

Communicable Diseases Weekly Report

Week 18, 30 April to 6 May 2017

In summary, we report:

- [Invasive meningococcal disease](#) – four new cases
- [Legionnaires' disease \(legionellosis\)](#) – five new cases
- [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

Four unrelated cases of invasive meningococcal disease (IMD) were notified this reporting week (Table 1). The cases were two young adults from Western Sydney Local Health District, an infant from Hunter New England Local Health District, and an elderly person from Northern Sydney Local Health District. The two cases from Western Sydney were caused by different serogroups of the pathogen (B and W). Contacts have been followed up by the local public health units.

In total, 24 cases of IMD (including two deaths) with onset in 2017 have been reported up to 6 May. Of these cases thirteen have been serogroup B, two serogroup C, three serogroup W, three serogroup Y, and three were not able to be typed.

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.

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

NSW is 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 meningococcal 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 also now 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](#).

Legionnaires' disease (Legionellosis)

There were five notifications of legionellosis in this reporting week (Table 1). Two of the case notifications were related to *Legionella pneumophila* infections in Sydney residents. Local public health units have investigated possible exposure sources for these cases but there does not appear to be a common source for their infection, or links to other recent cases.

The remaining three cases were related to infections with other *Legionella* species – *L. longbeachae* (2) and *L. bozemanii* (1) – which are more commonly associated with soil. Unprotected exposure to potting mix is believed to be the most likely source of exposure for all three cases.

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 1. NSW Notifiable conditions from 30 April to 6 May 2017, by date received*

		Weekly		Year to date			Full Year	
		This week	Last week	2017	2016	2015	2016	2015
Enteric Diseases	Cryptosporidiosis	44	26	905	566	509	1184	1040
	Giardiasis	71	60	1419	1554	1465	3481	3413
	Hepatitis E	1	0	9	10	4	16	20
	Rotavirus	9	10	223	197	127	746	1033
	STEC/VTEC	2	0	23	15	11	65	29
	Salmonellosis	95	73	1933	2156	2055	4543	4022
	Shigellosis	7	3	77	106	67	310	172
	Typhoid	1	2	32	23	20	37	41
Respiratory Diseases	Influenza	139	115	3022	2572	1586	35538	30301
	Legionellosis	5	1	47	50	36	134	96
	Tuberculosis	7	6	152	172	140	532	444
Sexually Transmissible Infections	Chlamydia	478	523	10427	9196	8307	25998	22544
	Gonorrhoea	184	182	3506	2325	1924	7004	5397
Vaccine Preventable Diseases	Adverse Event Following Immunisation	5	7	116	88	74	257	186
	Meningococcal Disease	4	2	25	16	12	75	47
	Pertussis	124	128	2216	4477	2255	10957	12079
	Pneumococcal Disease (Invasive)	11	6	121	114	104	542	494
Vector Borne Diseases	Barmah Forest	2	3	27	14	120	35	184
	Dengue	5	5	115	206	150	481	344
	Malaria	1	2	26	13	19	59	47
	Ross River	21	29	1042	270	1145	541	1635

* 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.