Communicable Diseases Weekly Report

Week 36, 3 to 9 September 2017

In summary, we report:

- Invasive meningococcal disease – four notifications
- Hepatitis C – two newly acquired cases
- 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

Four cases of invasive meningococcal disease (IMD) were notified this week (Table 1). Two of the cases were unrelated and were adults, caused by serogroup W and Y. The other two cases, caused by serogroup B, occurred in infants attending the same childcare centre.

When cases of meningococcal disease arise within 24 hours amongst a group of people in close contact they are called “co-primary” cases. This is a rare occurrence due to two people being infected from the same carrier. The public health response for co-primary cases is the same as for sporadic cases – with close contacts provided 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 58, an increase on the 47 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. 103,862 students were vaccinated in Term Two, with more to be vaccinated in Terms Three and Four. This will provide individual 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 GP.

The meningococcal ACWY vaccine is also recommended for travellers to countries where these serogroups are more common, and required for pilgrims to the Hajj. 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. 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 C

Two cases of newly acquired hepatitis C infection were notified in this reporting week. The first case was in a young child, who is thought to have acquired the infection from their mother. The second case, unrelated to the first, is in a woman in her twenties and potential sources of the infection are being investigated by the local public health unit.

Hepatitis C is caused by a virus that infects the liver and can lead to long-term liver disease, cirrhosis and liver cancer. Hepatitis C virus (HCV) is transmitted from person to person when the blood of an infected person enters the bloodstream of an uninfected person.

In Australia, spread is mostly through sharing needles and other injecting equipment contaminated with blood from an infectious person. Less commonly, hepatitis C is spread in other ways, such as tattooing, body piercing, acupuncture, through sex toys, sharing personal items like razors, and from mother-to-child. The risk of an infected mother passing on HCV to her baby either during pregnancy or at birth is low, at around 4 to 7%. This risk is higher if the mother is in the acute phase of infection or is co-infected with HIV.

Most people do not experience symptoms when they are infected with hepatitis C. When symptoms do occur, they usually develop within one to three months of infection and can include mild flu-like illness, jaundice (yellowing of eyes and skin), dark urine, abdominal pain, nausea, vomiting or fatigue. More commonly, hepatitis C is diagnosed through screening asymptomatic people or investigating signs or symptoms of liver disease. Following infection, about a quarter of people clear the virus from their bloodstream spontaneously. Those who do not clear the virus have chronic hepatitis C infection.

Effective new treatments, called direct acting antivirals (DAAs), are now subsidised on the Pharmaceutical Benefits Scheme for the treatment of adults with chronic hepatitis C. DAAs have a cure rate of over 95% and have few side effects. They need to be taken for only 12 weeks for most people (24 weeks for some) and are available in tablet form for most cases. There are current clinical trials of these oral medications with children, with the hope that they will also be available for treating children in the future. Hepatitis C treatment improves people's liver health by stopping liver damage caused by HCV. Following treatment some of the damage that has already occurred may repair. Successful treatment clears the virus so that the person can no longer transmit HCV to another person. People living with hepatitis C are strongly recommended to see their general practitioner about accessing hepatitis C treatment.

The NSW Hepatitis C Strategy 2014-2020 aims to reduce hepatitis C infections in NSW and improve the health outcomes of people living with hepatitis C, by reducing sharing of injecting equipment among people who inject drugs by 25% and increasing the number of people accessing hepatitis C treatment. Follow the link for information from the PBS on hepatitis C treatments.

Follow the links for further information about hepatitis C, the NSW Hepatitis C Strategy 2014- 2020 and the 2016 Annual Data Report of the NSW Hepatitis B and C Strategies 2014-2020.

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 3 – 9 September 2017, by date received*

		Weekly		Year to date			Full Year	
		This week	Last week	2017	2016	2015	2016	2015
Bloodborne	Hepatitis C - Newly Acquired	2	0	24	22	19	25	29
Enteric Diseases	Cryptosporidiosis	4	2	1117	825	677	1184	1040
	Giardiasis	38	37	2293	2674	2500	3481	3413
	Hepatitis A	2	2	32	30	61	41	72
	Listeriosis	1	0	13	28	16	36	26
	Rotavirus	121	81	972	337	410	750	1033
	Salmonellosis	34	58	2810	3445	2981	4544	4022
	Shigellosis	2	7	155	215	127	310	172
Respiratory Diseases	Influenza	9684	11118	77031	25815	22977	35540	30295
	Legionellosis	2	2	88	98	76	134	96
	Tuberculosis	7	5	333	344	301	534	445
Sexually Transmissible Infections	Chlamydia	484	507	20034	18133	15806	25991	22525
	Gonorrhoea	138	185	6402	4849	3794	7003	5395
	LGV	1	0	20	42	22	60	35
Vaccine Preventable Diseases	Adverse Event Following Immunisation	8	3	214	177	130	257	186
	Meningococcal Disease	4	1	57	46	32	70	46
	Mumps	2	2	81	39	39	67	65
	Pertussis	67	72	4051	7365	6059	10956	12078
	Pneumococcal Disease (Invasive)	29	15	453	364	353	544	494
Vector Borne Diseases	Chikungunya	1	1	23	11	31	39	38
	Malaria	2	0	53	37	31	59	47
	Ross River	13	6	1384	358	1409	541	1635
Zoonotic Diseases	Psittacosis	1	0	8	2	1	9	3
	Q fever	1	1	150	145	170	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.