Communicable Diseases Weekly Report

Week 45, 2 to 8 November 2015

In summary, we report:

- **Gonorrhoea** – continuing increase in notifications
- **Cryptosporidiosis** – increase in case notifications
- **Summary of notifiable conditions activity in NSW**

For further information on infectious diseases and alerts see the Infectious Diseases webpage.

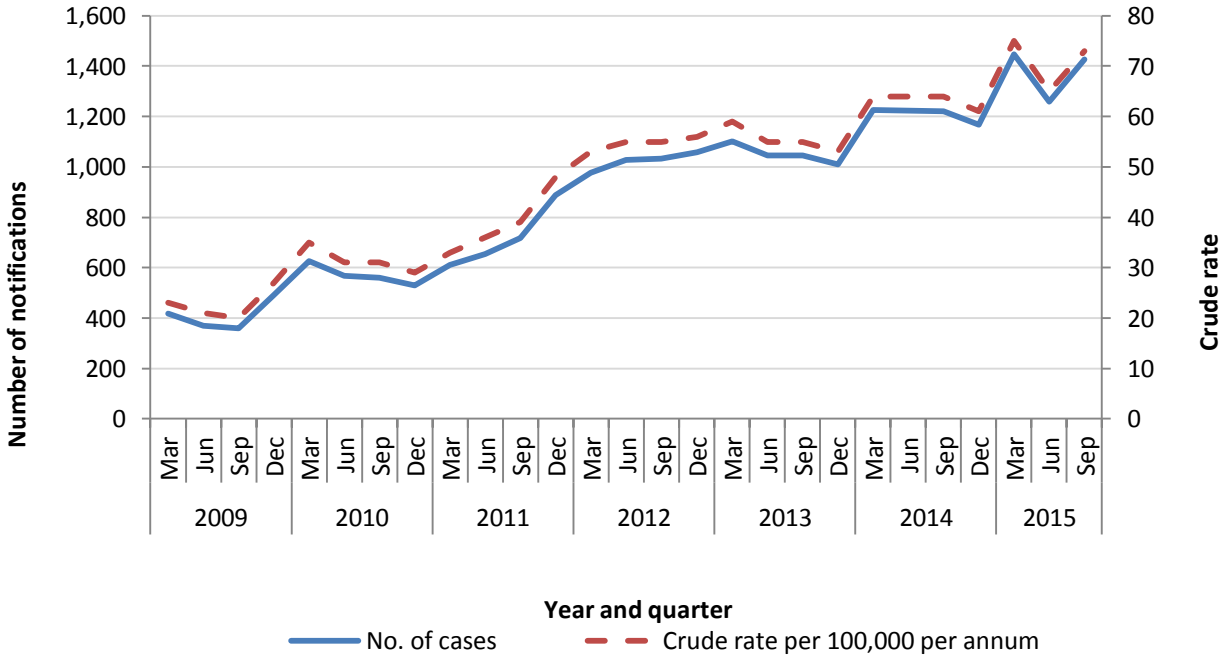
Follow the A to Z of Infectious Diseases link for more information on specific diseases.

For links to other surveillance reports, including influenza reports, see the NSW Health Infectious Diseases Reports webpage.

Gonorrhoea

The number of gonorrhoea notifications in NSW continues to trend upwards (Figure 1). From January 2009 to September 2015 82% of gonorrhoea notifications were in males. Spread of gonorrhoea in NSW is thought to be mainly associated with male-to-male sex. During the same period, 27% of cases were aged 15-24 years, 36% were aged 25-34 years and 20% were aged 34-44 years. More than half of the notifications were from inner-Sydney, with 31% of cases living in South Eastern Sydney Local Health District and 22% in Sydney Local Health District.

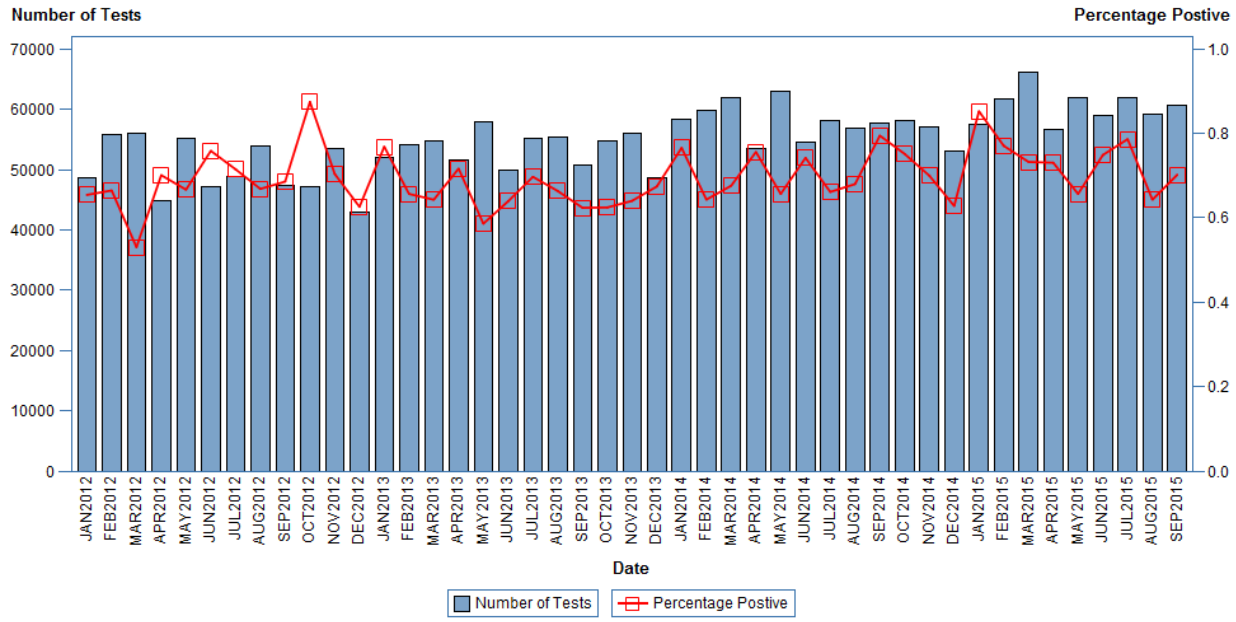
Figure 1: Gonorrhoea notifications and rates (per 100,000 population) for NSW by quarter, 1 Jan 2009-30 September 2015



