

Communicable Diseases Weekly Report

Week 48, 23 to 29 November 2015

In summary, we report:

- [**NSW Tuberculosis Report 2012-2014**](#)
- [**Cryptosporidiosis**](#) – increased activity
- [**Parechovirus**](#) – update on activity
- [**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.

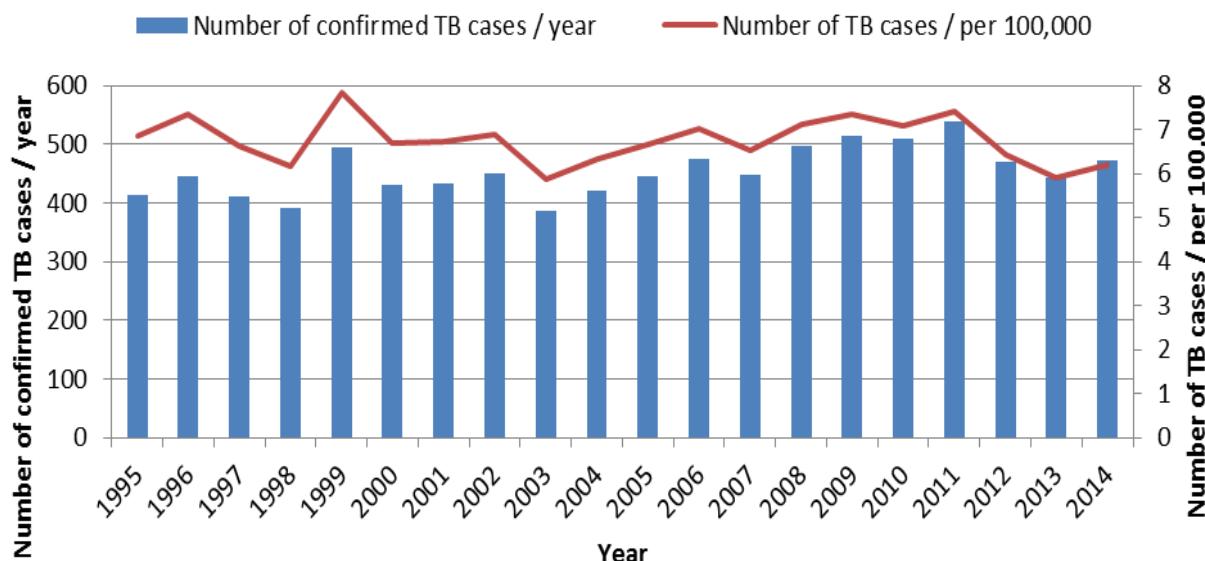
For links to other surveillance reports, including influenza reports, see the [NSW Health Infectious Diseases Reports](#) webpage.

NSW Tuberculosis Report 2012 – 2014

Tuberculosis (TB) is a disease caused by infection with the bacterium *Mycobacterium tuberculosis*, or closely related bacteria. TB infection most commonly affects a person's lungs but can also cause infection in other parts of the body. With lung TB the symptoms are prolonged cough, fevers, unexplained weight loss and night sweats. TB is spread through the air when a person with TB in the lungs or throat coughs, sneezes or speaks.

Since the 1980's Australia has maintained one of the lowest rates of TB in the world. Each year, approximately 1,300 new cases of TB are reported in Australia, of which 400-500 are diagnosed in NSW. Despite Australia's success in reducing TB, there is no room for complacency. Global connectivity through air travel and migration means that TB will remain a public health concern in Australia until worldwide control of TB is achieved.

Figure 1: Number and rate of TB notifications in NSW, 1995 - 2014



The NSW Tuberculosis (TB) Report for cases notified from 2012 to 2014 was released this week. Click on the link below to view the full report:

<http://www.health.nsw.gov.au/Infectious/tuberculosis/Documents/tb-report-2012-14.pdf>.

In summary:

