

Communicable Diseases Weekly Report

Week 39, 22 September to 28 September 2019

In summary, we report:

- [Infectious syphilis](#) – increase in notifications in females
- [Invasive meningococcal disease](#) – two new cases
- [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.

Infectious syphilis

In 2018, 76 cases of infectious syphilis were notified in female NSW residents (Figure 1). This represents a 65% increase from the 46 cases notified in 2017. In the first half of 2019, 49 cases were notified, representing a 32% increase from the 37 cases notified by the same time in 2018 and demonstrating that the increase continues in 2019.

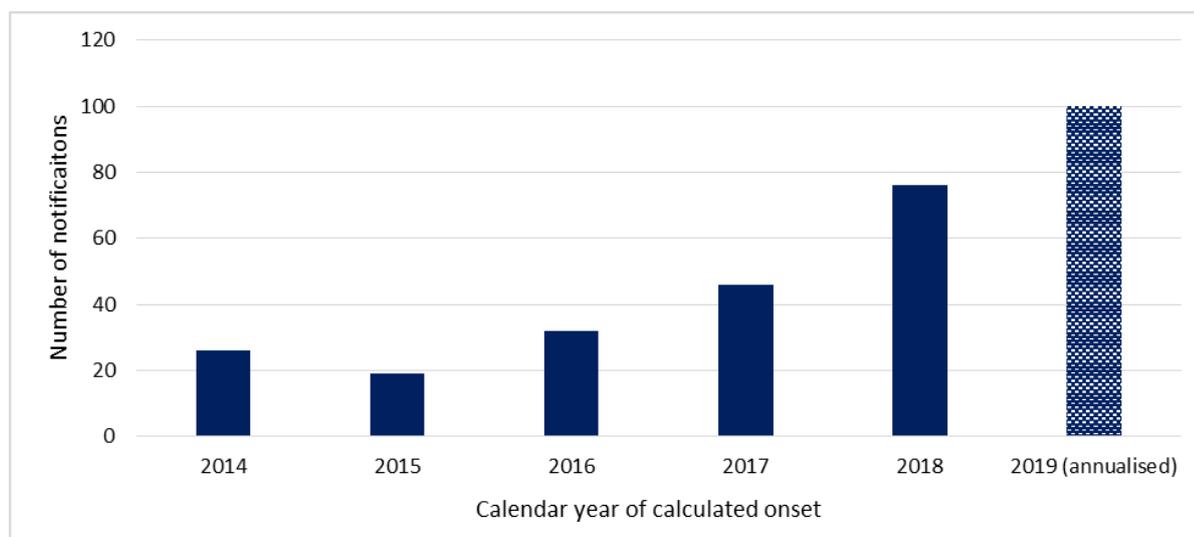


Figure 1: Notifications of infectious syphilis in females in NSW, by year of calculated onset, 2014-2018 and annualised estimate for 2019 (source: NCIMS, extracted 3 October 2019)

A similar increase in infectious syphilis among females has been seen [nationally](#), with the notification rate of infectious syphilis in females in Australia increasing more than threefold over the five year period 2013-2017. There is currently an outbreak of infectious syphilis among Aboriginal and Torres Strait Islander populations in Queensland, the Northern Territory, South Australia, and Western Australia. While a proportion of the national increase in notifications can be attributed to cases associated with the outbreak in predominantly regional and remote areas, the largest relative increase nationally and in NSW has occurred among non-Indigenous females residing in major city areas. There no evidence to suggest that the outbreak among Aboriginal and Torres Strait Islander populations has spread to NSW; the number of infectious syphilis cases notified in Aboriginal females in NSW remained small in the first half of 2019.

Syphilis is caused by the bacterium *Treponema pallidum*. It is transmitted primarily via sexual contact, and also from mother to baby during pregnancy or at delivery. Condoms are partially effective in preventing sexual transmission of syphilis. Uncomplicated syphilis is treated with one or several injections of benzathine penicillin depending on the time since infection.

Untreated syphilis typically progresses in stages. In 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. Tertiary syphilis may involve the brain, nerves, eyes, heart, blood vessels, spinal cord, liver, bones, and joints and can be fatal. Neurological symptoms resulting from infection of the central nervous system can occur at any stage. Syphilis is most infectious during the primary and secondary stages.

In NSW, the transmission of syphilis is thought to be mainly associated with male-to-male sex, with 94% of infectious syphilis notifications in 2018 occurring in men. Although infectious syphilis in females remains rare, the recent increase in notifications is concerning due to the high risk of mother-to-child transmission of syphilis. In the first half of 2019, almost 90% of infectious syphilis infections in women were in those aged under 46 years.

Congenital syphilis can cause stillbirth, neonatal death, preterm delivery or low birth weight, and severe congenital abnormalities. Although the risk to the baby is highest if the mother has or acquires infectious syphilis during pregnancy, non-infectious syphilis (i.e. late latent syphilis with no clinical signs or symptoms) also leads to adverse birth outcomes in about 20% of cases.

