Communicable Diseases Weekly Report

Week 32, 4 August to 10 August 2019

In summary, we report:

- Shiga toxigenic *Escherichia coli* – two unrelated cases reported
- Chikungunya – one new case reported
- 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.

Shiga toxigenic *Escherichia coli*

Two cases of Shiga toxigenic *Escherichia coli* (STEC) infection were notified in this reporting week (Table 1). One case was in a woman aged in her twenties from regional NSW. The case was reported to live on a farm, and the family butchers their own meat. The second case was in a man aged in his twenties from regional NSW who may have acquired the infection while travelling in Greece during his incubation period. However, the case did not report any high risk exposures while overseas, including no animal contact.

Escherichia coli (*E. coli*) are bacteria commonly found in the gastrointestinal tract of people and animals. Many types of *E. coli* are harmless but some can produce toxins, called Shiga toxins, which can result in severe disease in humans. STEC strains are carried by animals, particularly cattle, without signs of illness.

People are infected when they come into contact with the faeces of an infected animal or person, either directly or indirectly through consuming contaminated food (for example, undercooked hamburgers, unwashed salad vegetables, unpasteurised milk or milk products), drinking or swimming in contaminated water, person-to-person contact, or contact with animals on farms or petting zoos.

STEC infection causes a diarrhoeal illness, often with abdominal cramps, nausea and vomiting. The Shiga toxin may cause bleeding in the bowel so people with STEC gastroenteritis often have bloody diarrhoea. STEC infection is one cause of haemolytic uraemic syndrome (HUS), a severe and sometimes life-threatening illness characterised by haemolytic anaemia (a type of anaemia where the red blood cells break up), acute kidney failure (uraemia), and a low platelet count which makes bleeding more likely. Children with STEC infections are more likely to develop HUS than adults.

STEC infections may be prevented by safe food handling and food storage, and good hand hygiene. This includes:

- washing hands thoroughly with running water and soap before eating and preparing food, after touching pets, farm animals, their enclosures or feeding containers, and after using the toilet or changing nappies;
- only using clean knives and cutting boards when preparing ready-to-eat foods;
- thoroughly cooking all foods made from minced meat (e.g. hamburger patties and sausages) or internal organs (offal);
- washing all fruit and vegetables before eating; and
- not eating or drinking unpasteurised dairy products.

Further information

- NSW Health STEC and HUS fact sheet and STEC notification data page.
- NSW Health Personal hygiene and petting zoos factsheet.

Chikungunya

There was one new case of chikungunya reported in this reporting week (Table 1), and two in the previous week. This most recent case was in adult male who had acquired the infection while in the Maldives. The two cases reported in the previous week were both acquired in Thailand. Travel to Thailand has been linked to 5 (42%) of the 12 notified chikungunya cases with disease onset in 2019 and 43 (16%) of the 263 dengue cases in 2019. The Thailand Ministry of Public Health has reported almost 6000 cases of chikungunya so far this year and over 43,000 cases of dengue.

Chikungunya, like dengue and Zika, is a viral infection that is usually spread by one of two types of mosquito: the yellow fever or dengue mosquito (*Aedes aegypti*) and the Asian tiger mosquito (*Aedes albopictus*). These mosquitoes become infected when they feed on someone who has dengue or chikungunya virus in their bloodstream. Once the mosquito is infected, the virus multiplies inside the mosquito over several days and can infect other people when the mosquito feeds again.

Chikungunya infection usually starts with flu-like symptoms: fever, chills, headache and muscle pain, accompanied by joint swelling, stiffness and pain (especially in the mornings), a rash (usually on the trunk or limbs), and a feeling of tiredness or weakness. Symptoms usually develop about 7-10 days after being bitten by an infected mosquito.

The majority of people infected with the chikungunya virus recover completely in a few weeks, but some may experience tiredness for many weeks and joint pain for many months. A blood test is required to correctly diagnose the infection.

