

Communicable Diseases Weekly Report

Week 39, 24 to 30 September 2017

In summary, we report:

- [Invasive meningococcal disease](#) – six cases reported
- [Hepatitis A](#) – update on Sydney outbreak
- [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

Six cases of invasive meningococcal disease (IMD) were notified this week ([Table 1](#)). These unrelated cases occurred in residents of the Northern NSW, Hunter New England, Murrumbidgee, South Eastern Sydney, and Western Sydney Local Health Districts. Five 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 four of the cases, with three due to serogroup B and one due to serogroup W.

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 for 2017 to 68, an increase on the 56 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 life saving. 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. The vaccination program commenced in Term 2 with 103,862 students vaccinated. The total number of students vaccinated during Term 3 is currently being collated, with more to be vaccinated in Term 4. 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](#).

Hepatitis A

Two new cases of locally-acquired hepatitis A infection were reported this week ([Table 1](#)). From 25 July to 30 September, 2017, there were 24 cases of hepatitis A reported in adults in NSW. On average, there are usually three cases reported in NSW per month, and most cases usually acquire their infection overseas. Only two of the 24 recent cases have any overseas travel during their incubation (exposure) period.

Molecular typing of the viruses isolated from 15 of these cases has shown that they share an identical common partial genome sequence, meaning that the cases are all part of the same outbreak. The molecular typing of hepatitis A viruses in this cluster shows they are very similar to a strain currently circulating in Europe associated with a large, multi-country outbreak (see the [ECDC report](#)).

The nine remaining cases have molecular typing results pending: seven of the nine cases are males and the median age is 41 years (range 21 to 60 years). Four of these cases report MSM activity during their exposure period. Two of the cases live outside of Sydney but reported travel to Sydney during their exposure period.

It is suspected that the earlier cases and some of the later cases have been exposed to a common source as they share overlapping incubation periods. Secondary cases have also been identified, with evidence that some infections have been transmitted from person to person. Men who engage in sexual activity with other men (MSM) are being reminded to get vaccinated as anal sex and oral-anal sex have been identified as risk factors for some cases (see [media release](#)).

Despite extensive investigation, to date no food item or other possible exposure has been found in common with all the cases. NSW public health units are continuing to investigate possible sources of infection in conjunction with the NSW Food Authority (see the related [media release](#)).

Hepatitis A is a viral infection of the liver. Symptoms include feeling unwell, lack of appetite, aches and pains, fever, nausea, and abdominal discomfort, followed by dark urine, pale stools and jaundice (yellowing of the skin and eyes). The illness usually lasts from one to three weeks. People who experience these symptoms are advised to see their GP.

Infected people can transmit the virus to others from two weeks before the development of symptoms until one week after the appearance of jaundice. The virus is spread by the faecal-oral route, including through the consumption of contaminated food or water or by direct contact with an infected person. While infectious, people diagnosed with hepatitis A should avoid preparing food or drink for other people, sharing utensils or towels, or having sex for at least one week after onset of jaundice.

There is no specific treatment for hepatitis A infection and people sometimes require hospitalisation for supportive care. A safe and effective vaccine is available, with two doses spaced at least six months apart shown to provide high levels of protection against infection for many years. Hepatitis A vaccination is routinely recommended for people at higher risk of infection and those who are at increased risk of severe liver disease. These include travellers to countries where hepatitis A is common (most developing countries), some occupational groups, men who have sex with men, people with developmental disabilities, and people with chronic liver disease.

People exposed to hepatitis A can be protected from developing the disease if they receive the vaccine or protective antibodies within two weeks of exposure.

Follow the links for NSW Health [hepatitis A notification data](#) and the NSW Health [hepatitis A 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 24 to 30 September 2017, by date received*

		Weekly		Year to date			Full Year	
		This week	Last week	2017	2016	2015	2016	2015
Bloodborne Diseases	Hepatitis C - Newly Acquired	1	1	26	22	22	25	29
Enteric Diseases	Cryptosporidiosis	5	6	1136	853	699	1184	1040
	Giardiasis	41	45	2412	2808	2651	3481	3413
	Hepatitis A	2	3	41	30	63	41	72
	Rotavirus	114	146	1349	373	570	750	1033
	STEC/VTEC	2	1	43	35	14	65	29
	Salmonellosis	31	42	2909	3612	3125	4544	4022
	Shigellosis	4	3	166	232	134	310	172
	Typhoid	1	1	44	30	32	37	41
Respiratory Diseases	Influenza	5073	6562	95005	31492	28280	35540	30295
	Tuberculosis	7	6	368	376	330	534	445
Sexually Transmissible Infections	Chlamydia	381	478	21526	19594	17026	25991	22525
	Gonorrhoea	143	176	6944	5222	4149	7003	5395
Vaccine Preventable Diseases	Adverse Event Following Immunisation	5	4	224	194	142	257	186
	Haemophilus influenzae type b	1	0	6	4	5	5	5
	Meningococcal Disease	6	2	68	54	36	70	46
	Mumps	2	1	86	44	43	67	65
	Pertussis	58	87	4277	8101	6829	10956	12078
	Pneumococcal Disease (Invasive)	17	31	522	410	392	544	494
Vector Borne Diseases	Chikungunya	1	0	26	15	34	39	38
	Dengue	1	3	211	372	253	481	344
	Malaria	1	1	55	39	33	59	47
	Ross River	7	9	1413	375	1453	542	1635

* 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.