- There were 1386 confirmed cases notified between 2012 and 2014 in NSW (470 in 2012, 443 in 2013 and 473 in 2014) equating to annual incidence rates of 6.4, 6.0, and 6.3 cases per 100,000 population, respectively.
- Two-thirds of TB cases were in people aged between 15 and 49 years (n = 873; 63%), with the mean age of cases being 43 years (range: 2 months – 97 years). Males accounted for 53% of all cases (n = 733).
- Residents of Sydney metropolitan local health districts (LHDs) made up 85% of all confirmed TB cases (Western Sydney LHD, n = 373; South Western Sydney LHD, n = 256; Sydney LHD, n = 210; South Eastern Sydney LHD, n = 186; Northern Sydney LHD, n = 147).
- Nine out of ten notified cases were born overseas (n=1238; 89%); over half (53%) of those born overseas were born in either India (n = 234), Vietnam (n = 146), Philippines (n = 140) or China (n = 139).
- There were 148 TB cases in Australian born people (49 in 2012, 38 in 2013 & 61 in 2014), of which 19 identified as Aboriginal (seven in 2012, three in 2013 & nine in 2014). In this time period, the age standardised rate for Indigenous Australians was over six times higher than Australian born non-Indigenous Australians (3.9 per 100,000 and 0.6 per 100,000 respectively).
- The most commonly identified risk factor, present in 80% of all notified cases, was being born overseas in a high TB- burden country. Past residence for 3 or more months in a high risk country that was not the person's country of birth was the next highest reported risk factor.
- Pulmonary only disease (defined as site of infection including the lung but excluding the pleura) accounted for 52% (n = 718) of TB cases. Extrapulmonary disease accounted for 42% (n = 576) and cases with both pulmonary and extrapulmonary disease accounted for 6% of cases (n = 90). Lymph nodes were the second most common site of infection after the lung.
- There were 15 cases of multi drug resistant (MDR)-TB reported (3 in 2012, 7 in 2013 and 5 in 2014). All cases were born in high incident TB countries in Asia (Vietnam (4), China (4), India (3), Philippines (2), Nepal (1) and Myanmar (1)) with 11 of the cases residing in Australia for 5 years or less before their MDR-TB diagnosis. There were no extensively drug resistant (XDR)-TB cases reported.
- Clinical outcomes for cases between 2011 and 2013 were reported to allow time for treatment to occur. A total of 88% (n = 1278) of cases were successfully treated, consisting of 5% (n = 67) who were considered cured (culture positive prior to treatment and culture negative after completion of treatment) and 95% (n = 1211) who completed treatment. There were five TB-related deaths reported, four in 2011 and one in 2012. Twenty four cases (2%) defaulted before completion of treatment; the remainder either transferred overseas, died of a non-TB related cause, were continuing on treatment at the time of analysis, or outcome was unknown.

Further information on TB is available from the [NSW TB Program website](#).

Cryptosporidiosis

Cryptosporidiosis notifications are above normal levels for this time of year, with 41 cases reported in the current period compared to the previous 5-year average of 12 cases per week (Table 1). Cases were mainly reported amongst residents of regional local health districts. Cryptosporidiosis in the spring months has been linked to contact with young animals such as lambs and calves with diarrhoea. Disease incidence typically peaks during summer months between January and March each year, often linked with swimming pools.

Cryptosporidiosis is a diarrhoeal disease caused by the parasitic protozoan, *Cryptosporidium* spp. These microscopic parasites are transmitted as environmentally hardy cysts (oocysts), shed from

infected humans and animals (including dogs, cats, livestock and wildlife) and can survive up to six months in moist environments. It is spread through the faecal-oral route directly from person to person, from animal to person and by ingesting contaminated food and water.

Cryptosporidiosis outbreaks have also been linked to sources such as contaminated drinking water, swimming pools, spa pools, and to petting infected animals.

Infection may be asymptomatic, but disease usually presents as profuse watery diarrhoea and abdominal cramps after a 7 day incubation period (range 1-12 days). Nausea, vomiting, fever, dehydration and weight loss may also be present. Symptoms typically resolve within 1-2 weeks; however, some people may experience recurrence of symptoms for up to a month, and chronic or extra-intestinal infections may occur in people who are immunocompromised.

Patients are infectious while they excrete oocysts, which may continue for several weeks after diarrhoea stops.

As *Cryptosporidium* are resistant to usual levels of chlorine in swimming or spa pools, outbreaks are frequently associated with community pools. High doses of chlorine (superchlorination) and cleaning of filters are required in such instances.

Public pool operators are required to manage pools in accordance with the *Public Health Regulation 2012*, which includes requirements on the levels of disinfectants. The occurrence of two or more cases linked to a pool should prompt intervention by local public health units, including advice on superchlorination.

Preventive measures include:

- hand washing (especially after handling animals or animal manure, changing nappies, working in the garden and before preparing food)
- not drinking untreated water and avoiding swallowing water when swimming; and,
- avoiding swimming in natural waters within a week of heavy rain.

Cases or relevant care-givers should be informed about the nature of the infection and how it is spread, with emphasis on hygienic practices, particularly to:

- Not swim for at least two weeks after the diarrhoea has stopped
- Not share towels or linen for at least two weeks after the diarrhoea has stopped
- Not handle food for other people for at least 48 hours after the diarrhoea has stopped.

