

Communicable Diseases Weekly Report

Week 49, 1 to 7 December 2019

In summary, we report:

- [Shiga toxigenic *Escherichia coli* and haemolytic uraemic syndrome](#) – one case of HUS
- [Viral gastroenteritis](#) – 40 notified outbreaks
- [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.

Shiga toxigenic *Escherichia coli* and haemolytic uraemic syndrome

Four cases of Shiga toxigenic *Escherichia coli* (STEC) infection were notified in this reporting week ([Table 1](#)). One case was from regional NSW, one was from an urban area of a regional centre and two cases were from metropolitan Sydney. Two are elderly people who were hospitalised and have since recovered. Two are young children, both aged one year old. One child sought emergency treatment at hospital but did not require hospital admission. The other child developed haemolytic uraemic syndrome (HUS), a known complication of STEC infection and remains in hospital and receiving treatment. No links have been identified among cases. Of the three people who could be interviewed, none reported significant animal or rural exposures.

Escherichia coli (*E. coli*) are bacteria commonly found in the gastrointestinal tract of people and animals. Many types of *E. coli* are harmless but some can produce toxins, called Shiga toxins, which can result in severe disease in humans. STEC strains are carried by animals, particularly cattle, without signs of illness.

People are infected when they come into contact with the faeces of an infected animal or person, either directly or indirectly through consuming contaminated food (for example, undercooked hamburgers, unwashed salad vegetables, unpasteurised milk or milk products), drinking or swimming in contaminated water, person-to-person contact, or contact with animals on farms or petting zoos.

STEC infection causes a diarrhoeal illness, often with abdominal cramps, nausea and vomiting. The Shiga toxin may cause bleeding in the bowel so people with STEC gastroenteritis often have bloody diarrhoea. Haemolytic uraemic syndrome (HUS) is a severe and sometimes life-threatening illness characterised by haemolytic anaemia (a type of anaemia where the red blood cells break up), acute kidney failure (uraemia), and a low platelet count which makes bleeding more likely. Children with STEC infections are more likely to develop HUS than adults.

STEC infections may be prevented by safe food handling and food storage, and good hand hygiene. This includes:

- washing hands thoroughly with running water and soap before eating and preparing food, after touching pets, farm animals, their enclosures or feeding containers, and after using the toilet or changing nappies;
- only using clean knives and cutting boards when preparing ready-to-eat foods;
- thoroughly cooking all foods made from minced meat (e.g. hamburger patties and sausages) or internal organs (offal);
- washing all fruit and vegetables before eating; and
- not eating or drinking unpasteurised dairy products.

For further information on personal hygiene and petting zoos see the [NSW Health fact sheet](#).

For further information see the [STEC and HUS fact sheet](#) and [STEC notification data page](#).

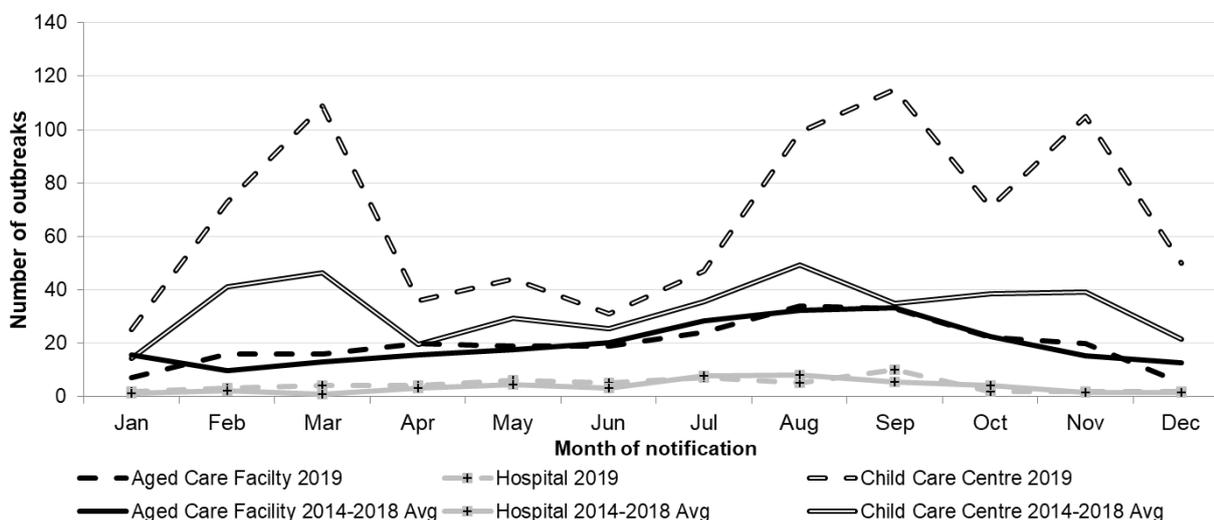
Viral gastroenteritis

There were 40 outbreaks of gastroenteritis in institutions notified during this reporting period, affecting at least 364 people. A total of 32 of the outbreaks occurred in child care centres and 81% of those affected within child care centres were children aged 5 years or younger. Of the remaining outbreaks, four occurred in residential aged care facilities, two occurred in hospitals, one occurred in a school and one at a camp.

