

Communicable Diseases Weekly Report

Week 28, 7 July to 13 July 2019

In summary, we report:

- [Invasive meningococcal disease](#) – two new cases
- [Legionellosis](#) – two new cases
- [Kunjin/West Nile virus](#) – one new case
- [Summary of notifiable conditions activity in NSW](#)

For further information see NSW Health [infectious diseases page](#). This includes links to other NSW Health [infectious disease surveillance reports](#) and a [diseases data page](#) for a range of notifiable infectious diseases.

Invasive meningococcal disease

Two new cases of invasive meningococcal disease were notified in this reporting week (Table 1). One was a small child under the age of five from regional NSW, who unfortunately died as a result of their infection. The other was a teenager from metropolitan Sydney. No links were found between the cases. Tests have shown that both infections were caused by meningococcal serogroup B.

Invasive meningococcal disease (IMD) is a serious, often fatal infection caused by the bacteria *Neisseria meningitidis*. There are several serogroups of meningococcal bacteria associated with IMD, of which four (B, C, W and Y) cause almost all IMD in Australia. The National Immunisation Program provides meningococcal ACWY vaccine to children at 12 months of age and high school students in Year 10. People aged 14-19 years who are not enrolled in school, or who miss out on the school vaccination can access free vaccine from their GP. A vaccine against the most common strains of meningococcal B is available in Australia via private prescription.

While meningococcal disease can and does affect people of any age, children less than 5 years, and people 15-24 years of age are at highest risk of meningococcal disease.

The annual NSW Health Meningococcal Disease Awareness campaign begins this week to bring awareness of the symptoms of meningococcal disease and the need for people to seek urgent medical attention should symptoms occur. For the second year, the campaign is using social media platforms, including Facebook, Snapchat, and Instagram to assist parents and young people to identify the symptoms of meningococcal disease so they can act fast if symptoms begin (Figure 1).

The initial symptoms of IMD are non-specific and often mimic other illnesses such as respiratory or gastrointestinal infections, making diagnosis difficult. Symptoms may include sudden fever, nausea, vomiting, abdominal pain, headache, neck stiffness, dislike of bright lights, joint pain, irritability, and a red-purple rash that doesn't disappear when pressure is applied. It's important to know that a rash does not always appear or it may occur late in the disease.

In young children, symptoms may also include irritability, difficulty waking up, high-pitched crying, rapid or laboured breathing and refusal to eat.

People with IMD can become very unwell, very quickly, and the disease can be fatal within hours of the first symptom appearing. Anyone who thinks they, or someone they care for, might be experiencing symptoms of meningococcal disease, should seek urgent medical care. The absence of the rash (which may appear late in the illness or not at all), should not exclude the consideration of meningococcal disease. Patients presenting with non-specific symptoms should be encouraged to return to the doctor, or visit an emergency department if symptoms persist or rapidly worsen.

Figure 1: Social media posts from the NSW Health 2019 Meningococcal Disease Awareness Campaign.



Further information

- NSW Health [meningococcal disease website](#) and [meningococcal disease factsheet](#)
- [The Australian Immunisation Handbook](#) for more information on meningococcal vaccines
- [NSW meningococcal disease data](#).

Legionellosis (Legionnaires' disease)

Two new cases of legionellosis (Legionnaires' disease) were reported in this reporting week (Table 1); both were due to the *Legionella pneumophila* serogroup 1 (LP1) strain. Both cases appear to have acquired their infections locally (Central Coast Local Health District and Nepean Blue Mountains Local Health District). The cases do not have any common potential source of exposure and investigations into the source of both cases' infection 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 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 per cent mortality rate.

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

Legionellosis 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. People intending to handle potting mix should wear gloves and a mask, and should wet the potting mix to reduce dust. People should also wash their hands well with soap and water 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 legionellosis outbreaks.

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](#).

Further information

- NSW Health [Legionnaires' disease](#) factsheet
- [NSW Legionnaires' disease data](#).

Kunjin/West Nile virus

One case of Kunjin/West Nile virus infection was notified in this reporting week (Table 1). The case, a man in his sixties, had recently travelled to the USA, where West Nile virus infection is frequently reported. Kunjin virus is a subtype of West Nile virus. While they cannot be distinguished on routine testing, this case's recent travel to a country where West Nile virus is endemic means this case was likely infected with West Nile virus.

