

Communicable Diseases Weekly Report

Week 47, 21 to 27 November 2016

In summary, we report:

- [Pertussis](#) – update
- [Viral gastroenteritis](#) – high numbers of childcare centre outbreaks in November
- [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.

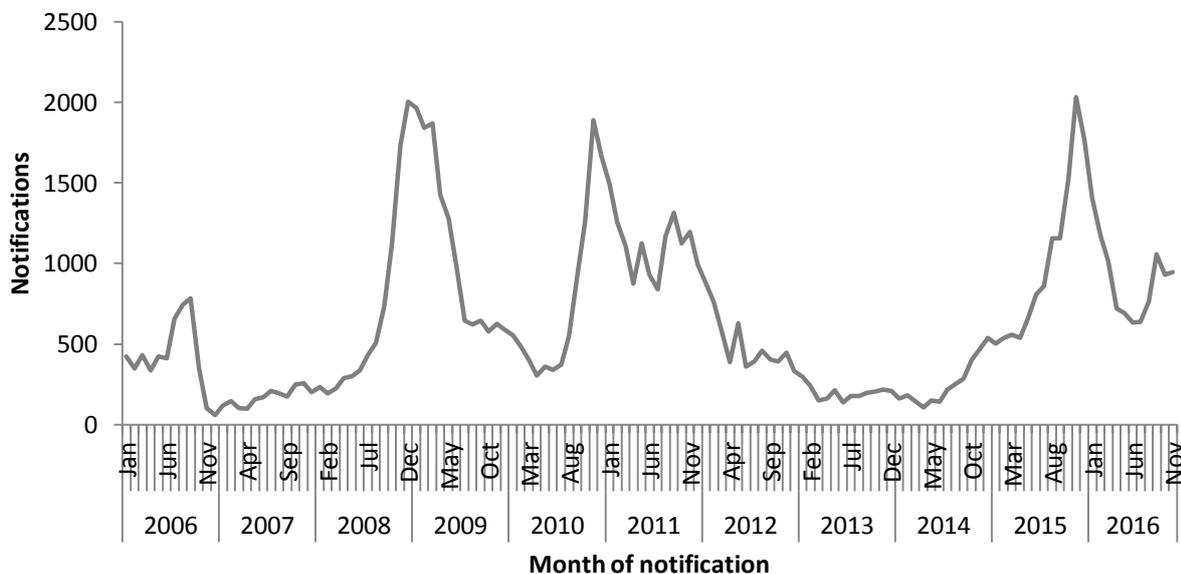
Pertussis

Although pertussis notifications in NSW have declined substantially since peaking in November 2015, notifications remain at a high level with slight upswings observed in August and November 2016 (Figure 1). This is consistent with prior epidemic cycles such as in 2010 – 2011 where a delayed return to pre-outbreak notification levels was observed (Figure 1).

In response to the increasing number of pertussis notifications in the second half of 2014 and the likelihood that further increases would occur, the NSW Antenatal Pertussis Vaccination Program commenced in April 2015 to protect infants during the period before they could be protected by their own vaccinations (see below). Additionally, health professionals and all NSW schools were provided with information to encourage early diagnosis and treatment of pertussis to help reduce the spread of infections in the community. In March 2016 the immunisation schedule was updated to include an 18-month pertussis vaccine booster for all children born after 1 October 2014. Immunity to pertussis from vaccination, and from infection, wanes over time, so it is important that everyone receives their pertussis vaccinations on time.

Pertussis, also known as ‘whooping cough’, is a highly contagious bacterial infection affecting the respiratory system which is caused by the bacterium *Bordetella pertussis*. It affects individuals of all ages but is more severe (and can be fatal) in small babies, particularly those too young to be vaccinated or those who are unvaccinated. Elderly people are also at increased risk of developing complications from pertussis.

Figure 1. NSW pertussis notifications, January 2006 to 27 November 2016.



Pertussis is a vaccine preventable disease and is notifiable in NSW. Vaccination against pertussis is recommended for children at 6-8 weeks, 4 and 6 months of age, with a booster at 18 months of age, 4 years of age and in the first year of high school. Boosters in childhood are important due to progressive waning of immunity with increasing time since the last dose.

The NSW Antenatal Pertussis Vaccination Program offers free diphtheria, tetanus and pertussis (dTpa – Boostrix®) vaccine to all pregnant women in the third trimester of pregnancy, preferably at 28 weeks gestation. Antibodies produced by the mother in response to vaccination are transferred to the unborn baby and persist in the baby during the first few months of life thereby protecting against whooping cough during the period the infant is developing his or her own immunity through vaccination, which commences at six weeks of age. Boostrix® vaccine is provided free to general practices, Aboriginal Medical Services and antenatal clinics for all pregnant women in the third trimester.

Follow the link for more information about pertussis in [childcare and schools](#).

Follow the link for more information about pertussis [patient management for GPs](#).

Follow the link for more information regarding the [Antenatal Pertussis Vaccination Program](#).

Follow the link for more information regarding [pertussis notifications](#).

