

Communicable Diseases Weekly Report

Week 43, 24 to 30 October 2016

In summary, we report:

- [Dengue and Chikungunya](#) – travel warning
- [Meningococcal Disease](#) – 4 new cases
- [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.

Dengue and Chikungunya

There were 4 new cases of dengue and 1 new case of chikungunya reported in this reporting week (Table 1). While these mosquito-borne infections can be acquired by travellers to many parts of the world, locations in Indonesia (particularly Bali) are most commonly associated with dengue infection in NSW travellers, and one of the most common sources of chikungunya infections. Of the 367 dengue cases reported so far in 2016 (by onset date), 228 (62%) cases followed travel to Indonesia, particularly to Bali. Five (28%) of the 18 chikungunya cases in 2016 were also acquired in Indonesia. India, the Philippines and Sri Lanka have been the next most common sources for both dengue and chikungunya cases reported in 2016.

Dengue and chikungunya are viral infections that are 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.

Dengue infection usually presents with severe flu-like symptoms. The disease, also called 'break-bone' fever can affect infants, children or adults. The symptoms of dengue fever vary according to the age of the patient. People with dengue fever begin to develop illness between 3 and 14 days (usually 4-7 days) after being bitten by an infected mosquito. Symptoms include sudden fever, chills, severe headache with pain behind the eyes, swollen glands, muscle and joint pain and extreme fatigue. There may also be abdominal pain, nausea and vomiting. A faint red rash sometimes develops on the upper body around the third day. The fever typically lasts around 6 days. Severe dengue is a rare but potentially deadly complication.

Chikungunya infection also presents 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. Others may experience symptoms such as tiredness for many weeks and joint pain for many months. A blood test is required to correctly diagnose these infections.

Mosquito-borne infections are just one of the disease risks faced by school leavers travelling overseas for 'Schoolies Week'. NSW Health has this week issued [advice for school leavers to get prepared if travelling overseas](#).

People who travel to dengue and chikungunya-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. For a world map showing areas where dengue is likely to be present see [HealthMap Dengue](#).

There are currently no vaccines available in Australia against dengue or chikungunya. Travellers to affected areas should 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 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 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 also reduce the risk of infection.

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 information page](#).

For additional advice on steps to avoid being bitten by mosquitoes see the [Mosquitoes are a Health Hazard Factsheet](#). For additional information on dengue notifications in NSW residents see the [dengue notifications page](#).

Meningococcal Disease

Four cases of meningococcal disease were reported this week ([Table 1](#)). No connection between the cases was identified and they occurred in different local health districts. The cases occurred in three young adults and an infant. Three of the cases were serogroup B and one young adult was serogroup W.

A total of 69 cases of meningococcal disease (five cases of conjunctivitis and 64 of invasive disease) have been reported so far in 2016, including four fatal infections. In the same period of 2015 there were 38 cases notified with two deaths. Cases of meningococcal disease in 2016 have occurred in both adults and children with an age range of 0 to 88 years. The number of meningococcal disease notifications in 2016 has increased compared to 2015 however they are still within the historical range of notifications in NSW.

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 invasive meningococcal disease (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. Since the introduction of a serogroup C vaccine in 2003 most cases in NSW have been caused by serogroup B. However, since 2015 there has been an increase in cases caused by serogroup W in NSW and other jurisdictions.

To date in 2016 in NSW, 24 cases of meningococcal disease have been caused by serogroup B and 26 by serogroup W. Other cases in 2016 have been caused by serogroup Y (12), C (2) or a non-groupable strain (5); serogroup results are pending for three cases.

Vaccination against meningococcal C infection is included in the national immunisation schedule with vaccination due at 12 months of age. Combined vaccines against the A, C, Y and W serogroups are generally only recommended for travellers to countries where these are more common and for some people with certain high risk conditions that predispose them to developing IMD such as people without a spleen.

A vaccine against some serogroup B strains has recently become 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](#) and [vaccination](#).

Summary of notifiable conditions activity in NSW

The following table (Table 1) summarises notifiable conditions activity over the reporting period.

Table 1. NSW Notifiable conditions from 24 to 30 October 2016, by date received *

		Weekly		Year to date			Full Year	
		This week	Last week	2016	2015	2014	2015	2014
Enteric Diseases	Cryptosporidiosis	17	18	910	726	333	1038	429
	Giardiasis	54	52	3000	2827	2423	3415	2942
	Hepatitis A	1	2	32	64	61	71	80
	Hepatitis E	1	0	16	14	35	20	38
	Rotavirus	34	30	479	743	535	1036	714
	STEC/VTEC	1	3	44	16	30	29	31
	Salmonellosis	68	70	3848	3316	3517	4040	4273
Shigellosis	5	11	255	147	180	172	212	
Respiratory Diseases	Influenza	403	517	33787	29620	20353	30306	20888
	Tuberculosis	9	13	400	352	393	445	475
Sexually Transmissible Infections	Chlamydia	527	519	21564	18370	18928	22548	22899
	Gonorrhoea	153	133	5736	4451	4040	5400	4876
	LGV	1	1	45	19	11	20	14
Vaccine Preventable Diseases	Adverse Event Following Immunisation	7	6	215	156	225	186	258
	Measles	0	1	11	7	67	9	68
	Meningococcal Disease	4	1	68	38	26	46	37
	Mumps	1	2	45	45	74	64	82
	Pertussis	203	263	8940	7867	2016	12083	3051
	Pneumococcal Disease (Invasive)	18	10	462	428	430	495	511
Vector Borne Diseases	Chikungunya	1	1	20	35	19	37	27
	Dengue	4	9	378	276	344	343	378
	Ross River	6	3	383	1502	522	1638	673
Zoonotic Diseases	Q fever	3	2	176	210	149	265	190

* Notes on Table 1: NSW Notifiable Conditions activity

- Data cells represent the number of notifiable disease 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 in the current reporting week 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.