Communicable Diseases Weekly Report

Week 6, 8 to 14 February 2016

In summary, we report:

- Shigellosis – recent locally acquired cases
- Fever and unspecified infection presentations in infants - update
- 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.

Shigellosis

Five cases of shigellosis were notified this reporting week (Table 1). One case acquired their infection from overseas, another from a person in their household who had recently come from overseas, and three acquired their infection in NSW from unknown sources. Although numbers of shigellosis cases are similar to previous years, the number of cases in recent weeks who have not had overseas travel nor identified sexual exposures is higher than usual. Two cases reported during week 7 attended the same wedding, however other locally acquired notified cases have no known common source identified to date. Full typing is not available yet but amongst recent locally acquired cases both *Shigella sonnei* and *Shigella flexneri* have been reported, indicating that they were acquired from separate sources. Public health units continue to follow up cases to identify possible common sources of infection.

Shigellosis is a diarrhoeal disease caused by *Shigella* bacteria. There are four species of *Shigella* bacteria. Symptoms include diarrhoea (often containing blood and mucous), fever, nausea, vomiting and abdominal cramps. The symptoms usually begin around 1-3 days after exposure. The illness usually lasts 4-7 days, but can last longer.

Shigellosis spreads easily from person to person by the faecal-oral route, as only a small number of organisms is enough to cause illness. Strict personal hygiene is necessary to prevent person to person spread, which occurs if hands are not washed properly or if anything that is contaminated comes in contact with a person's mouth. Certain types of sexual activity, such as oral-anal sex, facilitate transmission of *Shigella* from person to person. Globally, shigellosis is commonly acquired from ingestion of food contaminated by poor hand hygiene or by flies that have been in contact with human waste.

People with *Shigella* infection can have the bacteria in their faeces, and so remain infectious, for some weeks after their symptoms have resolved. Treatment with appropriate antibiotics generally reduces the time a person is infectious to a few days. Antibiotics are therefore recommended for all people with shigellosis, even if symptoms are only mild, in order to reduce the risk of spread to other people.

Shigellosis can be prevented by thorough hand washing after any possible exposures to human faecal material, including after toileting, changing nappies and sexual activity. People who have shigellosis should not have sex where there is any contact with the anus, to avoid transmitting *Shigella* to the mouth.

People travelling to countries where shigellosis is common should avoid uncooked foods, including fruit and vegetables unless washed and peeled by the person themselves, and drink only bottled, boiled or treated water.

Follow the links for further information on shigellosis and *Shigella* notifications.

Fever and unspecified infection presentations in infants

Between October and December 2015 NSW emergency departments had an increased number of presentations of infants under one year of age with fever or unspecified infection requiring admission (Figure 1). This increase in presentations was associated with an increase in laboratory detections of parechovirus in this age group, as was also reported in NSW in the summer of 2013-14[1].

Infant presentations with fever or unspecified infection decreased to the seasonal expected rate in January and February across all NSW, however in week 6 an increase in presentations was noted at Maitland Hospital (Figure 2). Investigation by the public health unit determined that several causative organisms were detected amongst infants presenting to the emergency department: one with parechovirus, one with a different enterovirus, and one with a picornavirus isolated from clinical specimens.

Figure 1. Total weekly counts of Emergency Department presentations for fever or unspecified infection *that were admitted,* for 2016 (black line), compared with each of the 5 previous years (coloured lines), children aged less than 1 year, for 59 NSW Hospitals.

