

# Communicable Diseases Weekly Report

## Week 27, 4 to 10 July 2016

In summary, we report:

- [Legionellosis](#) – recent upswing in *Legionella pneumophila* cases
- [Invasive meningococcal disease](#) – one new case notified
- [Gastroenteritis outbreaks in institutions](#) – twenty notifications this week
- [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.

### Legionellosis

During this reporting week there have been four people diagnosed with *Legionella pneumophila* serogroup 1, three men and one woman all aged between 55 and 90 years. None of the cases have been to previous areas where *Legionella* clusters had been identified earlier in the year, and two cases had travelled in South Western Sydney but not to the same location. One case acquired their infection while travelling overseas. Public health investigations are ongoing.

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](#).

## **Invasive meningococcal disease**

One case of invasive meningococcal disease (IMD) was notified this reporting week (Table 1). The case was in an adult aged over 70 years from Central Coast LHD. The case presented with septic arthritis and was caused by serogroup W.

A total of 29 cases of IMD have been reported so far in 2016 (based on onset date), including four people who died from their infection. In the same period of 2015 there were 21 cases notified and no deaths. Cases in 2016 have occurred in both adults and children with an age range of 0 to 88 years.

IMD 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 becoming established and reproducing in the throat of the exposed person but in most people this does not cause any symptoms. In only a very small proportion of people the bacteria may invade from the throat to other parts of the body, causing disease.

Symptomatic disease typically involves meningitis (infection of the lining of the brain), septicaemia (infection of the blood) or both. Up to 10 per cent of invasive meningococcal 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 2015 there has been an increase in NSW and other jurisdictions of disease caused by serogroup W.

To date in NSW, 11 cases of IMD have been caused by serogroup B compared to 10 by serogroup W. Other cases in 2016 have been caused by serogroup Y (4) and C (1), or an unknown serogroup (3).

Vaccination against meningococcal C infection is included in the national immunisation schedule with vaccination due at 12 months of age. Combined vaccines against the A, C, Y and W serogroups are generally only recommended for travellers to countries where these are more common and for some people with certain high risk conditions that predispose them to developing IMD such as people without a spleen.

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

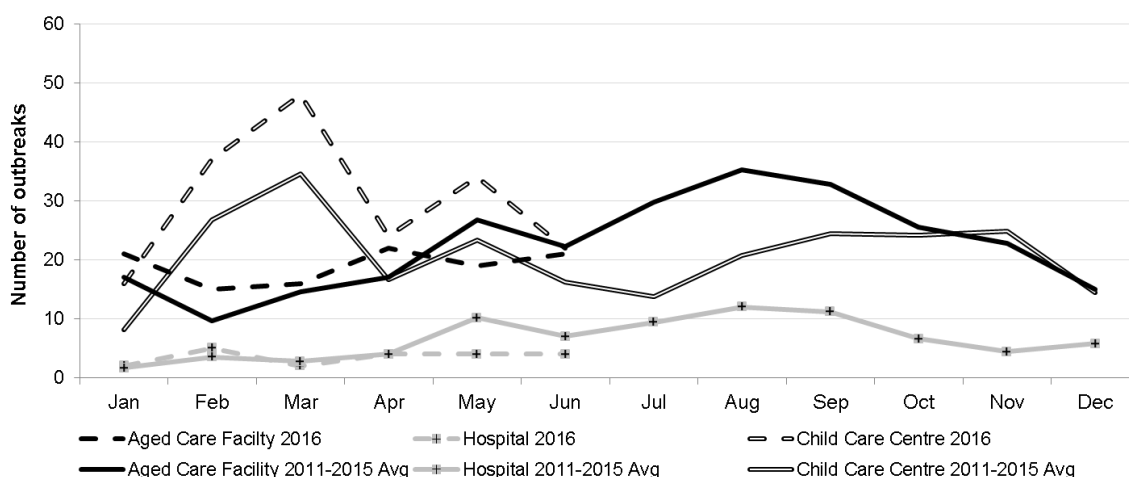
Follow the links for more information on [meningococcal disease](#) and [vaccination](#).

