

Communicable Diseases Weekly Report

Week 4, 22 - 28 January 2017

In summary, we report:

- [Ross River virus](#)- Increasing cases
- [Gonorrhoea](#) – Increasing notification trend
- [Chlamydia](#) – Increasing cases in males
- [Summary of notifiable conditions activity in NSW](#)

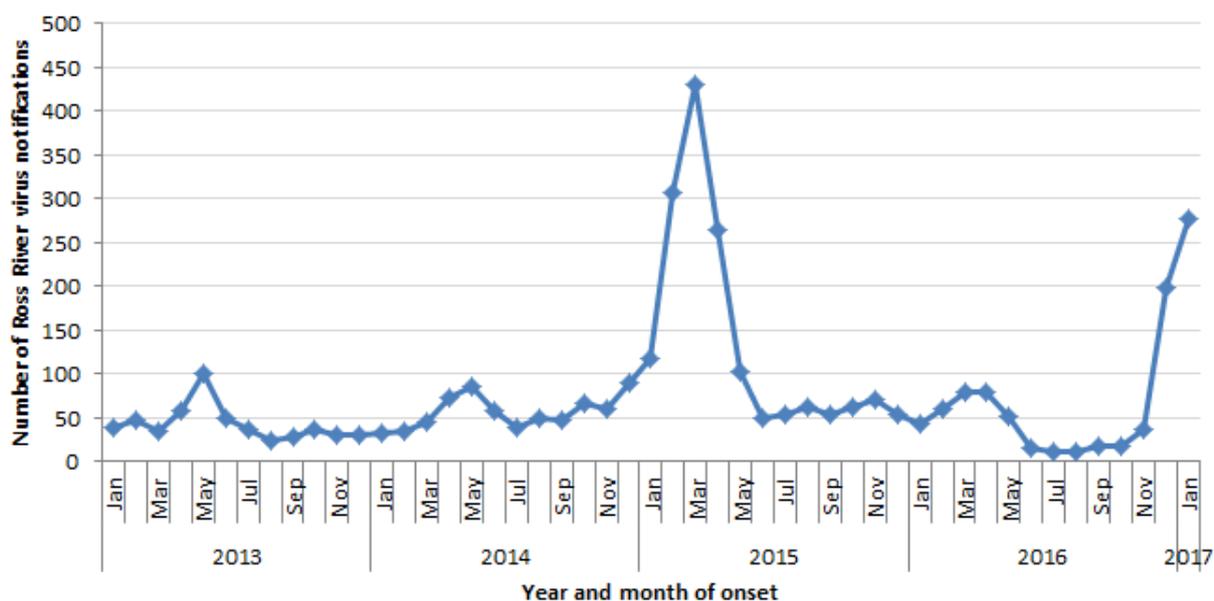
For further information on infectious diseases on-line see [NSW Health Infectious Diseases](#).

Also see [NSW Health Infectious Diseases Reports](#) for links to other surveillance reports.

Ross River virus

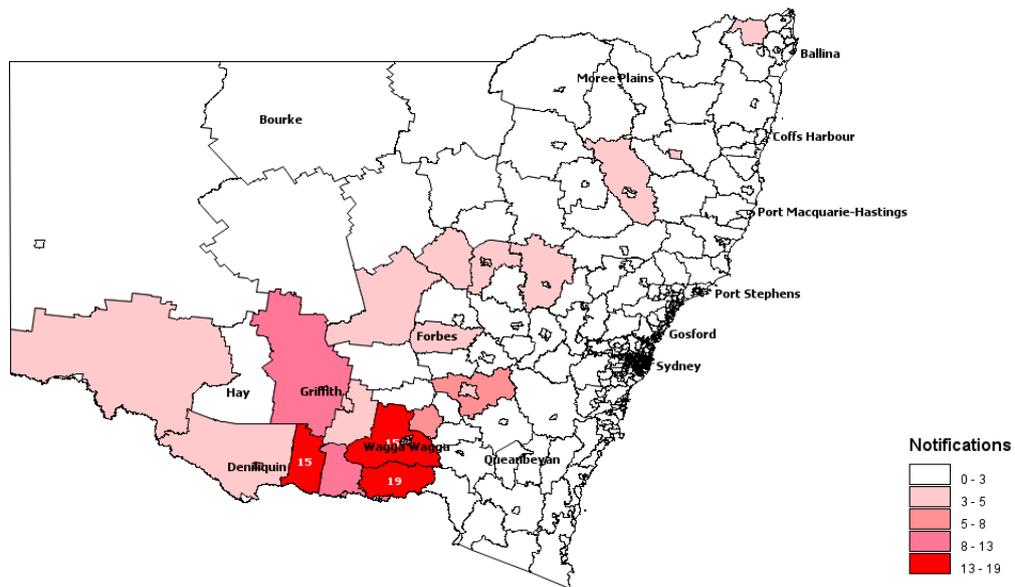
There were 81 notifications of human Ross River virus (RRV) infection reported this week ([Table 1](#)), with a total of 336 RRV notifications in January 2017, which continues the early upward trend of the 2016/17 arbovirus season (Figure 1). Notifications continued to be highest for residents in the central and southern parts of the state, most notably in the Albury, Wagga Wagga and Tocumwal regions which had 19, 15 and 15 notifications respectively (Figure 2). There were few notifications in coastal parts of the state or in the Sydney metropolitan area.

