillance](#) – decreasing influenza-like illness activity
- [Summary of notifiable conditions activity in NSW](#)

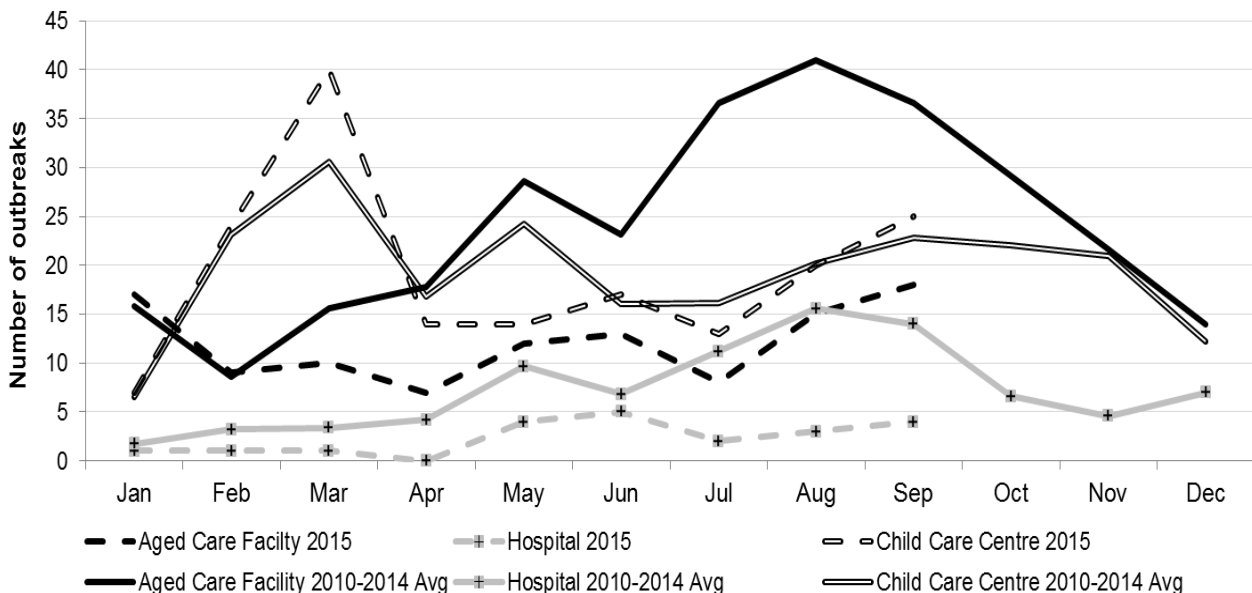
For further information on infectious diseases and alerts see the [Infectious Diseases](#) webpage.

Follow the [A to Z of Infectious Diseases](#) link for more information on specific diseases. For links to other surveillance reports, including influenza reports, see the [NSW Health Infectious Diseases Reports](#) webpage.

Gastroenteritis outbreaks in institutions

There were nineteen outbreaks of gastroenteritis in an institution reported in this period affecting at least 124 people. The previous five-year average for September is eighteen outbreaks per week. Four outbreaks occurred in an aged care facility, one outbreak occurred in a hospital and fourteen occurred in child care centres. All outbreaks appeared to have been caused by a virus and spread from one person to another. Samples were collected in two of these outbreaks and one outbreak was positive for rotavirus.

Figure 1. Gastroenteritis in institutions: outbreaks in 2015 (dotted lines) compared to the previous 5-year average, by institution type.



Gastroenteritis outbreaks in aged care facilities and hospitals tend to peak in August and child care centre outbreaks tend to peak at the beginning of the year in March. This is likely due to the large intake of new children into child care at this time exposing them to a large number of new people and new viruses to which they are likely to be susceptible. This year has seen much lower levels of gastroenteritis outbreaks except for in child care centres which is at expected levels.

Before the rotavirus vaccine was introduced in 2007, [rotavirus](#) was the main cause of gastroenteritis in children. The cause of gastroenteritis in child care centres remains largely

unknown as samples are rarely submitted for testing. This week there were 35 notifications of rotavirus, one of which was in one of the reported child care centre outbreaks. Rotavirus is seasonal and tends to peak in September or October.

