

Communicable Diseases Weekly Report

Week 43, 22 October to 28 October 2017

In summary, we report:

- [Invasive meningococcal disease](#) – three new cases
- [Australian bat lyssavirus](#) – a public warning regarding contact with bats
- [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

Three cases of invasive meningococcal disease (IMD) were notified this week (Table 1). These unrelated cases occurred in residents of Western Sydney and Murrumbidgee Local Health Districts. Two of the cases occurred in adults and one in an infant, with no links identified between any of the cases. Serogroup information is available for two of the cases, with both adults serogroup B.

Close contacts of the cases have been provided with clearance antibiotics. The main rationale for clearance antibiotics is to clear the meningococcal bacteria from the nose and throat from any carrier within the network of contacts close to each case. This reduces the risk of further transmission of what may be a more virulent strain of the organism within the contact network and prevents further cases of invasive disease. Clearance antibiotics are not a treatment for meningococcal disease.

These cases bring the total number of notifications of IMD with onset in 2017 to 79, an increase on the 62 notifications reported over the same period in 2016. IMD tends to be most prevalent in late winter and early spring, although cases occur all year round.

IMD is caused by infection with one of several serogroups of *Neisseria meningitidis* bacteria. The most common invasive serogroups in Australia are B, C, W and Y. 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 does invade from the throat to other parts of the body, causing IMD; usually involving 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.

It is important to identify symptoms of IMD early and immediately seek medical advice as early antibiotic treatment is lifesaving. Symptoms in young children and adults include fever, headache, nausea or vomiting, diarrhoea, sore muscles, drowsiness and stiff neck. For infants, infection may also be associated with irritability, a high pitched cry, refusal to feed, and extreme tiredness or floppiness. Meningococcal disease often presents with a distinctive red/purple rash, generally later in the disease.

Following the introduction of a serogroup C vaccine in 2003, which is provided free of charge at 12 months of age, the number of infections caused by serogroup C has decreased substantially. Serogroup B has previously been the most common cause of IMD in Australia; however, serogroup W has become the predominant type Australia-wide with NSW case notifications almost tripling from 2015 to 2016.

In February 2017 the NSW Government announced the NSW Meningococcal W Response Program which provides free meningococcal ACWY vaccine (4vMenCV) to Year 11 and 12 students at their schools in 2017.

Preliminary data shows that in terms two and three, 71 per cent of Year 11, and 76 per cent of Year 12 students have been vaccinated, with more Year 11 students to be vaccinated in term 4. These numbers are likely to underestimate true coverage as the preliminary data only includes those vaccinated through the school program and does not include vaccine received from general practitioners or other immunisation providers.

This provides protection for these students as well as contributing to herd immunity in the broader population. Teenagers aged 17 to 18 years who do not attend secondary school are able to access the free vaccine through their GPs. In 2018 free meningococcal ACWY vaccine will be offered to students in Years 10 and 11, with free vaccine also available through GPs for students who do not attend school, or who miss school clinics.

The meningococcal ACWY vaccine is also recommended for travellers to countries where these serogroups are more common, and is required for pilgrims to the Hajj. A vaccine against some serogroup B strains is also available in Australia. It is recommended for young children and adolescents but is not part of the National Immunisation Program. People with certain high risk conditions that predispose them to developing IMD, such as those without a spleen, are also recommended to be vaccinated against all available meningococcal serogroups.

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

Australian bat lyssavirus

Each year with the start of the bat breeding season in October there is an increase in NSW residents getting bitten or scratched by bats when they attempt to rescue young and miscarried pups that may be on the ground. Contact between bats and humans also increases in spring and summer when bats get caught in netting around fruit trees.

So far this year, more than 140 NSW residents have required post exposure prophylaxis (PEP) vaccination after being bitten or scratched by bats in Australia. Due to the risk of any bat carrying ABLV, NSW Health is warning people to not handle injured bats and flying foxes. Four bats that have scratched or bitten a person in NSW this year have been confirmed as carrying the potentially fatal Australian bat lyssavirus (ABLV), which is part of the lyssavirus family which includes the rabies virus.

Infection with any of the lyssaviruses (including rabies) can result in encephalomyelitis which, if not prevented, is fatal. The lyssavirus enters the body through the bite or scratch of an infected animal. The virus can remain unnoticed at the entry site for weeks or even years, but eventually travels via nerves to the brain causing encephalitis. Symptoms start with headache, fever and a feeling of apprehension, and can progress to excitability (classically with hydrophobia or fear of water), or delirium and convulsions. In about one-third of patients paralysis is the predominant presentation. Patients progress to coma and death within weeks.

As there is no effective treatment for lyssavirus infection once symptoms commence, prevention is crucial. Members of the public should not handle any bat unless vaccinated against rabies and using protective equipment.

If bitten or scratched by a bat the wound should be immediately cleaned for at least five minutes with soap and copious water, and an antiseptic such as Betadine® applied. This first aid can reduce the risk of infection by 90%. Nevertheless, urgent medical assessment of the need for rabies immunoglobulin and vaccine is also required.

People who find bats that are injured or in distress are advised to not attempt to rescue it. Contact the experts at WIRES on 1300 094 737.

For further information regarding domestic animals that have come into contact with bats, please visit the NSW Department of Primary Industries [website](#) or contact the Emergency Animal Disease Hotline on 1800 675 888.

For more information see our NSW Health Fact Sheet on [Rabies and Australian bat lyssavirus infection](#). The World Health Organization has also a [website](#) on worldwide rabies control strategies.

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 22 October – 28 October 2017, by date received*

		Weekly		Year to date			Full Year	
		This week	Last week	2017	2016	2015	2016	2015
Bloodborne Diseases	Hepatitis D	1	0	15	16	8	20	9
Enteric Diseases	Cryptosporidiosis	8	11	1174	908	731	1184	1040
	Giardiasis	46	47	2564	3007	2860	3480	3413
	Hepatitis E	1	0	16	16	14	16	20
	Rotavirus	49	116	1828	485	784	750	1033
	Salmonellosis	78	61	3122	3851	3339	4544	4022
	Shigellosis	3	11	189	257	149	310	172
Respiratory Diseases	Influenza	479	2004	102337	33811	29763	35540	30295
	Legionellosis	1	3	107	108	85	134	96
	Tuberculosis	4	7	397	431	359	534	445
Sexually Transmissible Infections	Chlamydia	569	531	23649	21682	18788	25994	22525
	Gonorrhoea	164	206	7613	5765	4539	7004	5395
Vaccine Preventable Diseases	Adverse Event Following Immunisation	4	7	243	218	160	258	186
	Meningococcal Disease	3	1	79	62	39	70	46
	Mumps	3	1	92	56	48	67	65
	Pertussis	85	92	4600	8971	8262	10956	12078
	Pneumococcal Disease (Invasive)	17	19	596	462	436	544	494
Vector Borne Diseases	Barmah Forest	1	2	96	30	173	35	184
	Chikungunya	1	1	29	21	37	39	38
	Dengue	5	8	232	406	282	481	344
	Malaria	1	2	62	46	35	59	47
	Ross River	16	11	1465	388	1506	542	1635
Zoonotic Diseases	Q fever	2	1	164	182	217	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 chronic blood-borne virus case reports are not included here but are available from the [Infectious Diseases Data](#) webpage.