Figure 1. Number of Ross River virus notifications by year and month of disease onset, NSW, 1 January 2013 – 31 January 2017



Source: NSW Health Notifiable Conditions Information Management System (NCIMS), Communicable Diseases Branch and Centre for Epidemiology and Evidence, NSW Health.

Figure 2. Number of Ross River virus notifications by onset date and Australian Bureau of Statistics statistical area 2 (SA2), NSW, 1 January 2017 – 31 January 2017



The upward trend in human RRV notifications is also consistent with the continuing reports of RRV and other arboviruses being detected in mosquitoes collected from central and southern parts of NSW as part of routine surveillance. See the [NSW Arbovirus and Vector Monitoring Program weekly reports](#) for further details.

NSW Health issued a [media alert](#) in December renewing its call for people to protect themselves against mosquito bites when spending time outdoors during the holiday period to reduce the risk of arbovirus infections. This is particularly important for people travelling to areas with current Ross River virus activity.

RRV is one of a group of arboviruses characterised by transmission through the bite of infected mosquitoes. Some people who are infected with the virus do not develop symptoms, while others experience flu-like symptoms that include fever, chills, headache and aches and pains in the muscles and joints.

Patients often report that their joints can become swollen, and joint stiffness may be particularly noticeable in the morning. A rash may also appear on the torso, arms or legs. The rash and other symptoms usually resolve after 7 to 10 days, although some people may experience symptoms such as joint pain and tiredness for many months.

There are no vaccines to protect against the arboviruses that cause human infections in NSW; therefore prevention relies on measures to avoid being bitten by mosquitoes and to reduce mosquito breeding near homes. Mosquitoes that carry these viruses are usually most active in the hours after sunset and again around dawn, but may bite throughout the day. People should remember to cover up and take care to reduce the risk of a serious mosquito-borne infection by following some simple precautions:

- Use an effective repellent on exposed skin areas. Re-apply repellent every few hours, according to the instructions, as protection wears off from perspiration, particularly on hot nights or during exercise.
- The best mosquito repellents contain diethyl toluamide (DEET) or picaridin. Repellents containing oil of lemon eucalyptus (OLE; also known as extract of lemon eucalyptus) or para menthane diol (PMD) also provide adequate protection. Some products (e.g. citronella) provide only short periods of protection.

- Topical repellents are not recommended for use on children below the age of 3 months.
- Note that prolonged or excessive use of repellents can be dangerous, particularly on babies and young children. Avoid putting repellent near eyes and mouth, spread sparingly over the skin, and rinse off once you are indoors.
- Provide mosquito netting, where necessary – both indoors and outdoors.
- Cover up as much as possible with loose fitting clothing and sensible footwear. Avoid tight clothes.
- Cover your clothes with repellent as mosquitoes can bite through material, but be careful as some repellents stain clothes.
- Use mosquito coils outdoors and plug-in devices with vaporising mats indoors.