Infections in small children may then spread to their other contacts. It is very important to keep small children with gastroenteritis at home, and to not visit family in aged care facilities or hospitals while they are sick, to prevent introducing viral gastroenteritis to these vulnerable people.

Follow the link for further information on [viral gastroenteritis](#).

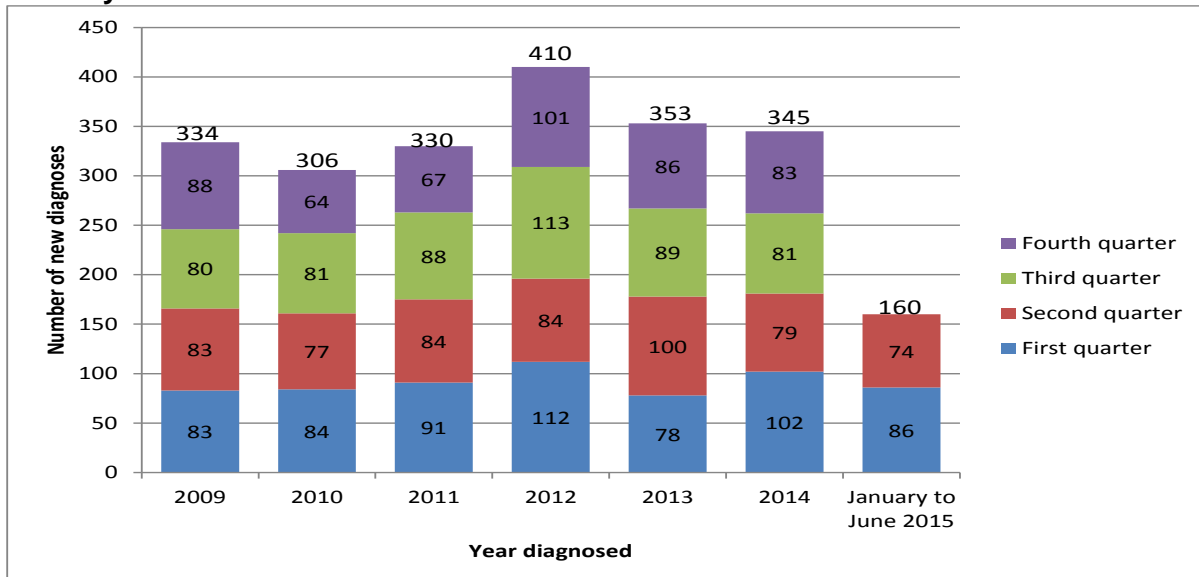
[Back to top](#)

Human immunodeficiency virus (HIV) 1 April to 30 June 2015

In the period 1 April to 30 June (quarter 2) 2015, 74 NSW residents were notified with newly diagnosed HIV infection, the lowest second quarter new diagnosis count since 2006. It is 12 per cent (%) less than the same period in 2012, despite a 13% increase in HIV testing in NSW in the same period (Figure 1). From 1 January to 30 June 2015, 160 NSW residents were notified with newly diagnosed HIV infection (Figure 1); this is 10% less than the average January to June 2009 to 2014 new diagnoses count.

Among the 160 new diagnoses January to June 2015, 147 (92%) were male, 12 (8%) were female and 1 (1%) was transgender; a very similar gender distribution to that of new diagnoses January to June 2009 to 2014. With respect to age at diagnosis, none were less than 20 years of age, 55 (34%) were 20 to 29 years, 43 (27%) were 30 to 39 years, 27 (17%) were 40 to 49 years and 35 (22%) were 50 years or over.

