

Communicable Diseases Weekly Report

Week 10, 07 March to 13 March 2016

In summary, we report:

- [Legionnaires' disease](#) - Sydney central business district outbreak
- [Measles](#) – one new case
- [Zika virus](#) – one new confirmed case
- [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.

Legionnaires' disease

NSW Health is currently investigating an outbreak of Legionnaires' disease due to *Legionella pneumophila*, serogroup 1, in people who had been in the Sydney central business district (CBD) during their exposure period. Seven confirmed cases of Legionnaires' disease who had been in the Sydney CBD prior the onset of their illness were notified this reporting week. An investigation into the cause of the outbreak was initiated. To look for further cases, emergency departments, respiratory physicians, laboratories and intensive care units were asked to immediately report any patients suspected to have legionellosis. Additionally information about the cluster was faxed to NSW general practitioners asking these clinicians to be on the alert for this disease. Notifications of legionellosis during the past three months were reviewed to identify any common exposures and an additional two cases were identified through this process, bringing the total number of cases potentially associated with the outbreak to nine. All cases were men between the ages of 31 and 88 years. Most reported smoking or significant underlying health conditions which predispose to *Legionella* infection. All cases were hospitalised. One case, with a serious underlying medical condition, died with his *Legionella* infection.

All owners and operators of cooling towers in the central business district were requested to immediately check the plant maintenance and disinfection. A field team of environmental health officers from City of Sydney, Health Protection NSW and public health units initiated an environmental investigation, centring on potential sources of contaminated aerosols such as cooling towers and water fountains in the area bound by Clarence, King, Park and Elizabeth Streets, which was identified as the priority area for investigation on the basis of exposures of confirmed cases. On 15 March the priority area was extended to include the area bound by Kent, Druitt, Pitt and Bathurst Streets.

Public health units are continuing to undertake active surveillance, and emergency department presentations and respiratory admissions to metropolitan hospitals are being monitored on a daily basis. No further cases have been identified. The latest disease onset was 4 March 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 corticosteroids. People with Legionnaires' disease often have severe symptoms and infection is associated with a 10-15% mortality rate.

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

Legionnaires' disease is not spread from person to person, but can occur from inhaling contaminated water aerosols or dust. *Legionella 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.

Legionella 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 the 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](#)

Measles

One case of measles was notified this reporting week (Table 1). The case occurred in a male from Northern Sydney Local Health District who had recently returned from Indonesia. This brings the total number of cases reported in 2016 to three. All cases reported this year acquired their infection outside of Australia.

Measles is endemic in many countries and it is important for people planning travel to make sure they are vaccinated. Travellers returning from areas where measles still circulates should seek medical advice if they develop the symptoms of measles. It is important that if someone suspects that they or a family member has symptoms of measles, they call ahead to their local doctor or emergency department so arrangements can be made to keep the person with suspected measles away from others who could be at risk of infection.

The measles virus is transmitted from person to person via respiratory secretions in the air following coughing and sneezing. Symptoms of measles include fever, runny nose, sore red eyes and cough, followed 3-4 days later by a red blotchy rash spreading from the head and neck to the rest of the body.

Infection with the measles virus can be serious with common complications including middle ear infection and viral or bacterial bronchopneumonia. Acute encephalitis occurs rarely and subacute sclerosing panencephalitis is a very rare fatal complication, occurring many years after infection in about 1 per 100,000 cases.

Vaccination is highly effective at preventing measles with two doses of measles containing vaccine offering protection against infection in 99% of people. Vaccination not only benefits those who receive it but also protects others, such as those too young or unable to be vaccinated, by reducing the risk that an unvaccinated person is exposed to measles virus; this is known as herd immunity

Anyone born in or after 1966 should have had two doses of measles containing vaccine, which is free for people up to 50 years of age in NSW. Measles containing vaccine is now routinely offered to all children at 12 months (as measles-mumps-rubella) and 18 months (as measles-mumps-rubella-varicella) of age through the National Immunisation Program.

If you were born in or after 1966 and are unsure of your vaccination status, or have not had two vaccine doses in the past (or had a confirmed measles infection), consult your GP for more advice. This is particularly important prior to overseas travel as the risk of being exposed to a case of measles is greater when travelling.