People who travel to chikungunya and dengue-affected areas are at risk. Affected areas include many tropical countries throughout Asia, the Pacific, Latin America and the Caribbean, and parts of sub-Saharan Africa and the Middle East.

There is currently no vaccine against chikungunya so travellers to affected areas need to take measures to avoid being bitten by mosquitoes. Peak biting activity of the dengue mosquito is during daylight hours. These mosquitoes will often enter buildings and hide in dark places such as under furniture. They tend to bite around the feet and ankles. People may not notice they are being bitten.

Travellers to chikungunya and dengue-affected areas should stay in accommodation with screened windows and doors and wear light-coloured clothing that covers the arms and legs.

Travellers should apply insect repellent containing DEET or Picaridin to all exposed skin, and re-apply during the day according to the manufacturer's instructions. Repellents containing oil of lemon eucalyptus (OLE) or para menthane diol (PMD) also provide adequate protection. Insecticidal surface sprays inside the home can reduce the risk of mosquito bites.

Travellers, particularly pregnant women and couples planning pregnancy, should also be aware of the risk of Zika virus, another mosquito-borne infection related to dengue. For specific advice on Zika virus see the NSW Health Zika virus website.

Further information

- NSW Health Chikungunya factsheet
- NSW Health Mosquitoes are a Health Hazard Factsheet
- HealthMap DengueMap (external link).

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 4 August – 10 August 2019, by date received*

Week 32 ending 10 August 2019

		Weekly		Year to date			Full Year	
		This week	Last week	2019	2018	2017	2018	2017
Enteric Diseases	Cryptosporidiosis	10	9	451	520	1092	708	1266
	Giardiasis	61	33	2031	1872	2211	2937	3135
	Hepatitis A	1	1	42	67	22	86	71
	Rotavirus	22	29	491	513	622	808	2319
	STEC/VTEC	2	0	39	35	34	57	53
	Salmonellosis	50	50	2419	2243	2647	3341	3681
	Shigellosis	21	17	539	215	136	530	236
	Typhoid	1	2	45	39	40	58	55
Respiratory Diseases	Influenza	4927	5101	78714	7146	35156	17422	103851
	Legionellosis	1	0	98	94	81	171	138
	Tuberculosis	14	13	345	304	311	507	542
Sexually Transmissible Infections	Chlamydia	603	588	19675	19699	18138	31196	29004
	Gonorrhoea	210	229	7340	6586	5792	10619	9159
	LGV	2	1	36	51	21	85	50
Vaccine Preventable Diseases	Pertussis	140	116	3798	2493	3712	6281	5366
	Pneumococcal Disease (Invasive)	21	17	378	373	373	682	683
	Rubella	1	0	10	0	4	0	5
Vector Borne Diseases	Chikungunya	1	2	16	3	23	13	47
	Dengue	9	4	269	194	197	299	306
	Malaria	2	1	36	42	47	66	68
	Ross River	6	4	434	411	1457	570	1653
	Zika virus	1	0	2	0	3	3	5
Zoonotic Diseases	Q fever	3	0	147	132	147	228	210

*** Notes on Table 1: NSW Notifiable Conditions activity**

- Only conditions which had one or more case reports received during the reporting week appear in the table.
- 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 (i.e. by report date).
- Note that notifiable disease data available on the NSW Health website are reported by onset date so case totals are likely to vary from those shown here.
- Cases involving interstate residents are not included.
- The shigellosis case definition changed on 1 July 2018 to include probable cases (PCR positive only), hence case counts cannot be validly compared to previous years.
- 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.
- Chronic blood-borne virus conditions (such as HIV, Hepatitis B and C) are not included here. Related data are available from the Infectious Diseases Data and the HIV Surveillance Data Reports webpages.
- Notification is dependent on a diagnosis being made by a doctor, hospital or laboratory. Changes in awareness and testing patterns influence the proportion of patients with a particular infection that is diagnosed and notified over time, especially if the infection causes non-specific symptoms.