Figure 1: Number of NSW residents notified with newly diagnosed HIV infection from 1 January 2009 to 30 June 2015



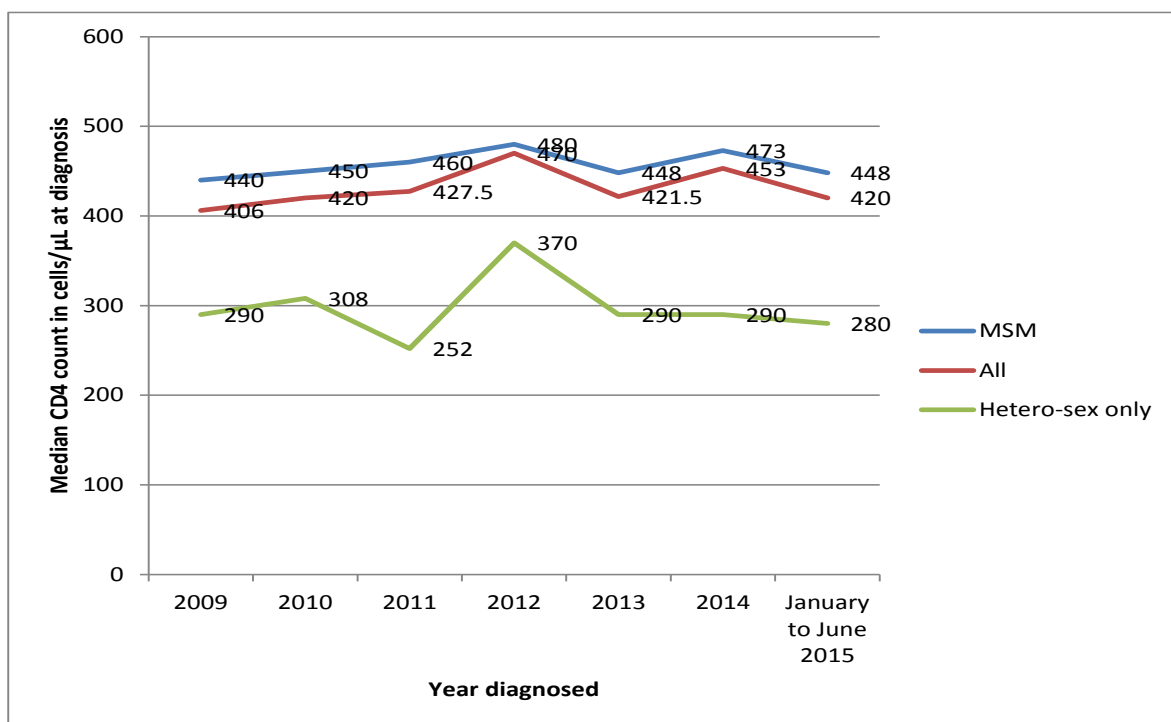
Data source: NSW HIV/AIDS database, Health Protection NSW, extracted 7 August 2015

Of 160 NSW residents notified with newly diagnosed HIV infection January to June 2015, 126 (79%) reported being MSM, 27 (17%) self-reported acquiring HIV through heterosexual sex, 3 (2%) reported being a person who injected drugs (PWID) and 4 (3%) were of unknown risk factor for HIV acquisition. This is a similar breakdown of HIV risk exposures as for the average of the period

January to June 2009 to 2014; 81% MSM, 15% heterosexual sex only, 2% were PWID and 2% were of unknown risk factor for HIV acquisition.

HIV infection manifests by reducing one of the white blood cells important for immunity – these white blood cells are called CD4. A low CD4 count indicates a more advanced stage of HIV infection. The median CD4 count at diagnosis for NSW residents notified with newly diagnosed HIV infection January to June 2015 was 420. For those reporting to be MSM it was 448 and for those reporting heterosexual exposure only it was 280. The median CD4 count at diagnosis among those reporting heterosexual exposure to HIV remains low (Figure 2).

Figure 2: Median CD4 count at diagnosis of NSW residents notified with newly diagnosed HIV infection from 1 January 2009 to 30 June 2015 for all, for those reporting to be MSM and for those reporting heterosexual acquisition of HIV¹



Data source: NSW HIV/AIDS database, Health Protection NSW, extracted 7 August 2015.

¹The median CD4 count at diagnosis for other HIV risk exposure groups such as being a person who injected drugs (PWID) are not reported separately due to very low number of cases.