For more information please follow these links: [measles](#), [measles notifications](#) and [measles vaccination](#).

Zika virus

There was one new case of Zika virus infection confirmed in the reporting week (Table 1). The case had travelled with one of the previously notified cases to central America and likely acquired the infection there in January 2016. This brings the total confirmed cases in NSW in 2016 to four.

Zika virus infection is a mosquito-borne infection that has recently spread rapidly across the Americas after an initial introduction into Brazil in 2015, but it has previously been found in other parts of the world and caused outbreaks in a number of Pacific states over the past three years.

Zika virus is closely related to dengue virus and can cause a similar illness. The infection often causes no symptoms but when it does the illness is usually mild and lasts 4-7 days. There is no vaccine against Zika virus and no specific antiviral treatment.

The recent outbreaks in the Pacific and the Americas, particularly in Brazil, have raised concerns that Zika virus infection might cause birth defects if the mother becomes infected with Zika while pregnant, but further studies are required to confirm or exclude this link.

With the explosive spread of Zika virus in the Americas it is expected that more cases of infection will be identified this year in returned travellers. The number of countries with active Zika virus transmission is expanding. In recent weeks Thailand, the Marshall Islands, New Caledonia and Fiji have been added to the list of affected countries.

The *Aedes aegypti* mosquitoes that are primarily responsible for transmission of Zika virus are not established in NSW but are found in parts of north Queensland. There is a risk that local outbreaks could occur in these areas if an infected person visited and was bitten by mosquitoes (as occasionally occurs with dengue), but this is not a risk in NSW.

Women who are pregnant or planning to become pregnant are being advised to consider delaying their travel to areas with active outbreaks of Zika.

Travellers to affected areas should avoid being bitten by mosquitoes. *Ae. aegypti* mosquitoes prefer to live and bite people indoors, and peak biting activity is during daylight hours. They hide under furniture and tend to bite the feet and ankles. People may not notice they are being bitten.

Travellers to affected areas should stay in accommodation with screened windows and doors, wear loose fitting clothing that covers the arms and legs, and apply insect repellent containing DEET or picaridin to exposed skin, especially during daylight hours and in the early evening. For additional advice on steps to avoid being bitten by mosquitoes see the [Mosquitoes are a Health Hazard Factsheet](#).

For more information see the [Zika virus alert](#) and [Zika virus factsheet](#). Also see the Commonwealth Department of Health [Zika virus website](#) for information for medical practitioners and the current list of countries with active transmission of the virus.

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 7 to 13 March 2016, by date received *

		Weekly		Year to date			Full Year	
		This week	Last week	2016	2015	2014	2015	2014
Enteric Diseases	Cryptosporidiosis	33	24	286	285	135	1038	429
	Giardiasis	100	94	946	867	682	3415	2942
	Hepatitis A	1	1	12	31	25	71	80
	Listeriosis	1	0	11	6	7	26	23
	Rotavirus	4	5	132	92	80	1036	714
	Salmonellosis	110	123	1457	1357	1296	4045	4275
	Shigellosis	7	5	65	45	77	172	212
	Typhoid	3	0	19	11	16	41	44
Respiratory Diseases	Influenza	153	169	1294	812	654	30296	20887
	Legionellosis	7	0	19	22	15	95	72
	Tuberculosis	4	6	87	75	93	442	474
Sexually Transmissible Infections	Chlamydia	470	474	4960	4895	5145	22539	22898
	Gonorrhoea	96	91	1183	1163	1059	5399	4875
	LGV	2	0	9	7	2	19	14
Vaccine Preventable Diseases	Adverse Event Following Immunisation	8	5	36	38	64	182	256
	Measles	1	1	3	4	42	9	68
	Pertussis	232	261	3107	1257	487	12076	3052
	Pneumococcal Disease (Invasive)	4	3	52	46	49	494	511
Vector Borne Diseases	Dengue	4	14	75	110	107	340	378
	Flavivirus - other & unspecified	1	0	4	0	0	1	4
	Ross River	32	21	179	569	95	1641	673
Zoonotic Diseases	Q fever	3	3	44	52	57	267	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.