For more information, see the following NSW Health fact sheets and resources:

- NSW Health [Mosquitoes are a health hazard](#) factsheet with tips on prevention
- NSW Health [Fight the bite! campaign posters and media resources](#)
- NSW Health [Ross River notifications data](#)

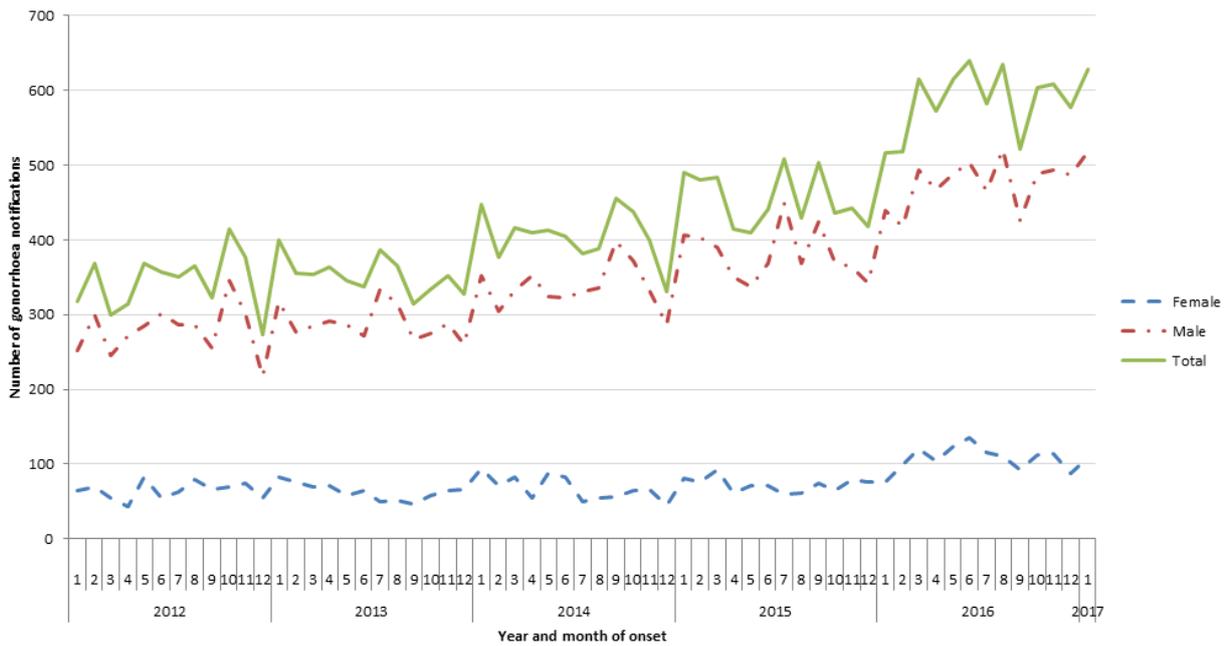
After periods of flooding, mosquito numbers can rapidly increase and cause nuisance as well as increase the risk of transmission of RRV and other arboviruses. For advice see the NSW Health fact sheet [Advice on Mosquito Control during Floods and Public Events](#)

Gonorrhoea

The overall gonorrhoea notification trend in NSW continues to increase (Figure 3). In 2016, 7,002 gonorrhoea notifications were received, a 28% increase compared to 2015. In 2017, 629 gonorrhoea notifications were received from 1 – 31 January, an increase of 22% compared to the same period in 2016. The transmission of gonorrhoea in NSW is thought to be mainly associated with male-to-male sex, with 82% of the 7,002 notifications in 2016 being in men. However, in 2016 there was a relatively larger increase in the number of females notified with gonorrhoea compared to the increase in males and this has been sustained into 2017. This may suggest that heterosexual transmission may be increasing.

From 1 – 31 January 2017, more than half of the notifications were from inner-Sydney, with 32% of cases living in South Eastern Sydney Local Health District and 25% in Sydney Local Health District. A smaller proportion of notifications were received from the Northern Sydney and Western Sydney Local Health Districts (9% and 7% respectively).

