

Communicable Diseases Weekly Report

Weeks 45 and 46, 7 to 20 November 2016

In summary, we report:

- [Invasive pneumococcal disease](#) – increase in notifications
- [Ross River virus](#) – early detection of arboviruses in mosquito surveillance
- [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.

Invasive pneumococcal disease

Notifications of invasive pneumococcal disease (IPD) during September and October (124) were above the historical four year average (90). Notification rates have been highest in adults aged 65 years and over. IPD activity generally increases during the winter flu season, especially in older adults, with pneumococcal pneumonia often a secondary complication for people who have had a recent influenza infection.

IPD notifications this week also included one fatal case in a one year old child who was fully vaccinated. This infection was found to be caused by a pneumococcal serotype (called 15C) which is not included in the vaccine.

Pneumococcal infection can cause a variety of diseases including pneumonia, septicaemia (blood infection), otitis media and meningitis. Symptoms depend on the site of infection and the age of the person. People with pneumococcal pneumonia tend to experience shortness of breath, fever, lack of energy, loss of appetite, headache, chest pain and cough.

People most at risk of the infection include children under two years of age, older adults, Aboriginal and Torres Strait Islander people, people with lung disease, heart disease, cancer, kidney disease, HIV infection, people whose spleen has been removed or doesn't work properly, and people who smoke.

There are over 90 serotypes of pneumococcal disease. Different pneumococcal serotypes vary in their propensity to cause disease. Worldwide, only a limited number of serotypes are responsible for most cases of IPD but the predominant serotypes vary by age group and geographic area. The current pneumococcal vaccine used for children under the National Immunisation Program (NIP) - Prevenar 13 - covers the 13 serotypes most commonly associated with invasive disease. Unfortunately this still leaves the rare possibility of infection with other serotypes, as seems to have occurred in the child that died this week. In the past 5 years fewer than 2% of IPD notifications have been due to serotype 15C.

The introduction of pneumococcal vaccines for children under the NIP has led to a dramatic reduction in the overall incidence of IPD in Australia in the primary target group of children under 2 years of age.

Pneumococcal vaccine is recommended and is free for children at 6-8 weeks, 4 months and 6 months of age, for all people aged 65 years or older, and for all Aboriginal people aged 50 years or older. It is also free for children aged 2-5 years with certain medical conditions and for Aboriginal people aged 15-49 years who have a chronic medical condition. You should consult with your GP for more advice.

Follow the links for more information on [pneumococcal disease](#), [invasive pneumococcal notifications data](#) and [pneumococcal vaccination](#).

Ross River Virus

There were six notifications of human Ross River virus (RRV) infection reported this week, up from two notifications in the previous week ([Table 1](#)).

While reports of locally-acquired human arbovirus infections such as RRV and Barmah Forest virus (BFV) remain low, [NSW Health is urging people to safeguard against mosquito bites](#) after an unusually early increase in detections of these mosquito-borne viruses in mosquitoes. [Routine mosquito surveillance](#) has also detected a marked increase in total numbers of mosquitoes, particularly in inland areas following recent flood events.

After periods of flooding, mosquito numbers can rapidly increase and cause nuisance as well as increase the risk of transmission of RRV and other arboviruses. For advice see the NSW Health fact sheet [Advice on Mosquito Control During Floods and Public Events](#).

RRV is one of a group of arboviruses characterised by transmission through the bite of infected mosquitoes. Some people who are infected with the virus do not develop symptoms, while others experience flu-like symptoms that include fever, chills, headache and aches and pains in the muscles and joints.

Patients often report that their joints can become swollen, and joint stiffness may be particularly noticeable in the morning. A rash may also appear on the torso, arms or legs. The rash and other symptoms usually resolve after 7 to 10 days, although some people may experience symptoms such as joint pain and tiredness for many months.

There are no vaccines to protect against the arboviruses that cause human infections in NSW; therefore prevention relies on measures to avoid being bitten by mosquitoes and to reduce mosquito breeding near homes. Mosquitoes that carry these viruses are usually most active in the hours after sunset and again around dawn, but may bite throughout the day.

People should remember to cover up and take care to reduce the risk of a serious mosquito-borne infection by following some simple precautions:

- Use an effective repellent on exposed skin areas. Re-apply repellent every few hours, according to the instructions, as protection wears off from perspiration, particularly on hot nights or during exercise.
- The best mosquito repellents contain diethyl toluamide (DEET) or picaridin. Repellents containing oil of lemon eucalyptus (OLE; also known as extract of lemon eucalyptus) or para menthane diol (PMD) also provide adequate protection. Some products (e.g. citronella) provide only short periods of protection.
- Topical repellents are not recommended for use on children below the age of 3 months.
- Note that prolonged or excessive use of repellents can be dangerous, particularly on babies and young children. Avoid putting repellent near eyes and mouth, spread sparingly over the skin, and rinse off once you are indoors.
- Provide mosquito netting, where necessary – both indoors and outdoors.
- Cover up as much as possible with loose fitting clothing and sensible footwear. Avoid tight clothes.
- Cover your clothes with repellent as mosquitoes can bite through material, but be careful as some repellents stain clothes.
- Use mosquito coils outdoors and plug-in devices with vaporising mats indoors.

For more information, see the following NSW Health fact sheets and resources:

- NSW Health [Mosquitoes are a Health Hazard](#) factsheet with tips on prevention
- NSW Health [Fight the Bite! campaign posters and media resources](#)
- NSW Health [Ross River virus notifications data](#).

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 to 20 November 2016, by date received *

		Weekly		Year to date			Full Year	
		This week	Last week	2016	2015	2014	2015	2014
Enteric Diseases	Cryptosporidiosis	21	14	955	786	355	1038	429
	Giardiasis	57	55	3172	3020	2588	3415	2942
	Rotavirus	33	33	586	880	609	1036	714
	Salmonellosis	67	70	4039	3535	3706	4040	4273
	Shigellosis	5	8	271	151	193	172	212
Respiratory Diseases	Influenza	214	297	34692	29995	20595	30306	20888
	Legionellosis	1	5	110	88	63	96	72
	Tuberculosis	4	2	433	394	423	445	475
Sexually Transmissible Infections	Chlamydia	430	495	23053	19846	20312	22548	22899
	Gonorrhoea	96	122	6095	4748	4343	5400	4876
Vaccine Preventable Diseases	Adverse Event Following Immunisation	6	4	233	171	238	186	258
	Meningococcal Disease	1	1	69	41	32	46	37
	Mumps	1	1	51	49	76	64	82
	Pertussis	235	207	9651	9254	2369	12083	3051
	Pneumococcal Disease (Invasive)	19	12	507	454	455	495	511
Vector Borne Diseases	Chikungunya	1	1	26	37	20	37	27
	Dengue	7	9	403	292	355	343	378
	Ross River	6	2	394	1550	555	1638	673
Zoonotic Diseases	Q fever	3	3	189	233	159	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.