Communicable Diseases Weekly Report

Week 26, 23 June to 29 June 2019

In summary, we report:

- Hepatitis D – one new case in the reporting week
- Shigellosis – fourteen new notifications received in the reporting week
- Summary of notifiable conditions activity in NSW

For further information see NSW Health infectious diseases page. This includes links to other NSW Health infectious disease surveillance reports and a diseases data page for a range of notifiable infectious diseases.

Hepatitis D

One new case of hepatitis D was notified during this reporting period. The infection was in a man aged in his thirties known to also have a chronic hepatitis B infection.

Hepatitis D, also called delta hepatitis, is the least common but most severe form of viral hepatitis. Hepatitis D virus is a defective virus that requires the helper function of the hepatitis B virus to multiply and is therefore only found in people who are infected with hepatitis B virus. Hepatitis D testing is recommended for all people with chronic hepatitis B.

The symptoms of hepatitis D are similar to those of hepatitis B and include loss of appetite, nausea and vomiting, abdominal pain, fatigue, yellowing of the skin and eyes (jaundice), dark urine, and pale stools.

Hepatitis D is not commonly identified, with an average of 18 cases per year reported in NSW in the five year period 2014-2018. In the first half of 2019, 25 new cases of hepatitis D were reported. Although numbers remain small, this represents more than four times the number of cases reported over the same period in 2018 when six cases had been reported by 30 June. The reasons for this increase are not well understood but may relate, at least in part, to an increase in testing.

Hepatitis D virus is found in the blood and so is spread in similar ways to hepatitis B. Infection can occur through sharing injecting equipment, sexual contact, or needle stick or sharps injuries. It is less common for hepatitis D to be spread from mother to baby at birth compared to hepatitis B.

Hepatitis D infection can occur as a co-infection, which means it occurs at the same time as hepatitis B infection, or it can occur as a super-infection in people who already have chronic hepatitis B.

Most people who are co-infected with hepatitis D will clear the virus. However, some people who are co-infected with hepatitis B and hepatitis D may experience a more serious acute illness and have a higher risk (2%–20%) of developing acute liver failure compared to people infected with hepatitis B alone.

People with chronic hepatitis B who acquire hepatitis D usually develop chronic hepatitis D infection and have a higher risk of developing chronic liver disease and cirrhosis (scarring of the liver) than those infected with hepatitis B alone.

As infection with hepatitis D can only occur with hepatitis B, immunisation against hepatitis B infection will also prevent hepatitis D. Hepatitis B vaccination is part of the routine childhood immunisation program, with a total of four vaccine doses given at birth, 6 weeks, 4 months and 6 months of age.

There is no medication or vaccine to prevent hepatitis D super-infection in people with chronic hepatitis B. Prevention of hepatitis D super-infection can only be achieved through education to reduce exposure to infectious blood. Under the NSW Hepatitis B and C Strategies 2014-2020, NSW Health aims to reduce sharing of injecting equipment among people who inject drugs by 25 per cent by 2020.

Further information

- For more information go to the World Health Organization Hepatitis D website.
- Follow the links to the NSW Health hepatitis B fact sheet and hepatitis B vaccination from the Australian Immunisation Handbook.

Shigellosis

Of the fourteen notifications of shigellosis received this reporting week (Table 1), three were confirmed as *Shigella sonnei* and eleven were probable cases (which are unable to be confirmed as the molecular test used is unable to differentiate between *Shigella* species and *Escherichia coli*). All three confirmed cases acquired their infection locally through male to male sex.

These cases follow a notable increase in shigellosis notifications in April and May 2019 with 60 cases confirmed with a culture result. Of these, 21 cases (35%) are thought to have acquired their infection overseas, 24 were men who have sex with men (MSM) and likely acquired their infection through male to male sex contact locally (40%) and fifteen had an unknown source of infection (25%). Most MSM cases (90%) were due to *S. sonnei* biotype G resistant to ciprofloxacin, co-trimoxazole, ampicillin/amoxicillin and azithromycin. No epidemiological links between the cases have been identified.

Shigellosis is a diarrhoeal disease caused by *Shigella* bacteria. There are four serogroups of *Shigella*: *S. dysenteriae* (Group A), *S. flexneri* (Group B), *S. boydii* (Group C) and *S. sonnei* (Group D). Serogroups A, B and C are further divided into over 30 serotypes.

Symptoms of shigellosis usually start one to three days after exposure, and include diarrhoea (often containing mucous and/or blood), fever, nausea, vomiting and abdominal cramps. The illness usually resolves in 5 to 7 days. Some people who are infected may not have any symptoms, but may still pass the *Shigella* bacteria to others.

Shigellosis is easily transmitted from person to person by the faecal-oral route, as only a small number of organisms are 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 shigellosis 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 shigellosis 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. Antibiotic choice should be determined by testing results, because *Shigella* bacteria are often resistant to one or more commonly used antibiotics.

Multi-drug resistant *Shigella* is increasing in NSW. An alert was issued to health care providers in July 2018 and updated in July 2019, and NSW Health has been working closely with ACON to communicate with at risk community groups about safe sex, early detection and treatment options. Further information about the increase in drug resistance is available on the Infectious Diseases shigellosis alert page.

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

diarrhoea should not have sex where there is any contact with the anus for seven days until after their symptoms have resolved.

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.

Further information

- NSW Health shigellosis factsheet and shigellosis notifications data
- NSW Health Staying healthy while travelling overseas 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 June – 29 June 2019, by date received*

		Weekly		Year to date			Full Year	
		This week	Last week	2019	2018	2017	2018	2017
Enteric Diseases	Cryptosporidiosis	6	7	406	452	1035	708	1266
	Giardiasis	49	45	1739	1554	1912	2937	3135
	Hepatitis A	2	1	37	59	15	86	71
	Listeriosis	1	0	6	16	10	19	20
	Rotavirus	18	17	332	447	363	808	2319
	STEC/VTEC	3	0	35	32	32	57	53
	Salmonellosis	37	38	2128	1958	2365	3341	3681
	Shigellosis	14	16	445	118	108	530	236
Respiratory Diseases	Influenza	5551	4831	36204	4808	6744	17423	103851
	Legionellosis	3	2	87	83	71	171	138
	Tuberculosis	9	12	288	242	252	508	542
Sexually Transmissible Infections	Chlamydia	610	632	15952	16033	14896	31197	29005
	Gonorrhoea	237	237	6014	5276	4798	10619	9160
Vaccine Preventable Diseases	Meningococcal Disease	1	3	17	28	31	72	91
	Pertussis	128	114	3129	1987	3042	6281	5366
	Pneumococcal Disease (Invasive)	22	21	252	236	227	683	683
Vector Borne Diseases	Barmah Forest	2	1	43	46	80	74	127
	Dengue	4	4	218	155	166	299	306
	Ross River	12	8	374	359	1401	570	1653
Zoonotic Diseases	Q fever	3	3	136	97	119	228	210

*** Notes on Table 1: NSW Notifiable Conditions activity**

- Only conditions which had one or more case reports received during the reporting week appear in the table.
- 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 (i.e. by report date).
- Note that notifiable disease data available on the NSW Health website are reported by onset date so case totals are likely to vary from those shown here.
- Cases involving interstate residents are not included.
- The shigellosis case definition changed on 1 July 2018 to include probable cases (PCR positive only), hence case counts cannot be validly compared to previous years.
- 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.
- Chronic blood-borne virus conditions (such as HIV, Hepatitis B and C) are not included here. Related data are available from the Infectious Diseases Data and the HIV Surveillance Data Reports webpages.