Children who have diarrhoea should be kept home from school, preschool, childcare or playgroup until at least 24 hours after the diarrhoea has completely stopped. Carers of the sick, children or the elderly should avoid all contact with these groups for at least 48 hours after complete resolution of symptoms.

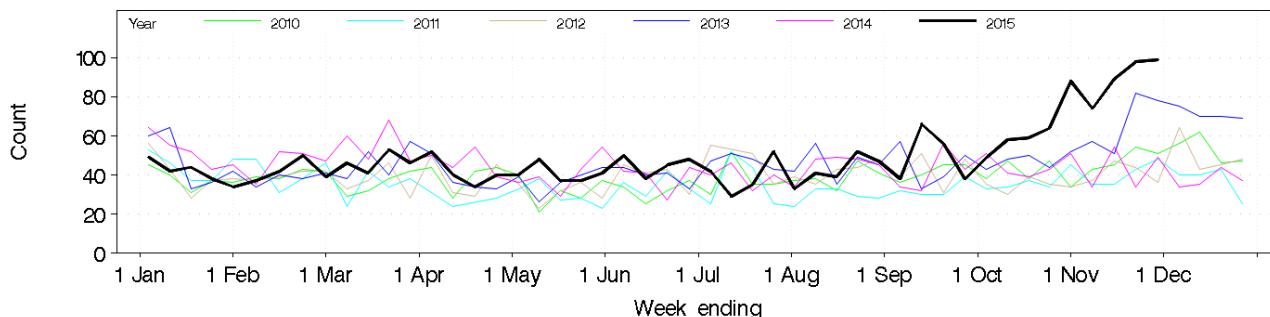
For more information, see the following NSW Health factsheets and guidance:

- [cryptosporidiosis factsheet](#)
- [factsheet on cryptosporidium and giardia in swimming pools and spa pools](#)
- [public health unit control guidelines](#)
- [advice for public swimming pool operators](#).

Parechovirus

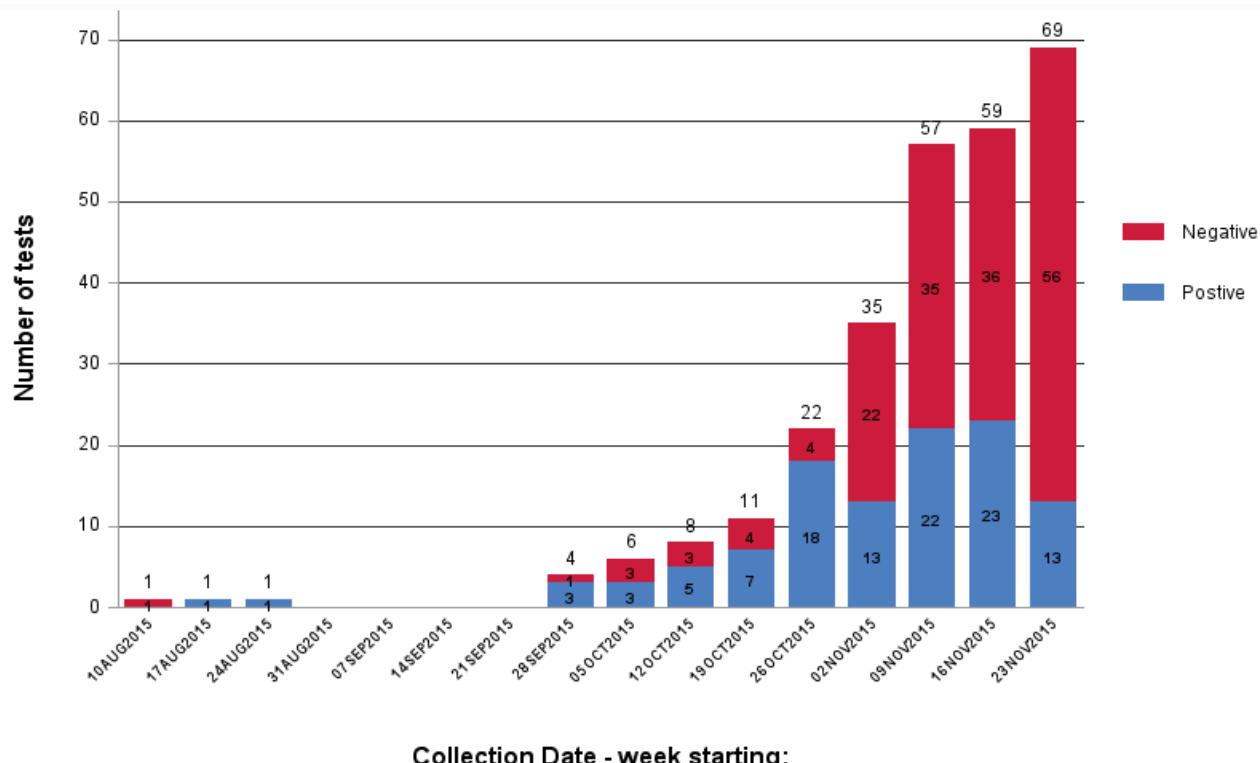
Emergency department (ED) surveillance continues to reveal an increasing trend in the number of ED presentations and subsequent admission for fever or unspecified infection in children under one year of age (Figure 2), mainly affecting the three NSW children's hospitals, Sydney Children's Hospital, The Children's Hospital at Westmead and John Hunter Hospital.

