

Communicable Diseases Weekly Report

Week 10, 5 to 11 March 2017

In summary, we report:

- [Measles](#) – 2 new cases
- [Mycobacterium chimaera](#) – 3rd reported case in NSW
- [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.

Measles

Two cases of measles have been notified this week. Both cases were young adults who acquired the disease while outside Australia (Bali, Indonesia and Thailand). Other Australian states have also had a recent increase in travellers returning from Bali with measles, which may indicate there is a measles outbreak there. It is important for everyone to make sure they are vaccinated against measles with at least two doses of a measles containing vaccine (MMR) particularly if they are traveling outside Australia.

Identified close contacts of both cases are being followed up by their local public health unit – Sydney PHU and Liverpool PHU. NSW Health has issued two media alerts describing the areas they visited whilst infectious. These media alerts can be accessed on the NSW Health [website](#).

The measles virus is transmitted from person to person via respiratory secretions in the air following coughing and sneezing. Symptoms of measles include fever, runny nose, sore red eyes and cough, followed 3-4 days later by a red blotchy rash spreading from the head and neck to the rest of the body.

Infection with the measles virus can be serious with common complications including middle ear infection and viral or bacterial bronchopneumonia. Acute encephalitis occurs rarely and subacute sclerosing panencephalitis is a very rare fatal complication, occurring many years after infection in about 1 per 100,000 cases.

Vaccination is highly effective at preventing measles with two doses of measles containing vaccine offering protection against infection in 99 per cent of people. Vaccination not only benefits those who receive it but also protects others, such as those too young or unable to be vaccinated, by reducing the risk that an unvaccinated person is exposed to measles virus; this is known as herd immunity.

Anyone born in or after 1966 should have had two doses of measles containing vaccine, which is free for people up to 51 years of age in NSW. Measles containing vaccine is now routinely offered to all children at 12 months (as measles-mumps-rubella) and 18 months (as measles-mumps-rubella-varicella) of age through the National Immunisation Program.

People born in or after 1966 and who are unsure of their vaccination status, or have not had two vaccine doses in the past (and not had a confirmed measles infection), should consult their GP for more advice. This is particularly important prior to overseas travel as the risk of being exposed to a case of measles is greater when travelling. Parents taking young infants overseas to countries where measles is common should discuss vaccination with their GP before they leave. In some circumstances measles vaccine can be given as early as 9 months of age, however two further doses at 12 and 18 months are still required for full protection.

For more information please follow these links:

- [measles fact sheet](#)
- [measles notifications](#)

- [measles vaccination information](#).

Mycobacterium chimaera

A third NSW resident has been confirmed to have *Mycobacterium chimaera* infection linked to contaminated open-heart surgery equipment. The man in his 80s underwent open-heart cardiac surgery at Prince of Wales Hospital in 2015. A NSW Health [media release](#) related to this case was issued on 14 March 2017.

In January 2017 two NSW residents, one a woman in her 80s and one a man in his 40s, both of whom had also undergone open-heart cardiac surgery at Prince of Wales Hospital in 2015, were also confirmed to have developed the infection.

Hospitals around the world have been affected by this issue which is thought to have arisen following contamination of heater-cooler devices during manufacture up until September 2014. This has been linked to at least 100 cases of *M. chimaera* infections in cardiac surgery patients worldwide. The first case in Australia was confirmed in Queensland in 2016.

Heater-cooler devices are essential to conduct open-heart cardiac surgery as they control the temperature of the blood during the period when blood circulation is conducted using a heart bypass machine so that complex heart surgery can be undertaken. The design of heater-cooler devices often results in water from the machine being aerosolised and it may drift over the operating table. This means that it is essential that the water used in the machines are free from pathogenic organisms.

Mycobacterium chimaera is a slow growing bacterium usually found in water or soil, and previously has been rarely found as the cause of human lung infections in patients with pre-disposing illnesses such as cystic fibrosis. It is part of the family of “non-tuberculous mycobacteria” which has some similarities to the bacteria that cause tuberculosis. In relation to open-heart surgery patients, the incidence of *Mycobacterium chimaera* infection is also very low but the risk is believed to increase for other patients exposed in the same facility where a case has been confirmed.

Patients who have been infected with *Mycobacterium chimaera* have presented with symptoms from 3 months to 5 years following surgery. *Mycobacterium chimaera* infection is not spread from person to person.

In December 2016 NSW Health contacted surgical patients who may have been exposed to *M. chimaera* from contaminated open-heart surgery equipment used in four affected NSW public hospitals prior to August 2016 (when the contaminated equipment was replaced or removed from service). These patients have been advised to be alert to the most common symptoms of *M. chimaera* infection: persistent fevers, unexplained weight loss and unusual or increasing shortness of breath.

Information has also been sent to GPs and relevant specialists noting that some patients have also developed osteoarthritis, cholestatic hepatitis, nephritis, splenomegaly, or ocular disease. Specialist infectious diseases’ assessment is recommended as treatment of the infection includes combination antimicrobial therapy and may require repeat surgery if prosthetic heart valves or grafts are involved.

For further information see:

- NSW Health [M. chimaera and cardiac surgery alert](#) page.
- Clinical Excellence Commission (CEC) [M. chimaera information and resources](#) page.

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 5 to 11 March 2017, by date received*

		Weekly		Year to date			Full Year	
		This week	Last week	2017	2016	2015	2016	2015
Enteric Diseases	Cryptosporidiosis	90	90	566	261	278	1184	1040
	Giardiasis	74	89	791	926	843	3481	3413
	Hepatitis A	1	1	9	11	31	41	72
	Rotavirus	7	10	140	136	88	746	1033
	STEC/VTEC	2	0	14	14	8	64	29
	Salmonellosis	89	123	1136	1423	1328	4543	4022
	Typhoid	10	0	40	38	22	74	82
Respiratory Diseases	Influenza	150	159	1687	1231	803	35537	30301
	Legionellosis	4	4	27	18	22	134	96
	Tuberculosis	10	6	82	98	74	535	444
Sexually Transmissible Infections	Chlamydia	527	596	5948	5164	4837	25999	22547
	Gonorrhoea	170	231	1978	1272	1152	7008	5399
Vaccine Preventable Diseases	Adverse Event Following Immunisation	3	10	45	41	38	254	186
	Measles	2	0	8	3	4	16	9
	Meningococcal Disease	2	2	15	10	6	76	47
	Mumps	1	2	21	6	14	65	65
	Pertussis	108	125	1342	3014	1230	10956	12079
	Pneumococcal Disease (Invasive)	6	9	70	52	45	542	494
Vector Borne Diseases	Dengue	9	7	83	92	109	481	344
	Malaria	3	1	16	10	11	59	47
	Ross River	43	68	774	132	562	541	1636
Zoonotic Diseases	Q fever	2	3	44	51	51	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.