

Communicable Diseases Weekly Report

Week 14, 2 to 8 April 2017

In summary, we report:

- [Invasive meningococcal disease](#)
- [Legionella infection](#)
- [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 meningococcal disease

One case of invasive meningococcal disease (IMD) was notified this reporting week (2 to 8 April). The case was a young adult from Sydney Local Health District. Contacts have been followed up by the local public health unit.

In total, 16 cases of IMD (including two deaths) with onset in 2017 have been reported up to 8 April. Of these cases nine have been serogroup B, two serogroup C, two serogroup W, and two serogroup Y. The serogroup result for the current case is pending.

Meningococcal disease is caused by infection with the bacterium *Neisseria meningitidis*. The bacteria are spread through direct contact of mucous membranes with the organism, such as exposure to respiratory droplets from the nose and throat of an infected person.

Close contact may result in the bacteria colonising the throat of the exposed person but in most people this does not cause any disease. In only a very small proportion of people the bacteria may invade from the throat to other parts of the body, causing IMD.

IMD typically involves meningitis (infection of the lining of the brain), septicaemia (infection of the blood) or both. Up to 10 per cent of IMD infections are fatal even with appropriate antibiotic treatment, and survivors may be left with long-term complications.

There are several serogroups of *Neisseria meningitidis* which can cause invasive disease. The most common serogroups in Australia are B, C, W and Y. Since the introduction of a serogroup C vaccine in 2003 most cases in NSW have been caused by serogroup B. However, since 2013 there has been an increase in cases caused by serogroup W in NSW and other jurisdictions.

Vaccination against meningococcal C infection is included in the National Immunisation Program Schedule, with vaccination due at 12 months of age.

NSW will be offering meningococcal ACWY vaccine (4vMenCV) to Year 11 and 12 students through a school-based vaccination program from 1 May 2017. This is expected to provide individual protection against four meningococcal strains, and contribute to herd immunity in the broader population by reducing meningococcal carriage in the vaccinated adolescents. Teenagers aged 17 to 18 years who do not attend secondary school will be able to access the free vaccine through their general practitioner later in the year.

Combined vaccines against the A, C, Y and W serogroups are also recommended for travellers to countries where these serogroups are more common and for some people with certain high risk conditions that predispose them to developing IMD, such as those without a spleen.

A vaccine against some serogroup B strains is available in Australia. It is recommended for young children and adolescents but is not part of the National Immunisation Program.

Follow the links for more information on [meningococcal disease](#) and [vaccination](#).

Legionella

There were two notifications of *Legionella pneumophila* in this reporting week as well a subsequent case reported in the following week (week beginning 10 April) (Table 1).

Cases were aged between 56 and 80 years, and all were male. Only one case reported having a significant underlying health condition for *Legionella* infection. All of the cases required hospitalisation. Two of the three cases live in close proximity to each other and environmental health officers are currently investigating this area although at this stage there does not appear to be a common source for their infection. The remaining case was unrelated to any other current or past exposure sites.

When Legionnaires' disease cases are identified, NSW Health public health unit staff interview patients and their families about their illness and possible exposures, including all locations where they travelled, worked, stayed or visited during the two to 10 days before the onset of illness. These locations are then mapped and compared closely with the exposures reported by other patients who have recently been diagnosed with Legionnaires' disease.

Legionellosis 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 legionellosis 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 legionellosis often have severe symptoms and infection is associated with a 10 to 15 per cent mortality rate.

Legionellosis 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*.

Legionellosis 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 legionellosis 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 legionellosis.

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

Table 2. NSW Notifiable conditions from 2 to 8 April 2017, by date received*

		Weekly		Year to date			Full Year	
		This week	Last week	2017	2016	2015	2016	2015
Enteric Diseases	Cryptosporidiosis	29	53	779	420	404	1184	1040
	Giardiasis	87	94	1162	1257	1192	3481	3413
	Rotavirus	22	7	184	166	110	746	1033
	Salmonellosis	123	105	1595	1799	1692	4542	4022
	Shigellosis	2	4	66	85	57	310	172
	Typhoid	4	4	50	42	30	74	82
Respiratory Diseases	Influenza	199	215	2514	1900	1176	35538	30301
	Legionellosis	2	1	33	36	27	134	96
	Tuberculosis	6	4	121	139	102	533	444
Sexually Transmissible Infections	Chlamydia	526	634	8527	7129	6579	25997	22545
	Gonorrhoea	181	198	2834	1808	1550	7004	5397
Vaccine Preventable Diseases	Adverse Event Following Immunisation	9	13	89	57	55	257	186
	Measles	6	5	22	8	4	16	9
	Meningococcal Disease	1	1	17	12	10	76	47
	Mumps	4	3	38	9	16	67	65
	Pertussis	116	95	1808	3844	1764	10957	12079
	Pneumococcal Disease (Invasive)	5	5	90	78	76	542	494
Vector Borne Diseases	Barmah Forest	3	0	21	10	80	35	184
	Dengue	2	2	101	149	130	481	344
	Malaria	3	0	22	10	14	59	47
	Ross River	29	52	953	192	920	544	1635
Zoonotic Diseases	Q fever	4	2	62	73	64	230	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.