Figure 2. Total weekly counts of Emergency Department presentations for fever or unspecified infection that were admitted, for 2015 (black line), compared with each of the 5 previous years (coloured lines), children aged under 1 year, for 59 NSW hospitals.



Human parechovirus (HPeV) infection has been identified as the main reason for this increase in presentations and admissions. Laboratory testing data from the two NSW testing laboratories – South Eastern Area Laboratory Services (SEALS) and the Children's Hospital Westmead (CHW) (Figure 3) - shows an increase in testing for parechovirus over this period, as well as an increasing trend of positive notifications. On 24 November 2015 an alert was sent to local health districts to advise ED clinicians and paediatricians to consider HPeV infection in infants who have compatible signs and symptoms. Laboratories have also been advised about how to access HPeV testing in NSW.

Figure 3. Number of people tested for parechovirus, and number with positive test results, NSW laboratories, 10 August – 30 November 2015.



Parechoviruses are a group of viruses which are part of the same virus family as enteroviruses. These viruses usually cause no symptoms but when illness occurs it is most commonly a mild diarrhoeal illness or respiratory infection. Infection with some strains can rarely lead to more severe blood infection (sepsis) and neurological infection (meningitis or encephalitis), particularly among young children.

Children under 3 months of age are most likely to develop severe disease – and babies can become unwell very quickly – but most recover after a few days with supportive treatment.

Parechovirus is usually spread from person to person through contact with respiratory droplets, saliva, or faeces from an infected person. Good hygiene is therefore the best protection: hands should be washed with soap and water after going to the toilet, before eating, after wiping noses, and after changing nappies or soiled clothing. The mouth and nose should be covered when coughing and sneezing and tissues disposed of straight away.

People who are unwell with colds, flu-like illness or gastro illness should stay away from small babies. If you are caring for a small baby and are unwell, wash your hands or use an alcohol-based hand rub before touching or feeding the baby. For further information see [Human parechovirus factsheet](#).

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 23 to 29 November 2015, by date received*

		Weekly		Year to date			Full Year	
		This week	Last week	2015	2014	2013	2014	2013
Enteric Diseases	Cryptosporidiosis	41	46	882	394	1091	429	1132
	Giardiasis	71	57	3143	2756	2149	2942	2242
	Hepatitis A	1	1	68	73	58	80	62
	Rotavirus	26	33	922	669	493	714	508
	STEC/VTEC	1	2	23	30	24	31	24
	Salmonellosis	65	75	3709	4017	3288	4302	3483
	Shigellosis	4	4	154	202	129	211	136
Respiratory Diseases	Influenza	61	83	30124	20746	8285	20887	8403
	Legionellosis	2	2	90	66	105	72	109
	Tuberculosis	4	1	379	453	414	473	443
Sexually Transmissible Infections	Chlamydia	413	470	20827	21716	20009	22891	21082
	Gonorrhoea	64	99	4953	4632	4059	4872	4263
Vaccine Preventable Diseases	Adverse Event Following Immunisation	2	5	175	249	494	256	509
	Meningococcal Disease	2	1	45	35	48	37	48
	Mumps	1	3	52	80	82	82	89
	Pertussis	491	485	10386	2695	2252	3051	2379
	Pneumococcal Disease (Invasive)	2	6	467	486	469	511	490
Vector Borne Diseases	Barmah Forest	3	1	184	158	420	163	438
	Dengue	7	4	298	367	286	378	303
	Malaria	4	0	44	85	91	87	93
	Ross River	19	19	1664	613	499	676	513
Zoonotic	Q fever	4	1	233	172	158	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. The onset date for the illness may have been earlier.
- Data cells in the 'Adverse Event Following Immunisation' category refer to suspected cases only. Reports are referred to the Therapeutic Goods Administration (TGA) for assessment. Information 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. Information on HIV and other blood-borne virus case reports are not included here but are available from the [Infectious Diseases Data](#) webpage.