Communicable Diseases Weekly Report

Week 41, 5 to 11 October 2015

In summary, we report:

- **Leprosy** – one new case
- **Acute rheumatic fever and rheumatic heart disease** – first notification in NSW
- **Summary of notifiable conditions activity in NSW**

For further information on infectious diseases and alerts see the Infectious Diseases webpage.

Follow the A to Z of Infectious Diseases link for more information on specific diseases.

For links to other surveillance reports, including influenza reports, see the NSW Health Infectious Diseases Reports webpage.

Leprosy

A new case of leprosy was notified in the Sydney region this reporting week (Table 1). This is the second case reported in NSW in 2015. Leprosy is a rare disease in Australia. From 1992 to 2014, the annual number of notifications of leprosy in Australia has ranged from 2 to 16 cases with an average of 9 cases per year. The majority of cases notified in Australia are acquired overseas.

Leprosy is a chronic infection of the skin and peripheral nerves caused by the bacterium *Mycobacterium leprae*. The incidence of leprosy worldwide is declining due to various factors including socioeconomic development, the use of Bacillus Calmette–Guérin vaccine and high treatment coverage with multi-drug therapy.

Leprosy is not highly infectious. People at risk are generally in close and frequent contact with someone with the infection. The disease is curable and once a person with leprosy begins appropriate treatment, they quickly become non-infectious.

The exact mechanism of transmission is not well understood, although person to person spread via nasal droplets is believed to be the main route. Large amounts of *M. leprae* DNA have been found in the nasal secretions of people with untreated lepromatous leprosy.

The usual clinical presentation varies between the two forms, lepromatous and tuberculoid leprosy. Host immune response determines clinical features.

In lepromatous leprosy, there is a high bacterial load and more severe disease throughout the body. Skin nodules, papules, macules and diffuse infiltrations are symmetrical on both sides of the body and are usually numerous and extensive. The skin lesions may or may not have loss of sensation and may be hyperpigmented. The nasal mucosa and eyes may be involved. Nerve involvement occurs and can result in loss of sensation or weakness.

In tuberculoid leprosy there is a lower bacterial load and skin lesions are single or few. The skin lesions are sharply demarcated, show loss of sensation or increased sensitivity and are not symmetrical. Nerve involvement tends to be severe. When loss of sensation occurs, injuries (such as burns or fractures) may go unnoticed.

The incubation period varies widely from months to 30 years, with an average of four years for tuberculoid leprosy and 10 years for lepromatous leprosy. *M. leprae* reproduces at a very slow rate and few cases are diagnosed in children less than five years old.

Follow the link for further information on leprosy notifications.

Leprosy is a nationally notifiable disease and all cases are reported to the World Health Organization (WHO). WHO has a ‘Final Push’ strategy for the worldwide elimination of leprosy; further information can be obtained from WHO Leprosy Elimination. Back to top

Acute Rheumatic Fever and Rheumatic Heart Disease

One case of recurrent acute rheumatic fever (ARF) was reported this week. The case was a young woman from Western NSW LHD who presented with carditis, polyarthritis and fever. The case had been previously diagnosed with rheumatic heart disease (RHD). This is the first report of a case of ARF or RHD in a person aged less than 35 years following the addition of these conditions to the list of diseases notifiable under the NSW Public Health Act 2010 on 2 October 2015.

ARF is a rare but serious inflammatory complication of infection with group A *Streptococcus* (GAS) and may follow a sore throat. Polyarthritis (pain and swelling in several joints) is the most common symptom of ARF. Other signs and symptoms may include carditis (inflammation of the heart), chorea (jerky limb movements arising from inflammation of the brain), erythema marginatum (a distinctive skin rash) and subcutaneous nodules. Fever is also typically present. Episodes of ARF can cause permanent damage to the heart valves leading to RHD.

ARF most commonly affects children aged 5 – 14 years, and higher rates of ARF and RHD occur in some groups, including Aboriginal and Torres Strait Islander people, Maori and Pacific peoples, and people born outside of Australia, particularly those from South-east Asia and Africa. Higher rates are also seen in women and in people living in disadvantaged conditions and where access to health services is poor.

There is no specific treatment for an acute episode of ARF. Supportive treatment can be given with the aim of reducing joint pain, swelling, and fever. However, people diagnosed with ARF require long-term follow-up, including administration of benzathine penicillin G every 21-28 days for a minimum of 10 years. This is given to prevent repeat GAS infections, which may lead to repeat episodes of ARF and worsening valvular disease. People with ARF and RHD also require regular doctor and dental review and an echocardiogram at least every two years.

Women with RHD need specialised prenatal care as they are at higher risk of complications during pregnancy as a result of additional changes their bodies go through during pregnancy.

NSW Health has established a register for people diagnosed with ARF and RHD to assist patients and their doctors manage adherence to regular penicillin prophylaxis and clinical reviews. Notification of people diagnosed with ARF and RHD aged less than 35 years is the first step in accessing the NSW RHD Register.

Further information is available from NSW Health and RHD Australia.

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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 October 2015, by date received*

		Weekly		Year to date			Full Year	
		This week	Last week	2015	2014	2013	2014	2013
Enteric Diseases	Cryptosporidiosis	9	10	713	327	1014	429	1132
	Giardiasis	32	56	2717	2372	1856	2942	2242
	Listeriosis	1	2	20	19	31	23	33
	Rotavirus	51	63	641	500	391	714	508
	Salmonellosis	39	51	3230	3494	2798	4302	3483
	Shigellosis	2	1	135	176	107	209	136
	Typhoid	1	1	33	35	51	44	58
Respiratory Diseases	Influenza	607	1148	29169	20223	7708	20888	8403
	Tuberculosis	3	3	304	378	347	473	443
Sexually Transmissible Infections	Chlamydia	333	380	17409	18512	16911	22893	21087
	Gonorrhoea	47	72	3847	3938	3479	4875	4264
Vaccine Preventable Diseases	Adverse Event Following Immunisation	3	0	143	217	457	256	509
	Pertussis	216	199	7218	1920	1880	3051	2379
	Pneumococcal Disease (Invasive)	11	17	411	419	417	511	490
	Rubella	1	1	9	7	12	10	12
Vector Borne Diseases	Barmah Forest	2	2	171	148	362	163	438
	Dengue	4	3	256	337	251	378	303
	Ross River	11	16	1544	512	431	677	512
Zoonotic	Q fever	6	1	184	144	129	190	163

***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.

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