

Communicable Diseases Weekly Report

Week 44, 31 October to 6 November 2016

In summary, we report:

- [Viral Gastroenteritis](#) – increased activity
- [Legionnaires' disease](#) - release of Sydney CBD outbreaks report
- [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.

Viral Gastroenteritis

Emergency department (ED) surveillance shows ongoing high levels of gastroenteritis activity across NSW, with 2,093 presentations and 476 admissions recorded in the past week ([Figure 1](#)). There was a notable increase amongst young children aged 5–16 years ([Figure 2](#)). This surveillance category includes provisional ED diagnoses of gastroenteritis, vomiting, diarrhoea and food poisoning, with an average of 1,842 ED presentations and 411 admissions usually observed during this period.

Figure 1. Total weekly counts of Emergency Department presentations for gastroenteritis, for 2016 (black line), compared with each of the 5 previous years (coloured lines), persons of all ages, for 60 NSW hospitals.

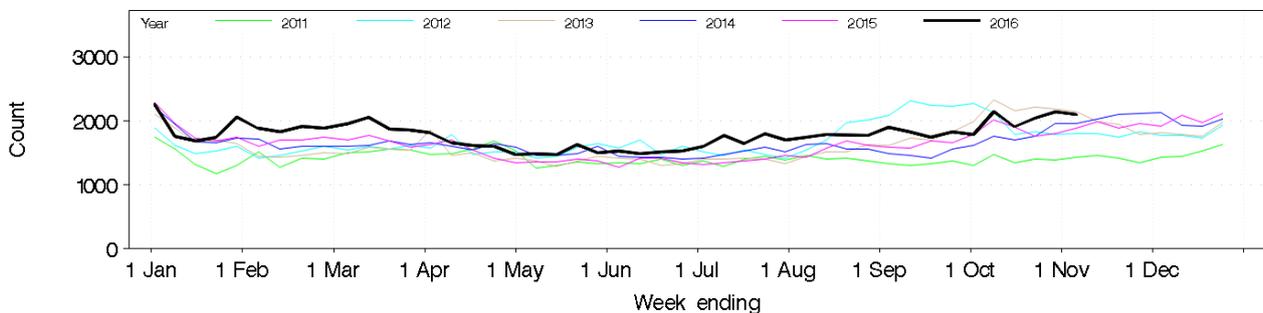
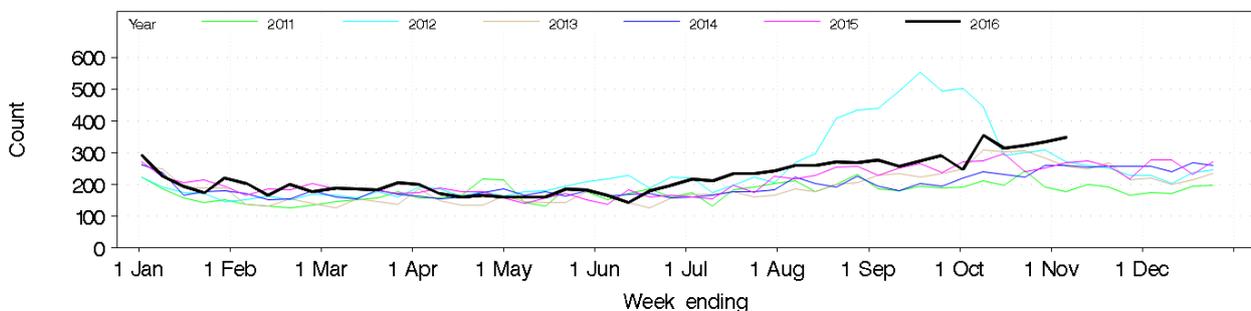


Figure 2. Total weekly counts of Emergency Department presentations for gastroenteritis, for 2016 (black line), compared with each of the 5 previous years (coloured lines), persons aged 5 to 16 years, for 60 NSW hospitals.



In the past four weeks (Weeks 41 – 44, 10 Oct – 6 Nov 2016), 81 gastroenteritis in institutions (early childhood education and care centres, aged care facilities and hospitals) outbreaks were reported, affecting at least 943 people. Norovirus was detected as the cause of illness in five outbreaks, rotavirus in another five, and both viruses were detected in one outbreak. Viral

gastroenteritis was also suspected as the cause of a large outbreak following several events held at a venue in Murrumbidgee Local Health District.

Viral gastroenteritis is a common intestinal infection caused by a number of different viruses, usually resulting in vomiting and diarrhoea. Norovirus infection is the most frequent cause and is most common during the cooler months. Symptoms may include nausea, vomiting, diarrhoea, fever, abdominal pain, headache and muscle aches. These symptoms can take between one and three days to develop and usually last between one and two days, sometimes longer. Dehydration may follow bouts of vomiting and diarrhoea, particularly in young children. Those infected should rest well and increase the amount of fluids they drink, and if concerned see their local doctor.

Rotavirus is the most common cause of severe gastroenteritis in early childhood globally. In the past week 37 cases of rotavirus infection were notified to NSW Health, similar to the previous week. Overall in 2016 rotavirus notifications are in the lower range observed in the past 5 years. Immunisation to prevent rotavirus infection is recommended and is free for children under 6 months of age. In NSW, the vaccine is given as two oral doses, at six weeks and four months of age, with completion of the course by 24 weeks of age.

Viral gastroenteritis is highly infectious and is spread by the vomit or faeces of an infected person through close contact with infected persons, contact with contaminated surfaces or through consuming contaminated food or drink. Viruses are often transmitted from person-to-person on unwashed hands.