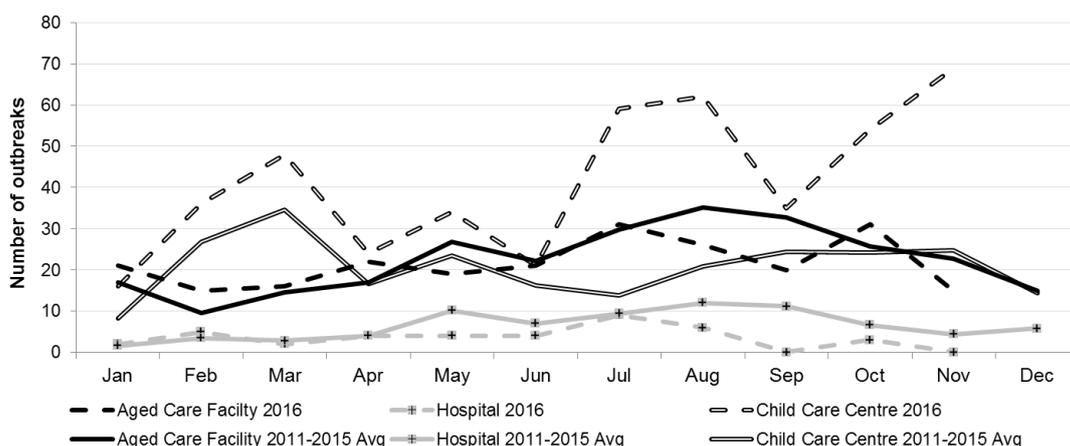
Viral gastroenteritis

There were fifteen outbreaks of gastroenteritis in an institution reported in this period affecting at least 135 people. The five-year weekly average for November is 13 outbreaks. Four outbreaks occurred in an aged care facility and eleven occurred in child care centres. All outbreaks appeared to have been caused by a virus and spread from person to person but no results from stool specimens have yet been reported.

Aged care facility and hospital gastroenteritis outbreaks have been at or below normal levels in November and 2016 in general. Child care centre gastroenteritis outbreaks are above average levels (Figure 2). It is not clear what has caused this as faecal samples are rarely collected in child care centres so the cause often remains unknown. Only 41 (9%) of childcare centre outbreaks had a sample collected in 2016, and of these only five had positive results suggesting the cause of the outbreak (4 norovirus and 1 rotavirus).

The number of child care centres outbreaks reported each year has been increasing in recent years. This is believed to be due, at least in part, to more consistent reporting of child care centre outbreaks to local public health units.

Figure 2. Gastroenteritis outbreak in institution notifications by month and facility, NSW, 2011-2016



Viral gastroenteritis is a common intestinal infection caused by a number of different viruses, usually resulting in vomiting and diarrhoea. Norovirus infections are the most frequent cause and are most common during the cooler months. Symptoms may include nausea, vomiting, diarrhoea, fever, abdominal pain, headache and muscle aches. These symptoms can take between one and three days to develop and usually last between one and two days, sometimes longer. Dehydration may follow bouts of vomiting and diarrhoea, particularly in young children. Those infected should rest well and increase the amount of fluids they drink, and if concerned see their local doctor.

Rotavirus is the most common cause of severe gastroenteritis in early childhood globally. Immunisation to prevent rotavirus infection is recommended and is free for children under 6 months of age. In NSW, the vaccine is given as two oral doses, at six weeks and four months of age, with completion of the course by 24 weeks of age.

Viral gastroenteritis is highly infectious and is spread by the vomit or faeces of an infected person through close contact with infected persons, contact with contaminated surfaces or through consuming contaminated food or drink. Viruses are often transmitted from person-to-person on unwashed hands.

The best way to prevent the spread of viral gastroenteritis is to wash your hands thoroughly with soap and running water for at least 10 seconds, particularly after using the toilet, assisting someone with diarrhoea or vomiting, attending nappy changes, and before preparing and eating food. It is vital that if you or your family contract gastroenteritis that you stay home from work or keep a child home from school or childcare if they are sick for at least 24 hours after the last symptom of gastroenteritis.

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 21 to 27 November 2016, by date received*

		Weekly		Year to date			Full Year	
		This week	Last week	2016	2015	2014	2015	2014
Enteric Diseases	Cryptosporidiosis	23	22	979	832	363	1038	429
	Giardiasis	54	57	3226	3079	2640	3416	2942
	Listeriosis	1	0	33	24	20	26	23
	Rotavirus	28	33	614	916	632	1036	714
	Salmonellosis	83	68	4124	3609	3803	4040	4272
	Shigellosis	7	5	278	155	194	172	212
Respiratory Diseases	Influenza	212	216	34909	30081	20644	30306	20888
	Legionellosis	2	3	115	90	65	96	72
	Tuberculosis	7	7	445	397	438	445	475
Sexually Transmissible Infections	Chlamydia	522	531	23679	20333	20773	22548	22899
	Gonorrhoea	154	130	6321	4850	4446	5398	4876
	LGV	1	1	50	19	11	20	14
Vaccine Preventable Diseases	Adverse Event Following Immunisation	3	6	236	177	243	186	258
	Pertussis	292	238	9948	9743	2485	12083	3051
	Pneumococcal Disease (Invasive)	11	20	519	460	459	495	511
Vector Borne Diseases	Chikungunya	1	1	28	37	22	37	27
	Dengue	4	10	415	299	357	343	378
	Malaria	2	0	51	40	84	47	87
	Ross River	8	6	403	1565	566	1637	673
Zoonotic Diseases	Psittacosis	1	0	7	2	9	3	13
	Q fever	3	5	193	235	163	265	190

* 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.