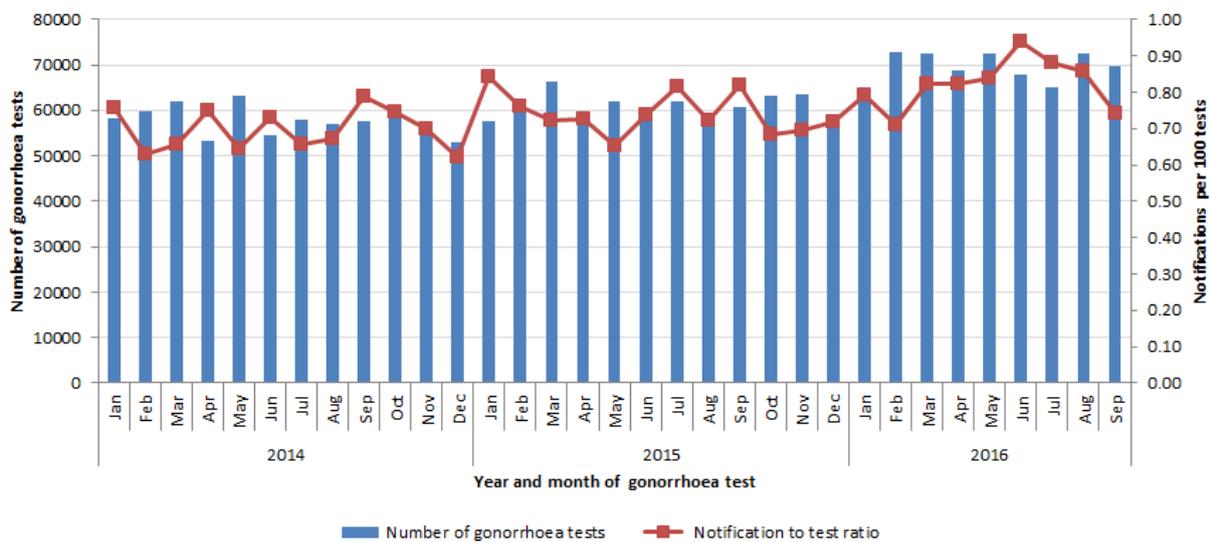
Figure 3. Number of gonorrhoea notifications by gender, year and month of onset, NSW, 1 January 2012 to 31 January 2017



Source: NSW Notifiable Conditions Information Management System (via SAPHaRI)
 Note: ‘Total’ includes transgender persons, and persons whose gender was not reported

People with gonorrhoea often have no symptoms, particularly women and those with gonorrhoea of the throat. Therefore, the number of people screened for gonorrhoea is likely to affect the number of people diagnosed with this infection. From 2013, NSW improved access to HIV testing with concurrent testing for other sexually transmissible infections, for gay and bisexual men. All specimens submitted for chlamydia testing are also tested for gonorrhoea. Laboratory denominator (testing) data in NSW from January 2014 to September 2016 shows that there has been an increase in the number of tests performed in 2016, along with a small increase in the positive notification ratio (Figure 4). This suggests that along with better detection of infections, there may be an increase in gonorrhoea transmission (incidence) in NSW over this period.

Figure 4. Number of gonorrhoea tests and notification to test ratio, NSW, 1 January 2014 – 30 September 2016



Source: NCIMS and NSW Denominator project, NSW Health

Sexual health screening of gay and bisexual men who are considering taking antiretroviral drugs to prevent HIV (pre exposure prophylaxis, or PrEP) as part of a large clinical trial that commenced on 1 March 2016 may be contributing to the increase in gonorrhoea tests and male gonorrhoea notifications. Over 4,500 participants have now been recruited to the trial.

Gonorrhoea is predominantly a sexually transmissible infection caused by the bacterium *Neisseria gonorrhoeae*. It is spread through contact with mucous membranes of infected people and infections can occur in the throat, anus, urethra, cervix and eyes.

Infection with gonorrhoea in men can commonly result in discharge from the penis and pain when urinating. Women can experience vaginal discharge or abnormal bleeding particularly after sex. Gonorrhoea often does not cause any symptoms. If untreated, gonorrhoea can result in infections of the skin, joints, blood stream, heart valves and lining of the brain (meningitis). Untreated gonorrhoea in women can lead to infection in the womb and fallopian tubes (pelvic inflammatory disease or PID) and this can result in infertility. Infertility can also occur in men if the infection spreads down the urethra and into the testes.

Gonorrhoea can be prevented by the use of condoms for vaginal and anal sex and dental dams for oral sex. Gonorrhoea in Australia remains treatable with antibiotics. Sexual partners of cases should be contacted, tested and treated.