The cause of the outbreaks is likely viral gastroenteritis, presumed norovirus or rotavirus, which has spread from person to person. However none of the outbreaks have had a specific pathogen confirmed (results from stool testing are either pending or stool specimens were not collected).

The current increase in outbreaks at childcare centres is unusual for this time of year (Figure 1).

Figure 1. Gastroenteritis outbreak in institution notifications by month and facility, NSW, 2014-2019*



* **Note** - the outbreak count for December 2019 is for the partial month and may increase.

Viral gastroenteritis is a common intestinal infection caused by a number of different viruses, usually resulting in vomiting and diarrhoea. Norovirus infections are the most frequent cause and are most common during the cooler months. Symptoms may include nausea, vomiting, diarrhoea, fever, abdominal pain, headache and muscle aches.

Viral gastroenteritis is highly infectious and is spread by the vomit or faeces of an infected person through close contact with infected persons, contact with contaminated surfaces, or consumption of contaminated food or drink. Viruses are often transmitted from person to person on unwashed hands.

Outbreaks of viral gastroenteritis occur more frequently when genetic changes cause new virus strains (primarily of norovirus and rotavirus) to emerge and spread in the community. Molecular typing work is carried out each year to track these genetic changes.

The best way to prevent the spread of viral gastroenteritis is to wash hands thoroughly with soap and running water for at least 10 seconds, particularly after using the toilet, assisting someone with diarrhoea or vomiting, attending nappy changes, and before preparing and eating food.

Infants and children attending childcare or school, and people whose work involves handling food or looking after others (children, the elderly or patients), should stay home and not return to childcare or work until 48 hours after symptoms have stopped.

Other people with viral gastroenteritis should stay home from work or school until at least 24 hours after the last symptoms have stopped, and should avoid visiting others in vulnerable settings such as hospitals or aged care facilities.

Clinicians are encouraged to notify outbreaks of gastroenteritis in institutional settings to the local public health unit and to test stool samples from patients who present as part of an outbreak for pathogens.

Further information

- [Norovirus](#) and [rotavirus](#) factsheets
- [Controlling viral gastroenteritis outbreaks guidance](#)

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 1 to 7 December 2019, by date received*

		Weekly		Year to date			Full Year	
		This week	Last week	2019	2018	2017	2018	2017
Bloodborne	Hepatitis C - Newly Acquired	1	0	25	34	40	38	40
	Cryptosporidiosis	29	24	611	683	1237	708	1266
	Giardiasis	69	46	3119	2800	3013	2937	3134
	Haemolytic Uremic Syndrome	1	0	5	4	2	4	2
	Rotavirus	72	102	1407	778	2258	808	2319
	STEC/VTEC	4	7	72	55	47	57	52
	Salmonellosis	63	73	3344	3117	3511	3337	3678
Enteric Diseases	Shigellosis	19	17	818	495	222	531	236
	Influenza	247	265	115460	16779	103572	17409	103841
Respiratory Diseases	Legionellosis	3	5	145	162	132	171	138
	Tuberculosis	13	18	559	481	510	508	544
Sexually Transmissible Infections	Chlamydia	688	603	30468	29670	27564	31181	28986
	Gonorrhoea	199	195	11019	10117	8678	10610	9149
Vaccine Preventable Diseases	Haemophilus influenzae type b	1	0	11	6	9	6	9
	Measles	1	0	57	17	31	18	32
	Meningococcal Disease	1	1	57	68	87	72	91
	Mumps	1	0	52	68	121	72	127
	Pertussis	125	147	5997	5711	5153	6280	5363
	Pneumococcal Disease (Invasive)	12	12	652	646	663	681	682
Vaccine Preventable Diseases	Dengue	8	9	434	289	294	299	306
	Malaria	1	2	67	65	67	66	68
Vector Borne Diseases	Ross River	5	3	560	558	1631	571	1653
Zoonotic Diseases	Q fever	2	7	230	224	198	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](#), the [HIV Surveillance Data Reports](#) and the [Hepatitis B and C Strategies Data Reports](#) webpages.
- Notification is dependent on a diagnosis being made by a doctor, hospital or laboratory. Changes in awareness and testing patterns influence the proportion of patients with a particular infection that is diagnosed and notified over time, especially if the infection causes non-specific symptoms.