Of 160 NSW residents notified with newly diagnosed HIV infection in January to June 2015, 64 (40%) were diagnosed by general medical practitioners not accredited to prescribe antiretroviral therapy (ART) nor specialised in HIV (non-s100 GP), 55 (34%) were diagnosed by sexual health clinics (SHC) (which also includes linked community testing sites), 24 (15%) by hospital located doctors, 11 (7%) by s100 GPs (GP HIV specialist-accredited to prescribe ART) and 6 (4%) by other doctor types such as immigration services. Of note, non-s100 GPs made a greater proportion of the new diagnoses in January to June 2015 compared with 31% for the average of the period January to June 2009 to 2014 and s100 GP doctors made a lesser proportion of diagnoses (7%) compared with 18% for the average of the period January to June 2009 to 2014.

Since 2013, HIV surveillance in NSW was enhanced to:

- at the time of diagnosis, collect from doctors additional information on the patient's HIV viral load, antiretroviral therapy (ART) commencement or deferral, and;

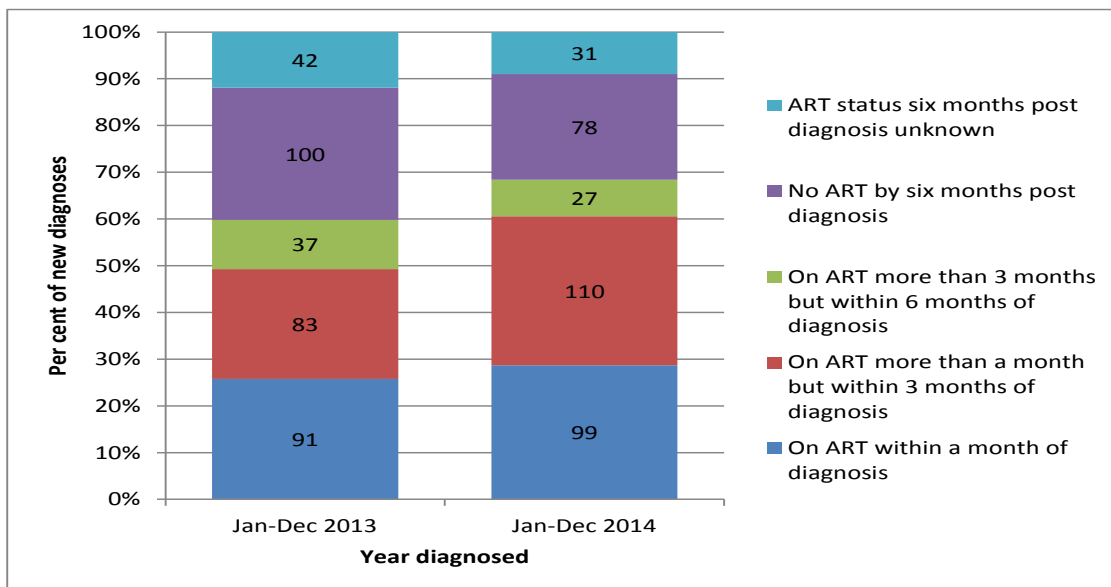
- b) at six months post diagnosis, follow up on the patient via their doctor to collect information on retention in care, ART commencement, pre-ART and latest HIV viral load and CD4 count.

So far the 698 NSW residents newly diagnosed with HIV infection from 1 January 2013 to 31 December 2014 have been followed up six months post diagnosis. Return rate of six month post diagnosis follow up forms by treating clinicians was high with 342 of 353 (97%) forms returned for the 2013 cohort and 312 of 345 (90%) forms returned for the 2014 cohort.

Among the cohort of 698 NSW residents notified with newly diagnosed HIV infection from 1 January 2013 to 31 December 2014, 447 (64%) were reported to have commenced ART within six months of diagnosis. This comprises 211 (60%) of 353 newly diagnosed in 2013 and 236 (68%) of 345 newly diagnosed in 2014 (Figure 3). In addition, 49% of the 2013 cohort was on ART within three months of diagnosis, compared with 61% of the 2014 cohort. It would appear that early commencement of ART is increasing.