## **Gastroenteritis outbreaks in institutions**

There were 20 outbreaks of gastroenteritis in an institution reported in this period affecting at least 125 people; this is higher than the five-year average for July of 12 outbreaks per week. Two outbreaks occurred in an aged care facility, one outbreak occurred in a hospital and seventeen occurred in child care centres. All outbreaks appeared to have been caused by a virus and spread from one person to another though no pathology results are yet available.

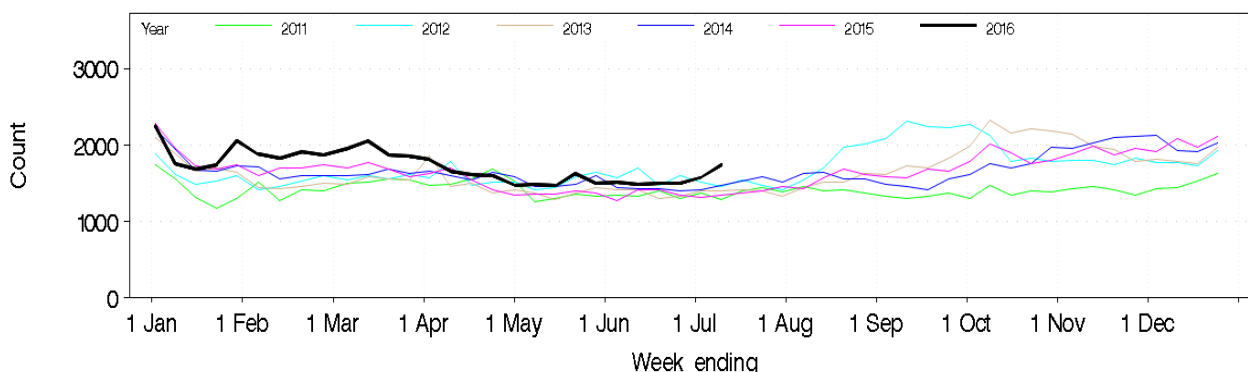
Monthly outbreak data indicates that aged care facility gastroenteritis outbreaks are increasing as per the seasonal trend for this time of year. Outbreaks in child care centres are higher than the previous 5-year average (Figure 1).

**Figure 1. Gastroenteritis in institutions: outbreaks in 2016 (dotted lines) compared to the previous 5-year average, by institution type and month of report.**



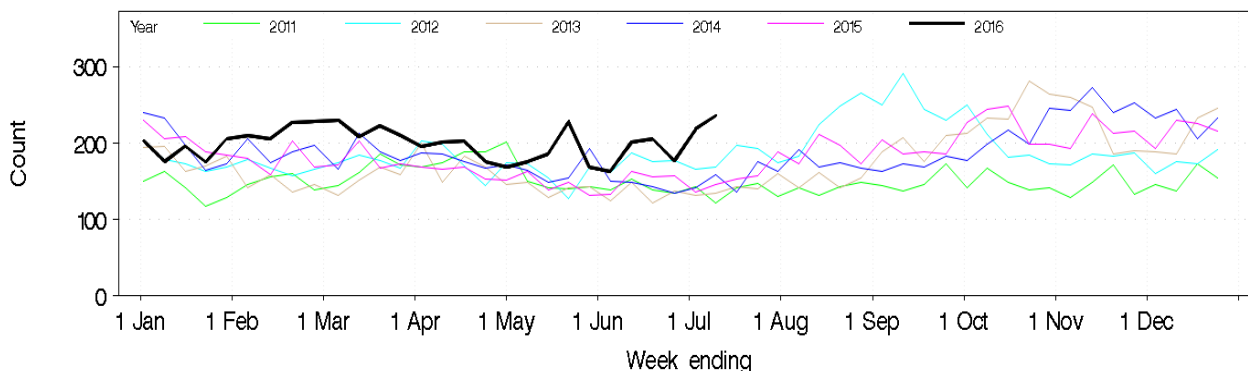
The number of emergency department presentations for gastroenteritis (1,741) continues to be above the usual range for this time of year (1,280 to 1,477) and significantly above the 5-year mean (1,391).