People with gonorrhoea often have no symptoms, particularly women and those with gonorrhoea of the throat. Therefore, the number of people screened for gonorrhoea is likely to affect the

number of people diagnosed with this infection. From 2013, NSW increased access to HIV testing with concurrent testing for other sexually transmissible infections, for gay and other men who have sex with men. All specimens submitted for chlamydia testing are also tested for gonorrhoea. Laboratory denominator (testing) data shows that the percentage positive of all tests for gonorrhoea in NSW from 2012 to September 2015 remains essentially unchanged (Figure 2). This suggests there has been little difference in gonorrhoea transmission in NSW over this period.

Figure 2. Gonorrhoea test data with percent positive - NSW residents, January 2012 – September 2015.



Source: NSW Denominator data project, NSW Health.

Gonorrhoea is predominantly a sexually transmissible infection caused by the bacterium *Neisseria gonorrhoeae*. It is spread through contact with mucous membranes of infected people and infections can occur in the throat, anus, urethra, cervix and eyes.

Infection with gonorrhoea in men can commonly result in discharge from the penis and pain when urinating. Women can experience vaginal discharge or abnormal bleeding particularly after sex. Gonorrhoea often does not cause any symptoms. If untreated, gonorrhoea can result in infections of the skin, joints, blood stream, heart valves and lining of the brain (meningitis). Untreated gonorrhoea in women can lead to infection in the womb and Fallopian tubes (pelvic inflammatory disease or PID) and this can result in infertility. Infertility can also occur in men if the infection spreads down the urethra into the testes.

Gonorrhoea can be prevented by the use of condoms for vaginal and anal sex and dental dams for oral sex. Gonorrhoea in Australia remains treatable with antibiotics. Sexual partners of cases should be contacted, tested and treated.

Many strains of *Neiserria gonorrhoeae*, both overseas and within Australia, are resistant to a wide range of antibiotics. Of concern is the emergence overseas of some strains of gonococcal bacteria that are highly resistant to the major classes of antibiotics. In Australia, the National Neisseria Network monitors antibiotic resistance in gonococcal bacteria, and this information is used to inform treatment guidelines.

Follow the links for more information on gonorrhoea and gonorrhoea notifications. More detail on trends of sexually transmitted infections is available from the STI report.

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Cryptosporidiosis

Cryptosporidiosis notifications have begun to increase this week, with 26 cases reported in the current period compared to six cases in the previous 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 extraintestinal 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 *Cryptosporidia* 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 NSW Health, 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 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.

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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 2 to 8 November 2015, by date received*

		Weekly		Year to date			Full Year	
		This week	Last week	2015	2014	2013	2014	2013
Enteric Diseases	Cryptosporidiosis	26	6	763	355	1040	429	1132
	Giardiasis	60	52	2935	2588	2017	2942	2242
	Hepatitis A	2	0	66	67	54	80	62
	Rotavirus	41	40	823	609	458	714	508
	Salmonellosis	85	49	3491	3733	3077	4302	3483
	Typhoid	1	0	38	38	52	44	58
Respiratory Diseases	Influenza	117	151	29923	20594	8122	20887	8403
	Legionellosis	1	3	86	63	98	72	109
	Tuberculosis	9	4	352	421	394	473	443
Sexually Transmissible Infections	Chlamydia	430	464	19213	20307	18605	22892	21083
	Gonorrhoea	51	68	4541	4341	3765	4874	4263
Vaccine Preventable Diseases	Adverse Event Following Immunisation	6	4	164	236	484	256	509
	Meningococcal Disease	1	2	41	32	42	37	48
	Pertussis	430	440	8760	2370	2097	3051	2379
	Pneumococcal Disease (Invasive)	11	10	451	455	445	511	490
Vector Borne Diseases	Barmah Forest	2	2	179	153	403	163	438
	Dengue	4	5	280	355	272	378	303
	Malaria	2	1	37	84	87	87	93
	Ross River	18	16	1603	557	474	677	512
Zoonotic	Leptospirosis	1	0	12	11	11	16	11
	Q fever	4	1	207	159	146	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.

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