Among 83 NSW residents notified with newly diagnosed HIV infection in quarter 4 2014 (the most recent quarter of diagnoses with six months post diagnosis data available), 66 (80%) were on ART within six months of diagnosis.

Figure 3: Per cent of NSW residents notified with newly diagnosed HIV infection in 2013 (n=353) and 2014 (n=345) by ART commencement status at six months post diagnosis, based on notification form and six month post diagnosis data.



Data source: NSW HIV notification and follow up data, Health Protection NSW, extracted 11 August 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 highly effective treatment for HIV, called antiretroviral therapy (ART).

ART is safe and effective and has made HIV a manageable chronic disease. Research has proven that ART needs to be started as rapidly as possible upon diagnosis to protect and benefit personal health and longevity and also reduce the risk of transmitting HIV to others. People living with HIV

on ART can live healthy normal lives and have a similar life expectancy as someone who is HIV-negative.

When first infected with HIV, most people have either no symptoms or only mild symptoms. However some people develop a flu-like illness with fever, sore throat, swollen glands or a rash a few weeks after infection. These symptoms disappear without treatment after a few days, and people with HIV infection may remain without symptoms for many years. However, people with untreated HIV infection can transmit the virus to others. Infectiousness is particularly high in the period shortly after initial infection when the virus is replicating but before an immune response occurs, as well as in late stage disease.

HIV is predominantly transmitted by unprotected 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.

In Australia, men who have sex with men are the highest risk group for HIV infection. Other risk groups include people from countries where HIV prevalence is high and their sexual partners, people who inject drugs, and people who travel to or work in high prevalence countries.

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 seronegative people at high risk of acquisition of HIV, and post-exposure prophylaxis (PEP) taken within 72 hours of exposure to HIV.

The [NSW HIV Strategy 2012-2015 A New Era](#) (the Strategy) was launched in December 2012. The goal of the Strategy is to work towards the virtual elimination of HIV transmission by 2020. The impetus behind the Strategy has come from recent evidence showing that the people with HIV infection who are on HIV treatment have a greatly reduced risk of transmitting HIV to their sexual partners. The Strategy focuses on: promoting condom use, safe injecting and risk reduction behaviour among priority populations; improving access to HIV testing for those who need it; and encouraging and supporting people with HIV to start and adhere to ART.

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

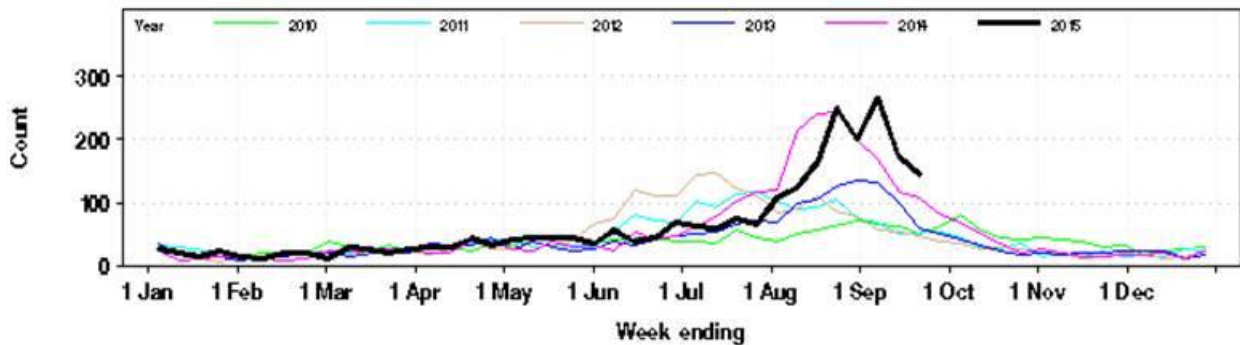
[Back to top](#)

Emergency Department surveillance update

The Public Health Rapid, Emergency Department and Syndromic Surveillance (PHREDSS) system is managed by the Centre for Epidemiology and Evidence, NSW Ministry of Health. It includes monitoring of presentations for a range of syndromes, discharge diagnoses and outcomes from ED. This includes data from 59 NSW emergency departments (EDs), representing approximately 85% of metropolitan ED presentations and approximately 60% of rural ED presentations.