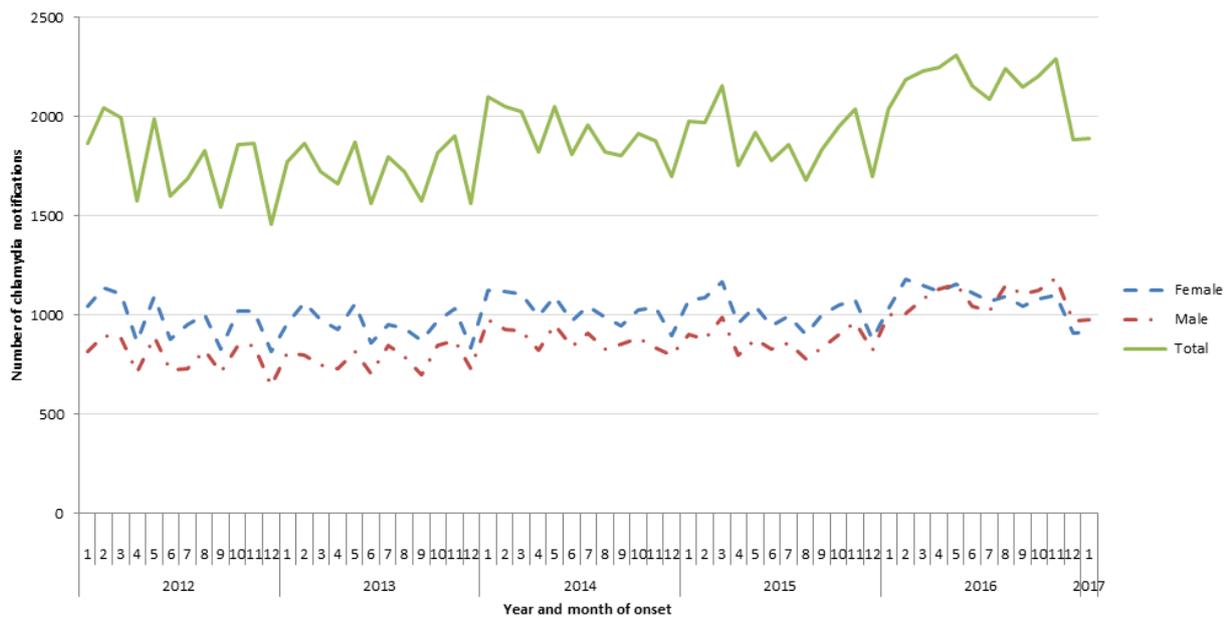
Many strains of *Neisseria gonorrhoeae*, both overseas and within Australia, are resistant to a wide range of antibiotics. Of concern is the emergence overseas of some strains of gonococcal bacteria that are highly resistant to the major classes of antibiotics. In Australia, the National Neisseria Network monitors antibiotic resistance in gonococcal bacteria, and this information is used to inform treatment guidelines.

Follow the links for more information on [gonorrhoea](#) and [gonorrhoea notifications](#).

Chlamydia

The number of male chlamydia notifications continued to increase throughout 2016. From 1 August 2016 to 31 January 2017, the number of male chlamydia notifications had consistently exceeded the number of female chlamydia notifications (Figure 5). There were 6,511 chlamydia notifications in males from 1 August 2016 to January 2017, a 23% increase compared to the same period in 2016 (5,306 notifications) (Figure 5). Chlamydia notifications in females increased by 3% over the same period (from 5,939 notifications to 6,142 notifications).

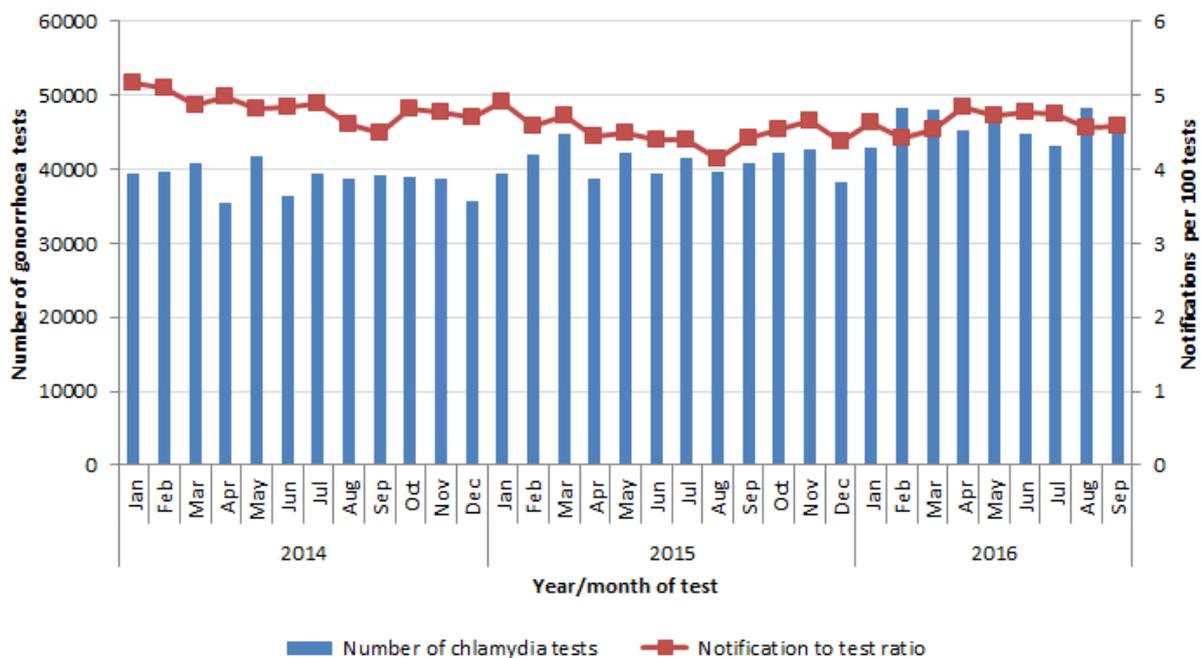
Figure 5. Number of chlamydia notifications by gender, year and month of onset, NSW, 1 January 2012- 31 January 2017



