

Communicable Diseases Weekly Report

Week 5, 26 January to 1 February 2020

In summary, we report:

- Novel coronavirus 2019 – refer to the NSW health website for ongoing updates
- Shiga toxigenic *Escherichia coli* and haemolytic uraemic syndrome – three new cases
- Congenital syphilis – two cases in January 2020
- 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.

Novel coronavirus 2019

For up-to-date information regarding the novel coronavirus outbreak and NSW response, please visit the [NSW Health novel coronavirus page](#).

Shiga toxigenic *Escherichia coli* and haemolytic uraemic syndrome

Three cases of Shiga toxigenic *Escherichia coli* (STEC) infection were notified this reporting week ([Table 1](#)). Two were in young children under three years old, one from metropolitan Sydney and one from regional NSW. The third case was a male in his 20s from regional NSW.

Typing of the three infections indicates that the cases are not related. The two children were subtyped as O157 and O111. The infection in the adult was detected by a PCR test and could not be confirmed on culture (the PCR test detects the genes typically associated with STEC infection, but STEC was not isolated).

The child from regional NSW developed haemolytic uraemic syndrome (HUS), a known complication of STEC infection and remains in hospital receiving treatment and is recovering. The child's parents reported both animal and farm exposures as possible sources of the infection.

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](#).

Further information

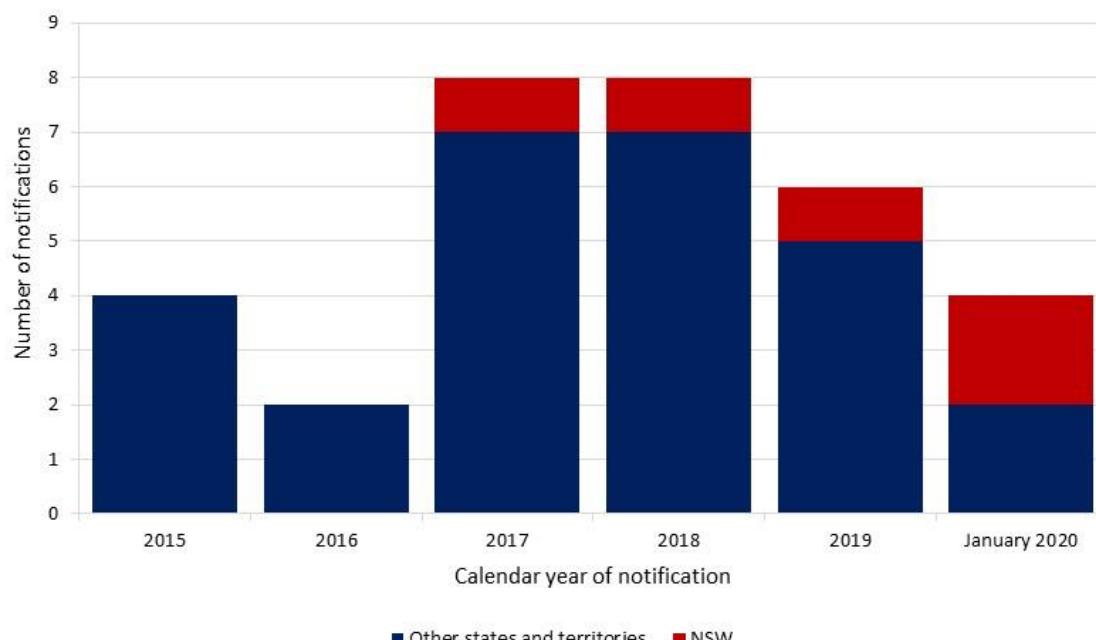
- NSW Health [STEC and HUS fact sheet](#) and [STEC notification data page](#).

Congenital syphilis

In January 2020, two cases of congenital syphilis were notified in NSW, including one case that was laboratory confirmed in this reporting week. Notifications of congenital syphilis are not included in Table 1 below, but are reported in the [NSW STI Strategy 2016-2020 Data Reports](#) which are published every six months.

Cases of congenital syphilis remain rare in Australia and in NSW. The [NSW STI Strategy 2016-2020](#) aims to sustain the virtual elimination of congenital syphilis in NSW. Since the current national surveillance case definition came into effect in 2015 to 31 January 2020, 32 cases have been notified in Australia (Figure 1). Five of these occurred in NSW, with one case each in the years 2017 to 2019 in addition to the two cases notified in January 2020. As congenital syphilis is considered to be preventable, all cases of congenital syphilis are considered a failure of the health system.

Figure 1: Number of congenital syphilis notifications by year of notification, Australia, 1 January 2015 - 31 January 2020 (NNDSS data extracted 6 February 2020)



The two cases notified in January 2020 both occurred in the greater Sydney area in non-Indigenous babies. One baby was born prematurely with clinical signs suggestive of congenital syphilis, and the other baby was stillborn (it's not clear whether syphilis was the cause of the still birth). In one case, the mother did not receive any antenatal care. In the other case, the mother had a negative syphilis screen in the first trimester of pregnancy and the infection was acquired later in pregnancy.