West Nile virus and Kunjin are mosquito-borne viruses that are transmitted by the bite of *Culex* mosquitoes. Kunjin is found in mainland Australia and Papua New Guinea, while West Nile virus is found in Africa, Europe and the USA.

The vast majority of people with infections do not show symptoms. A small proportion develop mild illness with fever, enlarged lymph nodes, rash, swollen and aching joints, headache, muscle weakness and fatigue. Some people infected with West Nile virus or Kunjin may develop encephalitis, a brain infection which may require hospitalisation. This case was hospitalised with encephalitis.

There is currently no vaccine or specific treatment for West Nile virus or Kunjin infection.

Kunjin virus is rare in Australia, and is more common in some parts of northern Australia. In NSW, Kunjin is very occasionally diagnosed in patients who live or travel west of the Great Dividing Range, and the presence of mosquito-borne viruses in the environment, including Kunjin virus, is monitored through the NSW Arbovirus Surveillance Program. This includes surveillance of chicken flocks, trapping mosquitoes for virus testing, and surveillance of human cases.

To protect against mosquitoes and reduce the risk of diseases they transmit, people are advised to:

- Cover-up with a loose-fitting long sleeved shirt and long pants when outside
- Apply mosquito repellent to exposed skin
- Take special care during peak mosquito biting hours, especially around dawn and dusk
- Remove potential mosquito breeding sites from around the home and screen windows and doors
- Take extra precautions when travelling or camping in areas with a higher risk of mosquito-borne diseases.

Further information

- [Mosquitoes are a health hazard](#) fact sheet
- [Kunjin virus](#) fact sheet
- [Staying healthy when travelling overseas](#) fact sheet

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 7July – 13 July 2019, by date received*

		Weekly		Year to date			Full Year	
		This week	Last week	2019	2018	2017	2018	2017
Enteric Diseases	Cryptosporidiosis	6	4	415	470	1051	708	1266
	Giardiasis	49	48	1841	1648	1995	2937	3135
	Hepatitis A	1	1	39	60	15	86	71
	Rotavirus	17	31	382	465	416	808	2319
	Salmonellosis	42	46	2216	2043	2452	3341	3681
	Shigellosis	13	13	470	145	119	530	236
Respiratory Diseases	Influenza	6414	6735	50121	5377	10499	17424	103851
	Legionellosis	2	2	91	86	75	171	138
	Tuberculosis	10	10	307	259	275	508	542
Sexually Transmissible Infections	Chlamydia	545	622	17153	17265	16013	31197	29005
	Gonorrhoea	216	222	6463	5686	5107	10619	9160
	LGV	1	1	26	41	18	85	50
Vaccine Preventable Diseases	Measles	1	0	38	8	25	18	32
	Meningococcal Disease	2	3	22	31	36	72	91
	Pertussis	98	118	3354	2128	3225	6281	5366
	Pneumococcal Disease (Invasive)	20	18	290	275	270	683	683
Vector Borne Diseases	Barmah Forest	1	2	46	48	84	74	127
	Chikungunya	1	1	11	3	12	13	47
	Dengue	7	4	231	167	169	299	306
	Kunjin	1	0	1	0	0	0	0
	Ross River	10	16	400	382	1418	570	1653
Zoonotic Diseases	Q fever	2	2	141	106	123	228	210

* Notes on Table 1: NSW Notifiable Conditions activity

- Only conditions which had one or more case reports received during the reporting week appear in the table.
- 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 (i.e. by report date).
- Note that [notifiable disease data](#) available on the NSW Health website are reported by onset date so case totals are likely to vary from those shown here.
- Cases involving interstate residents are not included.
- The shigellosis case definition changed on 1 July 2018 to include probable cases (PCR positive only), hence case counts cannot be validly compared to previous years.
- 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](#).
- Chronic blood-borne virus conditions (such as HIV, Hepatitis B and C) are not included here. Related data are available from the [Infectious Diseases Data](#) and the [HIV Surveillance Data Reports](#) webpages.
- Notification is dependent on a diagnosis being made by a doctor, hospital or laboratory. Changes in awareness and testing patterns influence the proportion of patients with a particular infection that is diagnosed and notified over time, especially if the infection causes non-specific symptoms.