Source: NSW Notifiable Conditions Information Management System (via SAPHaRI)
 Note: 'Total' includes transgender persons, and persons whose gender was not reported

Analysis of testing data from 1 January 2014 to September 30 2016 shows that there has been an increase in the number of tests performed from February to September 2016, and that the ratio of notifications to tests performed has remained relatively stable (Figure 6).

Figure 6. Number of chlamydia tests and notification to test ratio, NSW, 1 January 2014 – 30 September 2016



Source: NCIMS and NSW Denominator project, NSW Health

This suggests that the rise in notifications is largely due to an increase in testing and better detection of infections rather than an upswing in new infections. Sexual health screening of gay and bisexual men who are considering taking antiretroviral drugs to prevent HIV (pre exposure prophylaxis, or PrEP) as part of a large clinical trial that commenced on 1 March 2016 may be contributing to the increase in chlamydia tests and male chlamydia notifications. Over 4,500 participants have now been recruited to the trial.

Chlamydia can affect the urethra (the urine passage), cervix (the neck of the womb), rectum, anus, throat, and eyes. If chlamydia is not properly treated it can cause serious complications, including infertility.

Symptoms can occur within 2-14 days after infection. However, a person may have chlamydia for months, or even years, without knowing it. In women, symptoms can include lower abdominal cramps or pain, bleeding between regular periods, pain when passing urine, bleeding or pain during or after sex, and a change in vaginal discharge. In men symptoms include a discharge from the penis, pain when passing urine and swollen and sore testicles. Chlamydia is easily treated by a single dose of antibiotics.

It is important to see a doctor or sexual health clinic to get tested and treated. Using a condom correctly for vaginal, anal and oral sex can significantly reduce the risk of getting chlamydia and other sexually transmitted infections. Always use condoms with new or casual partners.

The [Play Safe website](#) has more information about chlamydia, other common STIs and safe sex.

Follow the link for more information on [chlamydia notification 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 21 – 28 January 2017, by date received*

		Weekly		Year to date			Full Year	
		This week	Last week	2017	2016	2015	2016	2015
Enteric Diseases	Cryptosporidiosis	33	36	142	80	65	1184	1040
	Giardiasis	72	96	267	295	286	3482	3412
	Hepatitis A	2	1	5	7	7	40	71
	Hepatitis E	1	0	3	4	2	16	20
	Rotavirus	23	24	84	76	41	745	1033
	STEC/VTEC	1	2	10	6	2	64	29
	Salmonellosis	117	130	434	538	555	4542	4022
	Shigellosis	9	6	28	22	19	306	172
	Typhoid	6	2	10	16	10	74	82
Respiratory Diseases	Influenza	156	177	632	360	279	35533	30301
	Legionellosis	4	2	9	8	11	133	96
	Tuberculosis	2	3	28	32	25	530	444
Sexually Transmissible Infections	Chlamydia	505	774	2263	1977	1892	25999	22548
	Gonorrhoea	169	240	746	493	455	7011	5400
Vaccine Preventable Diseases	Adverse Event Following Immunisation	2	4	10	5	9	253	186
	Meningococcal Disease	2	3	9	4	4	76	47
	Pertussis	134	165	601	1370	477	10941	12081
	Pneumococcal Disease (Invasive)	3	5	22	22	23	543	494
Vector Borne Diseases	Barmah Forest	3	1	5	4	4	35	184
	Dengue	12	8	30	23	35	464	343
	Ross River	81	122	336	32	87	528	1637
Zoonotic Diseases	Q fever	2	4	12	19	17	228	264

*** 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.