**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 of all ages, for 60 NSW hospitals.**

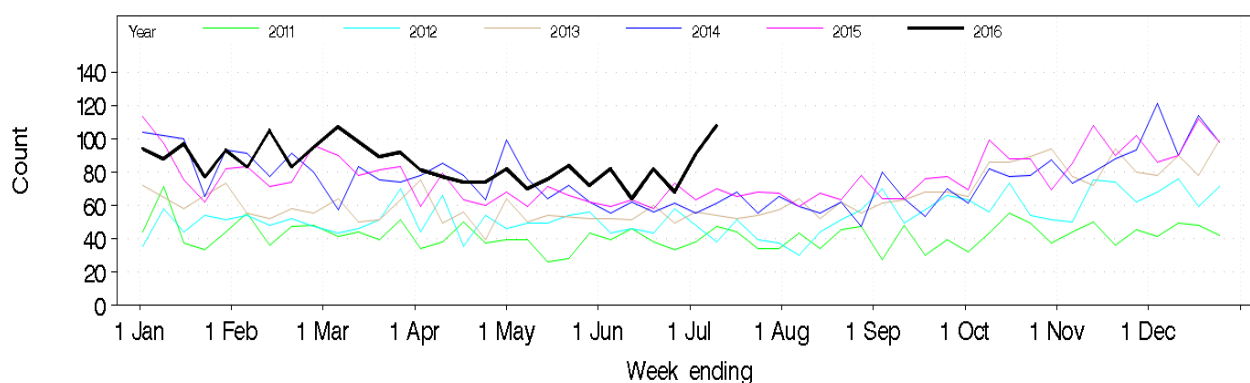


Presentations were particularly high in children under 5 years and persons aged 17-34 years, and across Western Sydney LHD. Among those admitted to hospital across the state, persons aged 17-34 years were significantly above the five-year mean.

**Figure 3: 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 Western Sydney LHD.**



**Figure 4: Total weekly counts of Emergency Department presentations for gastroenteritis that were admitted, for 2016 (black line), compared with each of the 5 previous years (coloured lines), persons aged 17–34 years, for 60 NSW hospitals**



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

## 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 4 to 10 July 2016, by date received \***

		Weekly		Year to date			Full Year	
		This week	Lastweek	2016	2015	2014	2015	2014
Enteric Diseases	Cryptosporidiosis	13	11	735	610	258	1038	429
	Giardiasis	55	49	2168	1988	1656	3415	2942
	Hepatitis A	2	1	26	49	41	71	80
	Rotavirus	8	6	259	178	216	1036	714
	Salmonellosis	80	84	2856	2569	2672	4044	4274
	Shigellosis	7	9	171	88	125	172	212
Respiratory Diseases	Influenza	544	313	4816	2993	1867	30302	20888
	Legionellosis	4	0	71	54	39	96	72
	Tuberculosis	10	7	232	215	223	445	475
Sexually Transmissible Infections	Chlamydia	443	420	13623	11777	12246	22548	22899
	Gonorrhoea	114	137	3588	2718	2564	5401	4877
	LGV	2	0	26	12	7	20	14
Vaccine Preventable Diseases	Adverse Event Following Immunisation	1	4	136	101	165	182	256
	Meningococcal Disease	1	2	28	20	17	46	37
	Mumps	3	1	21	30	50	63	82
	Pertussis	129	129	5784	3697	977	12079	3051
	Pneumococcal Disease (Invasive)	11	12	219	195	196	494	511
	Rubella	1	1	8	4	5	6	10
Vector Borne Diseases	Dengue	5	1	275	193	257	342	378
	Malaria	2	1	25	22	56	47	87
	Ross River	2	3	333	1284	338	1638	673
Zoonotic Diseases	Brucellosis	1	0	5	7	1	10	3

### \* 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.