

Communicable Diseases Weekly Report

Week 26, 25 June to 1 July 2017

In summary, we report:

- [Invasive meningococcal disease](#) – two notifications, unrelated
- [Hepatitis E](#) – one notification, overseas acquired
- [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

Two cases of invasive meningococcal disease (IMD) were notified this week ([Table 1](#)). Both cases occurred in adults: one in a resident of Sydney Local Health District (LHD) which was caused by serogroup W, and one in a resident of Northern NSW LHD due to serogroup C.

In the previous reporting week two cases of meningococcal disease were reported in children: one a resident of Northern NSW LHD and the other a resident of Nepean Blue Mountains LHD. Both cases were due to serogroup B. In all cases the local public health unit follows up people who have been in contact with the case in the week preceding their illness, and arranges information and clearance antibiotics according to national guidelines.

In total, 31 cases of IMD (including two deaths) with onset in 2017 have been reported up to 1 July. Of these cases 17 have been serogroup B, three serogroup C, five 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 in 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 are able to access the free vaccine through their general practitioner.

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](#), [vaccination](#) and [notification data](#).

Hepatitis E

There was one case of hepatitis E virus (HEV) infection acquired overseas notified this week ([Table 1](#)). The infection was most likely acquired whilst the case was in Southern Asia where the person reported consuming tap water as well as fruit and vegetables washed with tap water.

Most HEV infections occur without symptoms. When symptoms occur, there is usually a self-limited, acute illness characterised by nausea, vomiting, fatigue, abdominal pain, fever, dark urine and jaundice (yellowing of the skin and eyes). HEV infections in high-risk groups – particularly infants, people with pre-existing liver disease and pregnant women – can lead to fulminant liver failure or other serious complications.

HEV infection occurs worldwide, more commonly in resource-limited countries with limited access to essential water, sanitation, hygiene and health services. HEV infection is a rarely reported infection in Australia: there are usually between 10 and 20 HEV cases notified each year in NSW. In 2014, an outbreak of HEV infection in NSW was determined to be due to a pork liver dish made from Australian pork liver.

NSW Health actively follows up all people who have been notified as having a HEV infection to determine their likely source of infection and prevent further cases. Almost all cases in previous years in NSW have been in people who had travelled overseas in the period they were likely to have been infected or, rarely, in the household contacts of infected travellers.

HEV is usually spread by the faecal-oral route. The most common source of infection in resource-limited countries is thought to be consumption of faecally-contaminated drinking water. Sporadic HEV outbreaks in more developed countries have been reported following consumption of raw or undercooked pork or deer meat. Consumption of shellfish was a risk factor in one recently described outbreak.

One Australian study has shown that some local pig herds have evidence of having been exposed to HEV but it was not able to determine the risk of swine HEV transmission to humans. Nevertheless, this highlights the need to ensure that pork and other meat is cooked appropriately prior to consumption.

HEV and other potentially harmful micro-organisms that may be associated with pork are all destroyed by thorough cooking and proper handling. Pork livers and other pork products need to be cooked all the way through to kill any organisms that may be present – lightly searing the surface is not enough.

Travellers to countries where the safety of the local water supply is not certain should only drink bottled or boiled water (boil water for at least one minute). Raw food such as salads or fruit may be contaminated; if in doubt wash, cook or peel fruit yourself using bottled or boiled water. All meat, seafood and poultry should be cooked all the way through, and ‘street food’ should also be avoided if possible.

For further information, please see [hepatitis E factsheet](#), and the NSW Food Authority’s advice on [keeping food safe](#).

For further information of safe travel see the NSW Health [Staying healthy when travelling overseas fact sheet](#).

Follow the link for further information on [hepatitis E notification data](#).

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 25 June to 1 July 2017, by date received*

		Weekly		Year to date			Full Year	
		This week	Last week	2017	2016	2015	2016	2015
Enteric Diseases	Cryptosporidiosis	13	12	1036	722	609	1184	1040
	Giardiasis	59	44	1874	2116	1971	3481	3413
	Hepatitis E	1	0	11	11	6	16	20
	Rotavirus	18	24	362	254	175	751	1033
	STEC/VTEC	1	0	31	22	12	65	29
	Salmonellosis	50	37	2372	2774	2545	4543	4022
	Shigellosis	2	5	107	165	88	310	172
	Typhoid	1	1	36	25	28	37	41
Respiratory Diseases	Influenza	934	769	6636	4279	2980	35538	30301
	Tuberculosis	1	12	219	232	213	532	443
Sexually Transmissible Infections	Chlamydia	495	491	14747	13222	11717	25990	22525
	Gonorrhoea	139	137	4810	3485	2707	7005	5397
Vaccine Preventable Diseases	Adverse Event Following Immunisation	4	3	161	146	101	257	186
	Haemophilus influenzae type b	1	0	4	2	3	5	5
	Meningococcal Disease	2	2	32	26	20	75	47
	Mumps	1	0	65	21	30	67	65
	Pertussis	90	112	3039	5679	3670	10957	12079
	Pneumococcal Disease (Invasive)	19	9	229	207	194	544	494
Vector Borne Diseases	Barmah Forest	4	3	63	22	144	35	184
	Dengue	3	1	159	284	192	481	344
	Malaria	2	0	36	22	22	59	47
	Ross River	12	19	1297	332	1279	541	1635
Zoonotic Diseases	Q fever	1	4	109	119	119	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.