The best way to prevent the spread of viral gastroenteritis is to wash your hands thoroughly with soap and running water for at least 10 seconds, particularly after using the toilet, assisting someone with diarrhoea or vomiting, attending nappy changes, and before preparing and eating food. It is vital that if you or your family contract gastroenteritis that you stay home from work or keep a child home from school or childcare if they are sick for at least 24 hours after the last symptom of gastroenteritis.

People who are sick with gastroenteritis should also avoid visiting others in vulnerable settings such as hospitals or aged care facilities. If your work involves handling food, or looking after children, the elderly or patients, do not return to work until 48 hours after symptoms have stopped.

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

Legionnaires' disease

Case reporting of Legionnaires' disease peaks in the summer and autumn months. Case reports have been reasonably stable in the past five years with 70-100 cases reported every year. There have been 105 cases reported up to 6 November 2016 which is higher than the four-year average of 81 cases for the same time period. Of the 105 cases, 79 cases have been due to the *Legionella pneumophila* strain commonly associated with contaminated aerosolised water. This compares to 65 *Legionella pneumophila* cases reported for the same period in 2015.

This week the Chief Health Officer released a report on the investigation into the Legionnaires' disease outbreaks related to the Sydney CBD earlier this year. Staff involved with these outbreaks conducted a thorough epidemiological, environmental and laboratory investigation into two clusters of Legionnaires' disease. During this investigation, 15 cases reported exposures within the CBD and approximately 329 environmental samples were collected. Of these, five cases were shown to have the same strain by whole genome sequencing and that strain was matched to the strain identified in two cooling towers. A detailed report on this investigation can be found at <http://www.health.nsw.gov.au/Infectious/Pages/legionella-cbd-report.aspx>

In the setting of Legionnaires' disease outbreaks it is not unusual to have increased notifications: the outbreak itself is due to an increase in cases, but in response to an outbreak public health units undertake active case finding, and increased awareness by doctors and the community leads to

further case detection. In Sydney CBD 2016 outbreaks new more sensitive laboratory tests were employed, further increasing the number of Legionnaires' disease cases detected in 2016.

Legionnaires' disease is a type of pneumonia and the symptoms include fever, chills, cough and shortness of breath. Some people also have muscle aches, headache, tiredness, loss of appetite and diarrhoea. Risk factors for Legionnaires' disease include increasing age (most cases are aged over 50 years), smoking, and immunosuppression as a result of chronic medical conditions, cancer or taking high-dose corticosteroid medicines. People with Legionnaires' disease often have severe symptoms and infection is associated with a 10 to 15 per cent mortality rate.

Legionnaires' disease is caused by infection with *Legionella* bacteria. There are around 50 different species of *Legionella* bacteria, but most infections in NSW are caused by *L. pneumophila* or *L. longbeachae*.

Legionnaires' disease is not spread from person to person, but can occur from inhaling contaminated water aerosols or dust. *L. longbeachae* is found in potting mix, compost and soils and infection is associated with gardening and the use of potting mix. To prevent Legionnaires' disease it is recommended that people handling potting mix wet the mix beforehand to reduce dust, wear gloves and a mask, and wash their hands after handling potting mix or soil.

L. pneumophila is found in water and can contaminate air conditioning cooling towers, spas, plumbing systems and other bodies of warm water. Outbreaks are sometimes associated with contaminated cooling towers that are part of air conditioning systems in large buildings.

Regular inspection, disinfection and maintenance of cooling towers and plumbing systems limit the growth of bacteria and prevent outbreaks of Legionnaires' disease.

The NSW Public Health Act 2010 and the Public Health Regulation 2012 control various man-made environments and systems which are conducive to the growth of *Legionella* bacteria and which are capable, under the right conditions, of transmitting Legionnaires' disease.

Follow the link for more information on the [regulatory control of Legionnaires' disease](#).

Follow the links for more information on [Legionnaires' disease](#) and on [notifications of Legionnaires' disease](#).

Summary of notifiable conditions activity in NSW

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

Table 1. NSW Notifiable conditions from 31 October to 6 November 2016, by date received *

		Weekly		Year to date			Full Year	
		This week	Last week	2016	2015	2014	2015	2014
Enteric Diseases	Cryptosporidiosis	10	17	920	732	337	1038	429
	Giardiasis	51	56	3060	2879	2483	3415	2942
	Hepatitis A	1	1	33	64	61	71	80
	Listeriosis	1	0	32	22	19	26	23
	Rotavirus	37	37	519	790	556	1036	714
	Salmonellosis	53	69	3903	3364	3580	4040	4273
Respiratory Diseases	Shigellosis	4	6	259	149	187	172	212
	Influenza	351	432	34171	29778	20460	30306	20888
	Legionellosis	1	1	105	85	57	96	72
Sexually Transmissible Infections	Tuberculosis	14	11	423	360	400	445	475
	Chlamydia	459	574	22073	18882	19417	22548	22899
	Gonorrhoea	80	164	5827	4554	4150	5400	4876
Vaccine Preventable Diseases	LGV	1	1	46	19	11	20	14
	Adverse Event Following Immunisation	7	7	222	160	228	186	258
	Pertussis	248	213	9203	8311	2119	12083	3051
Vector Borne Diseases	Pneumococcal Disease (Invasive)	12	19	476	438	439	495	511
	Chikungunya	2	2	23	36	19	37	27
	Dengue	4	5	385	282	347	343	378
	Malaria	2	0	48	35	83	47	87
Zoonotic Diseases	Ross River	4	6	387	1512	534	1638	673
	Brucellosis	1	0	10	10	3	10	3
	Q fever	3	3	181	218	151	265	190

* Notes on Table 1: NSW Notifiable Conditions activity

- Data cells represent the number of notifiable disease 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 in the current reporting week 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.