Communicable Diseases Weekly Report

Week 44, 26 October to 1 November 2015

In summary, we report:

- **Q fever** – increase in case notifications
- **Mumps** – three new cases
- **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.

Q fever – increase in case notifications

While there were no Q fever cases notified in this reporting week there has been an increasing trend again this year with 202 notifications received to date, exceeding the annual totals for 2013 (163 notifications) and 2014 (190 notifications). There is a suggestion of a similar increasing trend in Q fever infections nationally in 2015, with 476 notifications received already year-to-date, compared to 492 notifications for the full year in 2014 (see the CDNA Fortnightly Report for 17-30 October 2015).

Q fever is caused by the environmentally-stable bacterium *Coxiella burnetii*, which may be transmitted by airborne dissemination from placental tissues, birth fluids and excreta of infected animals and by direct contact with infected animals and other contaminated materials (e.g. wool, straw or clothing). Infection is found widely across animal species; domestic and feral ruminants (cattle, goats and sheep) are the major reservoir for the bacteria and the most common source of infection in humans. Other companion animals (cats and dogs) and native wildlife (e.g. kangaroos) can be alternate sources. The organism has also been found in ticks but it is not known if these are vectors for human infection.

Q fever infections have a highly variable clinical presentation with 50-60% of cases being asymptomatic. Acute cases commonly present with fever, sweating and chills, severe headache, myalgia and arthralgia, extreme fatigue, weakness and malaise lasting 1–3 weeks. Although most people make a full recovery, chronic infections (defined as an infection lasting more than 6 months) occur in 1-5% of cases and most commonly present as endocarditis (infection of the heart valves). Chronic fatigue syndrome has also been reported in people previously infected with Q fever.

The laboratory confirmation of Q fever infection is complex - testing for suspected acute Q fever cases should include unclotted blood (EDTA tube) for nucleic acid testing/PCR, as well as acute and convalescent serum specimens taken 2 to 3 weeks apart for serology. Although the bacteria may only be detectable by PCR during the early stages of illness, this is still an important but underutilised diagnostic tool.

The collection of convalescent sera from all cases is essential as a single serology test alone is not sufficient to conclusively confirm or exclude the diagnosis. Serum found positive for Q fever phase II IgG and/or IgM by immunoassay should be referred to a specialist laboratory (e.g. CIDMLS - ICPMR - Pathology West) for supplementary testing to determine the stage of the infection.

Q fever vaccine (Q-Vax®) is available to protect people against Q fever. Vaccination is recommended for all people who are working, or intending to work, in a high-risk occupation, including farmers. Pre-vaccination screening with both a blood test and a skin test is mandatory before vaccination as the vaccine can cause a serious adverse reaction in people previously vaccinated or infected with Q fever. SafeWork NSW (formerly WorkCover NSW) requires at-risk workplaces to have vaccination programs and safe work practices in place.

A review of NSW Q fever notifications from 2001-2010 showed the positive effects of workplace vaccination programs with a decline in proportion of cases among abattoir and meat workers. However, there was an increasing proportion of cases among agricultural workers and other occupations where the risk of Q fever may not be well understood.

People who work with animals or materials that may carry Q fever bacteria should also use appropriate protective equipment and be educated on steps required to prevent spread to persons outside the workplace.

For more information, see the NSW Q fever factsheet, control guidelines and notification data, as well as the national vaccination recommendations.

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Mumps – three new cases

There were four confirmed cases of mumps this week, three of which were in a family of unvaccinated children from Western Sydney Local Health District and one in an adult from Hunter / New England Local Health District (Table 1.). The source of their infections has not been confirmed, however as mumps remains common in other parts of the world and may be asymptomatic or cause only a mild illness in up to a third of cases, it is possible that travellers may unknowingly be carrying the infection, which can then spread to people in Australia who are not vaccinated. There have been 47 cases of mumps reported in NSW so far this year, well down on the 74 cases reported in the same time period last year.

Mumps is an acute viral disease caused by the mumps virus which is transmitted through contact with respiratory secretions; usually from respiratory droplets through the airborne route but also through direct contact with the saliva of an infected person.

Common symptoms of mumps include fever, loss of appetite, tiredness and headaches followed by swelling and tenderness of the salivary glands. Complications are rare but can be serious including encephalitis and meningitis, orchitis, spontaneous abortion and hearing loss.

Mumps is a vaccine preventable disease, and notifiable in NSW. Vaccination against mumps uses a two-dose schedule given as part of the National Immunisation Program at 12 months of age with the measles-mumps-rubella (MMR) vaccine, and at 18 months of age with the measles-mumps-rubella-varicella vaccine. If you or your child have not received this vaccine, it is important that you see your general practitioner to discuss a catch-up schedule.

Additional doses of MMR vaccine are safe, so anyone unsure of their vaccination status should be vaccinated. MMR vaccine is provided free in NSW to all people born during or after 1966 who do not have written documentation of receiving two doses.

For more information see the NSW Health Mumps factsheet.

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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 26 October to 1 November 2015, by date received*

		Weekly		Year to date			Full Year	
		This week	Last week	2015	2014	2013	2014	2013
Enteric Diseases	Cryptosporidiosis	6	5	735	344	1031	429	1132
	Giardiasis	51	55	2877	2532	1974	2942	2242
	Rotavirus	38	53	777	575	449	714	508
	STEC/VTEC	2	0	17	30	18	31	24
	Salmonellosis	48	65	3384	3662	3027	4302	3483
	Shigellosis	2	4	144	189	113	209	136
Respiratory Diseases	Influenza	143	230	29754	20532	8034	20887	8403
	Legionellosis	1	1	82	58	98	72	109
	Tuberculosis	4	8	329	409	380	473	443
Sexually Transmissible Infections	Chlamydia	443	417	18705	19853	18173	22892	21083
	Gonorrhoea	61	57	4393	4240	3699	4875	4263
Vaccine Preventable Diseases	Adverse Event Following Immunisation	4	4	161	229	476	256	509
	Meningococcal Disease	2	0	40	28	41	37	48
	Mumps	4	1	47	76	79	82	89
	Pertussis	429	405	8317	2233	2030	3051	2379
	Pneumococcal Disease (Invasive)	9	17	439	447	435	511	490
Vector Borne Diseases	Barmah Forest	2	2	176	152	394	163	438
	Dengue	4	4	272	352	268	378	303
	Malaria	1	1	35	83	85	87	93
	Ross River	17	19	1587	549	467	677	512
Zoonotic	Psittacosis	1	0	2	8	7	13	8

***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.

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