Communicable Diseases Weekly Report

Week 34, 20 to 26 August 2017

In summary, we report:

- Invasive meningococcal disease – three notifications
- Viral gastroenteritis – 39 outbreaks of gastroenteritis in institutions
- 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 unrelated cases of invasive meningococcal disease (IMD) were notified this week. (Table 1). Two of the cases were adults and one was an infant. One of the adult cases, due to meningococcal B infection, died prior to receiving medical attention. Of the other cases one was serogroup Y, one was W.

Two cases of meningococcal conjunctivitis were also notified in this reporting week. Meningococcal conjunctivitis occurs when the lining of the eye is infected with the same bacteria that cause IMD. Meningococcal conjunctivitis does not usually cause systemic infection, however can cause a severe conjunctivitis that resolves with appropriate antibiotics. While meningococcal conjunctivitis is not reported as IMD, it is however still notified to enable a public health response as it may, very rarely, result in IMD in people in close contact with the person with meningococcal conjunctivitis. Both of the cases notified this week were in children with one serogroup W and one serogroup A. Disease due to meningococcal serogroup A is extremely rare in Australia with no cases seen in recent years.

This brings the total number of notifications of IMD for 2017 to 51, an increase on the 43 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.

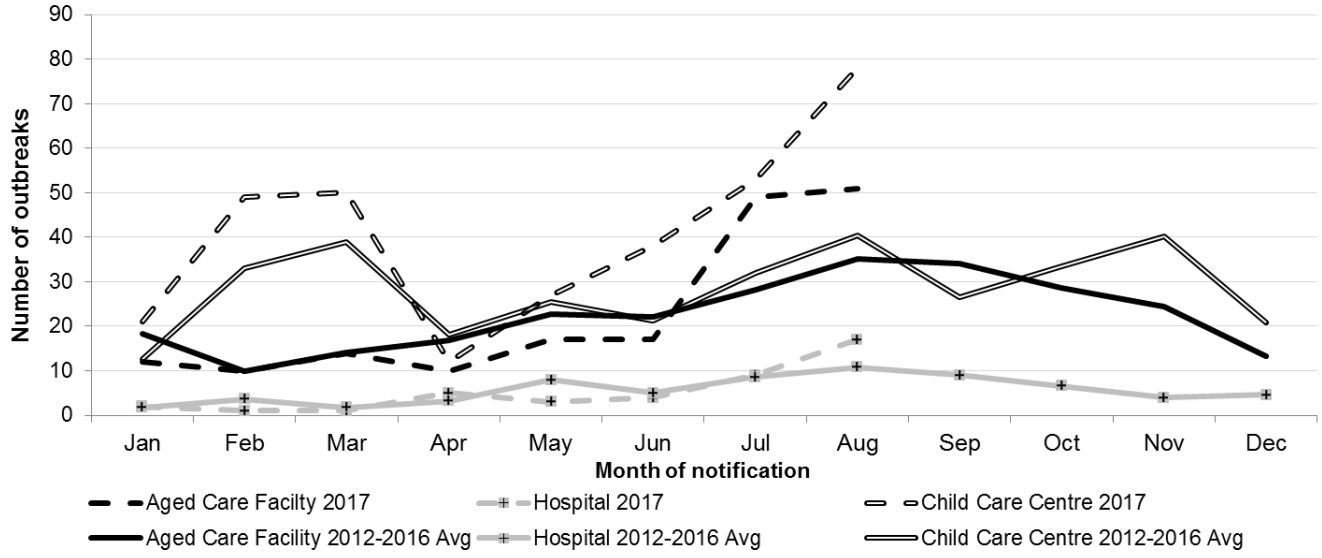
Follow the links for more information on meningococcal disease, vaccination and notification data.

Viral gastroenteritis

There were 39 outbreaks of gastroenteritis in institutions notified during this reporting period. This is 120% higher than the previous five year weekly average number of outbreaks for August. At least 348 people were affected. Ten outbreaks occurred in aged care facilities, 22 occurred in child care centres, five occurred in hospitals and two occurred in schools. Three outbreaks have been confirmed as being caused by norovirus and two outbreaks have been confirmed as being caused by rotavirus; the rest are either waiting for results or did not have stool specimens collected. However, all outbreaks appeared to have been caused by a virus and spread from person to person.

The increase in outbreaks is predominantly in aged care facilities and child care centres (Figure 1).The number of child care centre outbreaks reported each year has been increasing in recent years. This is believed to be due, at least in part, to more consistent reporting of child care centre outbreaks to public health units.

