

Communicable Diseases Weekly Report

Week 21, 21 May to 27 May 2017

In summary, we report:

- [Haemophilus influenzae type b \(Hib\)](#) – death in a child
- [Legionellosis](#) – sporadic case
- [Summary of notifiable conditions activity in NSW](#)

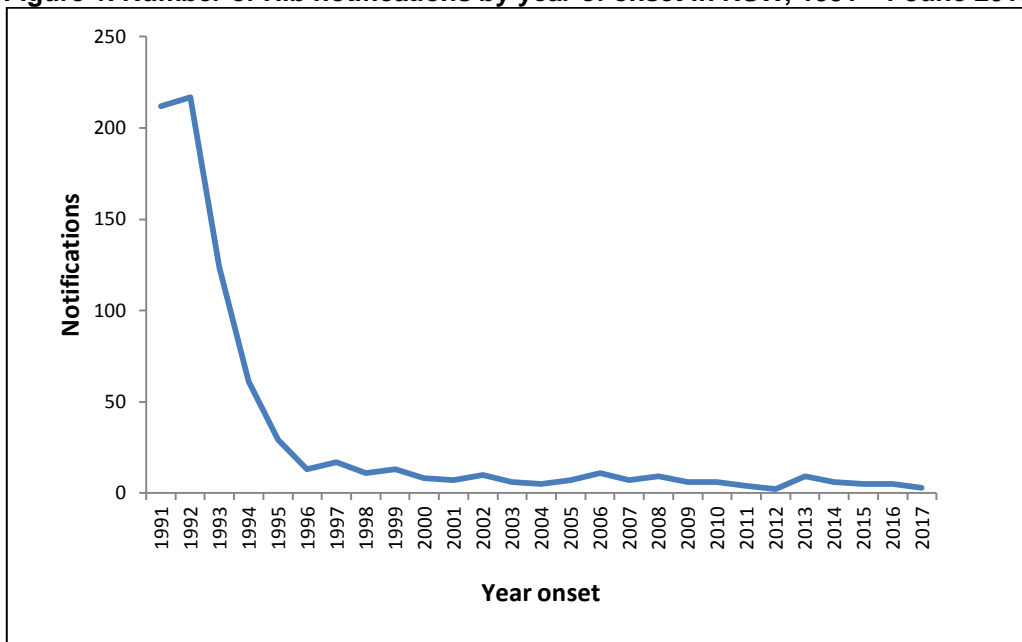
For further information on infectious diseases on-line see [NSW Health Infectious Diseases](#). Also see [NSW Health Infectious Diseases Reports](#) for links to other surveillance reports.

Haemophilus influenzae type b (Hib)

In this reporting week a child died from invasive *Haemophilus influenzae* type b (Hib) disease ([Table 1](#)). Contacts of the child have been followed up by the public health unit, with close contacts provided with clearance antibiotics where appropriate. The child was a young adolescent and fully vaccinated when a baby. This is the third notification of invasive Hib disease in NSW in 2017 to 01 June.

Hib notifications are now rare in NSW, with notifications dramatically declining following the introduction of Hib vaccine onto the childhood vaccination schedule in 1993. Notifications of Hib in NSW have declined from 212 in 1991 to an average of five per year in the last five years (Figure 1). This pattern has been seen nationally with a 95 % reduction in notifications across Australia since 1993.

Figure 1. Number of Hib notifications by year of onset in NSW, 1991 - 1 June 2017



Invasive Hib disease is a serious disease and can be fatal despite treatment. Prior to implementation of the Hib vaccination program, Hib was the commonest cause of meningitis in Australia, predominantly causing disease in children aged less than five years. Prior to the vaccination program, Hib also caused epiglottitis (infection of the epiglottis, resulting in obstruction of the airway) in children under five years of age.

Rarely, both before and since routine childhood Hib vaccination, invasive Hib disease occurs in older children, adolescents and adults.

Hib disease is caused by infection with *Haemophilus influenzae* type b bacteria. The organism can be carried asymptotically in the back of the nose and throat. Hib is predominantly transmitted from asymptomatic carriers by direct contact with respiratory droplets or discharges from the nose and throat. It can also rarely be transmitted from people with Hib disease. Hib does not survive in the environment living only in human hosts.

Hib vaccine is recommended in NSW for all infants at six weeks, four, six and twelve months of age and is provided as part of free routine immunisation in combination with other vaccines due at those ages.

Follow the links for further information on [Haemophilus influenzae type b and vaccination](#).

Further information is available from [NSW Health](#).

Legionellosis

There was one notification of *Legionella pneumophila* infection this reporting week as well as a subsequent case reported in the following week (week beginning 28 May) ([Table 1](#)).

Cases were aged between 65 and 90 years, one male and one female. Neither case reported having a significant underlying health condition and both cases required hospitalisation. The cases have unrelated exposures and also appear unrelated to any other current or recent 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 the case 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 geographic areas reported by other patients who have recently been diagnosed with Legionnaires' disease.

Legionella disease usually presents as 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 21 – 27 May 2017, by date received*

		Weekly		Year to date			Full Year	
		This week	Last week	2017	2016	2015	2016	2015
Enteric Diseases	Cryptosporidiosis	15	23	970	634	560	1184	1040
	Giardiasis	58	59	1596	1808	1668	3481	3413
	Rotavirus	16	20	277	220	150	746	1033
	Salmonellosis	51	75	2127	2407	2253	4543	4022
	Shigellosis	2	3	84	126	72	310	172
	Typhoid	1	0	35	25	22	37	41
Respiratory Diseases	Influenza	260	228	3687	3051	1869	35538	30301
	Legionellosis	1	0	52	66	44	134	96
	Tuberculosis	2	2	165	192	175	532	443
Sexually Transmissible Infections	Chlamydia	463	546	12152	10796	9699	25995	22525
	Gonorrhoea	145	168	4014	2751	2226	7005	5397
Vaccine Preventable Diseases	Adverse Event Following Immunisation	5	12	143	121	86	257	186
	Haemophilus influenzae type b	1	0	3	2	0	5	5
	Meningococcal Disease	1	1	29	21	14	75	47
	Mumps	2	3	57	14	20	67	65
	Pertussis	75	123	2538	4931	2759	10957	12079
	Pneumococcal Disease (Invasive)	12	12	156	140	134	542	494
Vector Borne Diseases	Barmah Forest	4	3	37	22	130	35	184
	Dengue	4	8	136	242	165	481	344
	Malaria	2	1	30	19	19	59	47
	Ross River	34	32	1149	299	1222	540	1635
Zoonotic Diseases	Q fever	4	3	91	100	101	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.