In this reporting period, ED monitoring of influenza-like illness * showed a continuing declining trend in activity, as shown in Figure 1. Influenza notifications also decreased this week to 2289 (Table 1), down from a peak of 3388 in the week ending August 23.

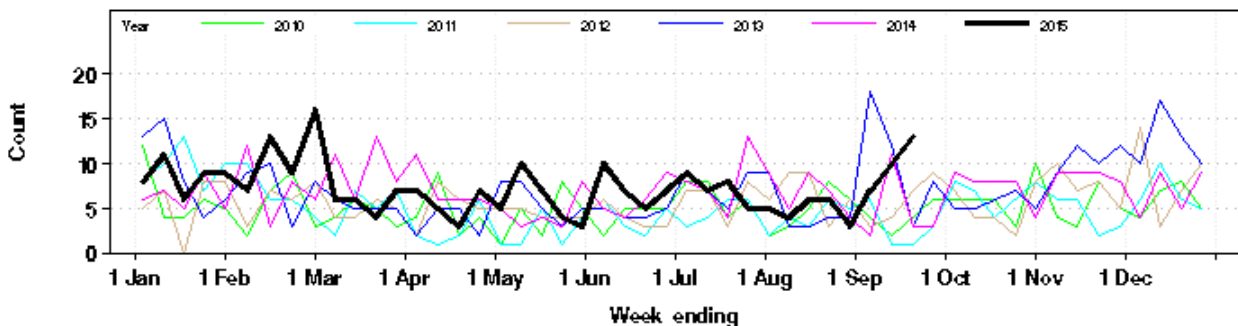
Figure 1. Total weekly counts of ED presentations for influenza-like illness, for 2015 (black line), compared with each of the five previous years, all age groups, up to the week ending 20 September 2015.



* Note that this data reflects provisional clinical diagnoses of “ILI syndrome” made by treating doctors in ED. This diagnostic category includes: ‘influenza-like illness’ or ‘influenza’ (including pneumonia with influenza).

In this reporting week the number of presentations for fever or unspecified infection in children aged under 1 year decreased to 193, which remains above the usual range for this time of year. However, presentations were particularly elevated at John Hunter Hospital (Figure 2). Overall, admissions from ED decreased to 54, which was also above the usual range for this time of year. In previous years the number of infants admitted from ED with this presenting syndrome has correlated with circulation of parechovirus infection. There were no critical care ward admissions.

Figure 2. Total weekly counts of Emergency Department presentations for fever or unspecified infection, for 2015 (black line), compared with each of the 5 previous years (coloured lines), children aged under 1 year, for *John Hunter Hospital*, up to the week ending 20 September 2015.



[Back to top](#)

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 14 to 20 September 2015, by date received.*

		Weekly		Year to date			Full Year	
		This week	Last week	2015	2014	2013	2014	2013
Enteric Diseases	Cryptosporidiosis	6	13	685	308	1002	429	1132
	Giardiasis	41	51	2560	2221	1749	2942	2242
	Hepatitis A	1	1	62	53	51	80	62
	Rotavirus	35	43	432	412	346	714	508
	Salmonellosis	51	46	3070	3299	2628	4302	3483
Respiratory Diseases	Influenza	2289	2945	25281	19401	7067	20888	8403
	Legionellosis	2	1	77	51	83	72	109
	Tuberculosis	3	8	281	348	324	473	443
Sexually Transmissible Infections	Chlamydia	355	389	15977	17329	15873	22894	21088
	Gonorrhoea	56	43	3610	3643	3264	4875	4264
Vaccine Preventable Diseases	Adverse Event Following Immunisation	4	2	133	207	441	256	509
	Pertussis	280	256	6376	1679	1758	3051	2379
	Pneumococcal Disease (Invasive)	8	21	364	382	384	511	490
Vector Borne Diseases	Barmah Forest	5	0	167	138	350	163	438
	Dengue	1	6	243	321	232	378	303
	Ross River	24	12	1503	469	418	677	512
Zoonotic	Q fever	3	6	158	138	123	190	163

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.

[Back to top](#)