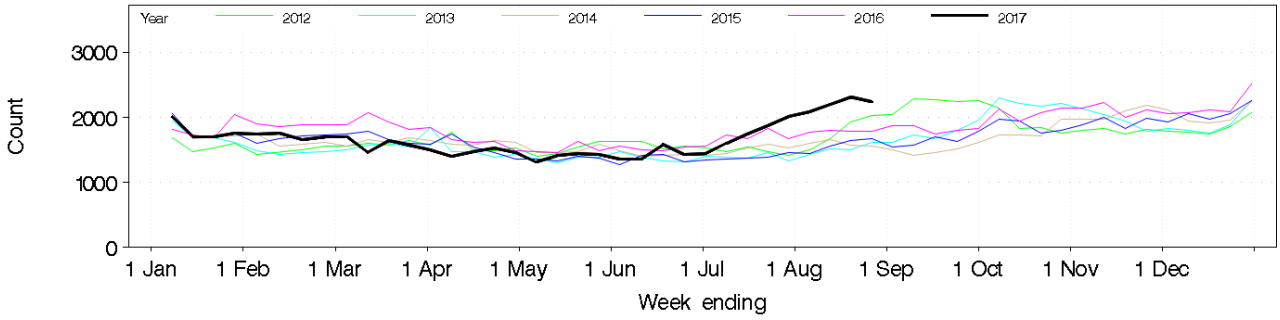
Figure 1. Gastroenteritis outbreak in institution notifications by month and facility, NSW, 2012-2017



Community levels of gastroenteritis also remain elevated as seen in emergency department presentations and rotavirus notifications. There were 2235 emergency department presentations in the past week, above the range usually seen at the time of year particularly for children under 5 years and adults over 65 years of age, but a decline overall from recent weeks (Figure 2).

Rotavirus notifications remain above the levels seen in recent years, and are predominantly affecting children under 5 years of age.

Figure 2. Total weekly counts of Emergency Department presentations for gastroenteritis, for 2017 (black line), compared with each of the 5 previous years (coloured lines), persons of all ages, for 60 NSW hospitals.



Viral gastroenteritis is a common intestinal infection caused by a number of different viruses, usually resulting in vomiting and diarrhoea. Norovirus infections are the most frequent cause and are most common during the cooler months. Symptoms may include nausea, vomiting, diarrhoea, fever, abdominal pain, headache and muscle aches. These symptoms can take between one and three days to develop and usually last between one and two days, sometimes longer. Dehydration may follow bouts of vomiting and diarrhoea, particularly in young children. Those infected should rest well and increase the amount of fluids they drink, and if concerned see their local doctor.

Viral gastroenteritis is highly infectious and is spread by the vomit or faeces of an infected person through: close contact with infected persons, contact with contaminated surfaces, or consumption of contaminated food or drink. Viruses are often transmitted from person to person on unwashed hands.

The best way to prevent the spread of viral gastroenteritis is to wash hands thoroughly with soap and running water for at least 10 seconds, particularly after using the toilet, assisting someone with diarrhoea or vomiting, attending nappy changes, and before preparing and eating food. It is vital that people with gastroenteritis stay home from work, school and childcare while sick and for at least 24 hours after the last symptom of gastroenteritis.

For further information see the norovirus and rotavirus factsheets.

Follow the link for more information on controlling viral gastroenteritis outbreaks.

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 20 – 26 August 2017, by date received*

		Weekly		Year to date			Full Year	
		This week	Last week	2017	2016	2015	2016	2015
Enteric Diseases	Cryptosporidiosis	8	6	1111	802	661	1184	1040
	Giardiasis	42	34	2218	2576	2391	3481	3413
	Hepatitis A	1	4	27	29	60	41	72
	Rotavirus	93	57	758	320	338	750	1033
	STEC/VTEC	5	0	40	28	13	65	29
	Salmonellosis	30	34	2718	3350	2891	4544	4022
	Shigellosis	7	6	146	203	125	310	172
Respiratory Diseases	Influenza	12225	9670	56208	18519	16282	35541	30296
	Legionellosis	3	0	82	93	73	134	96
	Tuberculosis	9	15	321	319	280	534	445
Sexually Transmissible Infections	Chlamydia	490	458	18847	17242	14962	25990	22525
	Gonorrhoea	130	134	5979	4618	3619	7003	5395
Vaccine Preventable Diseases	Adverse Event Following Immunisation	1	0	203	168	126	257	186
	Meningococcal Disease	3	1	51	43	30	70	46
	Pertussis	94	107	3912	6930	5547	10956	12078
	Pneumococcal Disease (Invasive)	13	23	409	329	320	544	494
Vector Borne Diseases	Barmah Forest	3	2	82	28	157	35	184
	Dengue	3	1	193	351	231	481	344
	Malaria	2	2	51	35	30	59	47
	Ross River	6	5	1363	353	1390	541	1635
	Zika virus	1	0	2	20	1	32	1
Zoonotic Diseases	Brucellosis	1	0	3	7	8	10	10
	Q fever	3	4	143	142	156	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.