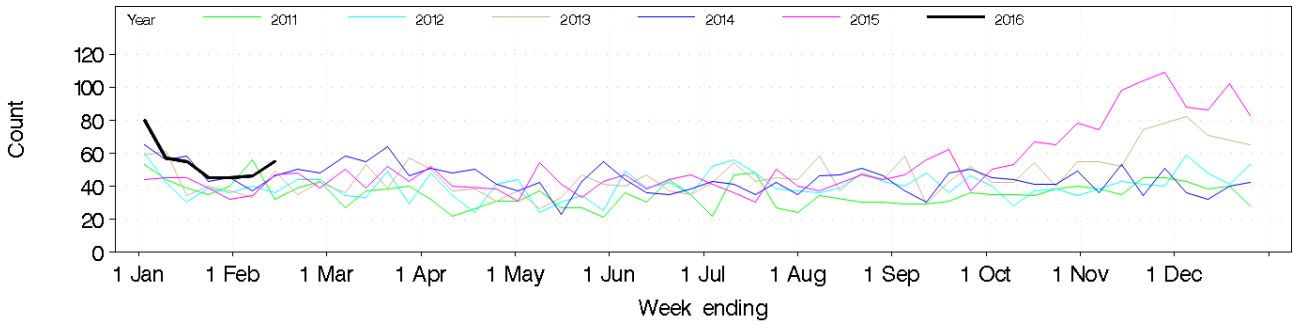
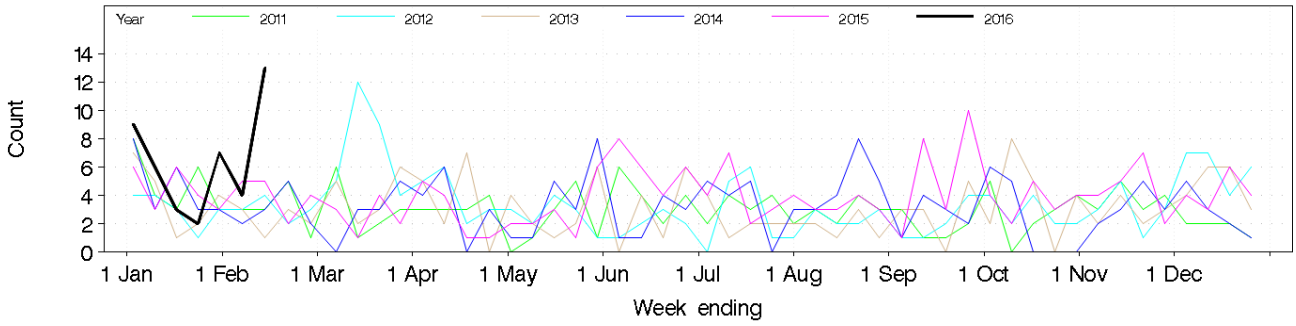


Figure 2. Total weekly counts of Emergency Department presentations for fever or unspecified infection, for 2016 (black line), compared with each of the 5 previous years (coloured lines), children aged less than 1 year, for Maitland Hospital.



Parechoviruses are a group of viruses which are part of the same virus family as enteroviruses. There are at least 16 different types of parechoviruses. Parechovirus types 1 and 2 are reported to have been associated with mild gastrointestinal and respiratory symptoms. However parechovirus type 3 is known to be associated with more severe illness with high fever and in some cases, neurological disease. 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.

[1] Cumming G, Khatami A, McMullan B, Musto J, Leung K, Nguyen O, et al. Parechovirus Genotype 3 Outbreak among Infants, New South Wales, Australia, 2013–2014. Emerg Infect Dis. 2015; 21(7); 1144–1152.

Parechovirus and enteroviruses are 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.

As the infants in Maitland were infected by different viruses, it is likely that this increase in presentations is coincidental rather than representing an outbreak.

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 8 to 14 February 2016, by date received *

		Weekly		Year to date			Full Year	
		This week	Last week	2016	2015	2014	2015	2014
Enteric Diseases	Cryptosporidiosis	31	39	177	138	97	1038	429
	Giardiasis	96	119	621	503	341	3415	2942
	Rotavirus	9	11	105	63	51	1036	714
	STEC/VTEC	1	0	6	4	14	29	31
	Salmonellosis	187	216	1077	854	765	4060	4302
	Shigellosis	5	8	48	31	49	172	212
	Typhoid	4	0	15	6	11	41	44
Respiratory Diseases	Influenza	136	113	725	451	446	30297	20888
	Legionellosis	1	1	10	17	8	95	72
	Tuberculosis	8	20	60	44	59	442	474
Sexually Transmissible Infections	Chlamydia	570	409	3317	2983	3159	22539	22899
	Gonorrhoea	105	100	732	693	691	5400	4875
Vaccine Preventable Diseases	Adverse Event Following Immunisation	3	7	15	14	29	182	256
	Measles	1	0	1	4	12	9	68
	Pertussis	261	305	2219	801	319	12081	3052
	Pneumococcal Disease (Invasive)	2	9	35	32	28	494	511
	Rubella	1	0	2	1	2	7	10
Vector Borne Diseases	Dengue	2	15	40	58	64	339	378
	Malaria	1	2	7	6	13	47	87
	Ross River	13	15	81	208	52	1641	673
Zoonotic Diseases	Leptospirosis	1	0	2	1	4	15	16
	Q fever	4	8	28	30	44	264	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.