Syphilis is caused by the bacterium *Treponema pallidum*. Untreated infection typically progresses in stages. Primary syphilis is characterised by the presence of a chancre, a usually painless ulcer that develops at the site of infection 10-90 days after exposure. Secondary syphilis involves non-specific symptoms such as fever, malaise, headache, rash, and enlarged lymph nodes. The symptoms of secondary syphilis resolve by themselves, usually after several weeks. The disease then enters a long latent phase during which there are no symptoms. Latency can be life-long; however, a minority of untreated cases develop tertiary syphilis which may affect a range of organs and can cause severe morbidity and mortality. Congenital syphilis can cause stillbirth, neonatal death, preterm delivery or low birth weight, severe congenital abnormalities, and developmental delays.

Syphilis is transmitted primarily via sexual contact. Congenital syphilis occurs when a woman is infected in pregnancy, or a previously acquired infection remains untreated in pregnancy, and the infection is transmitted to the unborn baby. The risk to the baby is highest in primary and secondary syphilis. However, latent syphilis also leads to adverse birth outcomes in a minority of cases. If adequately treated at least 30 days prior to delivery, the risk of congenital syphilis is reduced significantly. Treatment of syphilis consists of one or several injections of benzathine penicillin, depending on the stage of infection.

As highlighted in September 2019 in the [Week 39 Communicable Diseases Weekly Report](#), the number of infectious syphilis notifications in women of reproductive age has increased in recent years both nationally and in NSW. Although a large majority of infections continue to occur in males, transmitted predominantly through male-to-male sex, increasing syphilis in women increases the risk of untreated syphilis infection during pregnancy, and thus the risk of congenital syphilis.

The two NSW cases reported in January highlight the need for all pregnant women to receive comprehensive antenatal care. Syphilis testing should be routinely done at the first antenatal visit early in pregnancy. Repeat testing later in pregnancy and at birth is indicated if the mother or her sexual partner(s) are at high risk of infection with a sexually transmissible disease or if the risk is uncertain. In NSW, routine repeat screening at 28 weeks is recommended for all Aboriginal and Torres Strait Islander women and those whose baby will be identified as Aboriginal or Torres Strait Islander.

Where a woman is diagnosed with syphilis in pregnancy, testing and treatment of all sexual partners is critical to prevent re-infection later in pregnancy. In addition, the low but increasing risk of syphilis in women means that opportunistic testing for syphilis in all sexually active persons is important, including during general health check-ups. Healthcare providers and patients themselves should know the pregnancy status of any women diagnosed with syphilis or another sexually transmissible infection.

All babies born to a mother who required syphilis treatment during her pregnancy need comprehensive assessment at birth. Laboratory testing is particularly important, as signs and symptoms of congenital syphilis often do not become evident until later in childhood. Prompt diagnosis offers the opportunity to initiate treatment early and to prevent or mitigate long term adverse health outcomes.

Further information

- NSW Health [syphilis fact sheet](#) and [syphilis notification data page](#).
- Australian STI Management Guidelines, [syphilis section](#).

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 January – 1 February 2020, by date received*

		Weekly		Year to date			Full Year	
		This week	Last week	2020	2019	2018	2019	2018
Enteric Diseases	Cryptosporidiosis	18	14	82	86	91	669	708
	Giardiasis	57	49	219	369	294	3271	2937
	Haemolytic Uremic Syndrome	1	0	1	1	0	5	4
	Hepatitis A	3	0	6	8	9	61	86
	Rotavirus	19	18	163	83	105	1756	808
	STEC/VTEC	3	1	10	15	6	80	57
	Salmonellosis	104	90	416	521	472	3564	3336
	Shigellosis	30	46	153	91	22	869	531
	Typhoid	3	1	7	7	6	63	58
Respiratory Diseases	Influenza	633	534	2283	2254	1305	116447	17409
	Legionellosis	2	1	6	25	10	153	171
	Tuberculosis	6	10	34	41	52	597	507
Sexually Transmissible Infections	Chlamydia	414	639	2674	2912	2883	32454	31181
	Gonorrhoea	155	227	1006	1112	1065	11714	10610
	LGV	1	3	10	6	10	69	85
Vaccine Preventable Diseases	Pertussis	62	82	390	808	378	6386	6280
	Pneumococcal Disease (Invasive)	3	8	51	37	36	692	681
Vector Borne Diseases	Barmah Forest	2	3	8	7	5	63	74
	Malaria	2	2	4	7	5	73	66
	Ross River	2	2	13	46	32	578	571
Zoonotic Diseases	Q fever	1	2	20	32	28	247	228

*** 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.