In Australia, syphilis testing is routinely done at the first antenatal visit and repeat testing later in pregnancy is recommended for women at high risk of infection. From January 2018 to August 2019, there were two confirmed cases of congenital syphilis in NSW. These events emphasise the need for all pregnant women to receive early antenatal care that includes syphilis screening, and the importance that pregnant women with syphilis, their sexual partners, and their babies to be managed promptly and comprehensively.

NSW Health recently issued an [alert to clinicians](#) outlining the implications of the increase in female syphilis cases for testing and management of syphilis in pregnancy to prevent cases of congenital syphilis.

Further information:

- NSW Health [syphilis factsheet](#).
- The [syphilis section](#) of the Australian STI Management Guidelines.

Invasive meningococcal disease

Two new, unrelated cases of invasive meningococcal disease were notified in this reporting week (Table 1.). Both cases occurred in people aged in their sixties, from a regional local health district and one from metropolitan Sydney. One infection was due to serogroup B and the other to serogroup Y.

Invasive meningococcal disease (IMD) is a serious, sometimes fatal infection caused by the bacteria *Neisseria meningitidis*. There are six serogroups of meningococcal bacteria associated with IMD (A, B, C, W, X and Y), of which four (B, C, W and Y) cause almost all IMD in Australia.

Meningococcal disease can, and does, affect people of all ages, however children under five years of age, and young people aged between 15 and 24 years are at highest risk. For small children, this is considered to be due to the naivety of their immune system. For young people, this is likely due to increased rates of asymptomatic carriage of the bacteria in the nose and throat, and participation in activities which increase the likelihood of transmission.

Meningococcal bacteria are spread through close and prolonged contact with a person who is carrying the bacteria, who will usually be completely well. Close and prolonged contact includes

activities such as intimate kissing, or sharing the same household. The bacteria does not survive well outside of the human body, and is not easily spread through sharing of drinks or utensils.

The initial symptoms of IMD are non-specific and often mimic other illnesses such as respiratory or gastrointestinal infections, making diagnosis difficult. Symptoms may include sudden fever; nausea, vomiting, or abdominal pain; headache, neck stiffness, or dislike of bright lights; joint pain, irritability, and a red-purple rash that doesn't disappear when pressure is applied. A rash does not always appear or it may occur late in the disease.

In young children, symptoms may also include irritability, difficulty waking up, high-pitched crying, rapid or laboured breathing or refusal to eat

People with IMD can become very unwell, very quickly, and the disease can be fatal within hours of first symptom appearance. NSW Health encourages anyone who thinks they, or someone they care for, might be experiencing symptoms of meningococcal disease, to seek urgent medical care. The absence of the rash (which may appear late in the illness or not at all), should not exclude the consideration of meningococcal disease. Patients (and carers) presenting with non-specific symptoms should be encouraged to return to the doctor, or visit an Emergency Department if symptoms persist or worsen.

The National Immunisation Program provides meningococcal ACWY vaccine to children at 12 months of age and high school students in Year 10. People aged 14-19 years who are not enrolled in school, or who miss out on the school vaccination can access free vaccine from their general practitioner (GP). A vaccine against the most common strains of meningococcal B is available in Australia via private prescription. As vaccines do not cover all strains of meningococcal infection, NSW Health encourages all people to know the symptoms of meningococcal disease, and act fast if they present, even if they or the person they care for has received a vaccine in the past.

Further information

- NSW Health [meningococcal disease website](#) and [meningococcal disease factsheet](#).
- [The Australian Immunisation Handbook](#) for more information on meningococcal vaccines.
- [NSW meningococcal disease data](#)

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 22 September – 28 September 2019, by date received*

		Weekly		Year to date			Full Year	
		This week	Last week	2019	2018	2017	2018	2017
Enteric Diseases	Cryptosporidiosis	7	2	481	582	1132	708	1266
	Giardiasis	43	39	2640	2255	2511	2937	3135
	Rotavirus	47	67	818	626	1462	808	2319
	STEC/VTEC	1	2	47	37	42	57	53
	Salmonellosis	44	55	2733	2548	2901	3340	3680
	Shigellosis	16	17	640	308	169	531	236
	Typhoid	1	2	53	45	44	58	55
Respiratory Diseases	Influenza	1523	2598	110837	13966	95302	17423	103851
	Legionellosis	1	6	119	114	93	171	138
	Tuberculosis	15	10	418	390	389	508	542
Sexually Transmissible Infections	Chlamydia	566	592	23973	23792	21777	31192	29000
	Gonorrhoea	201	225	8945	8086	6963	10618	9159
	LGV	1	1	43	66	32	85	50
Vaccine Preventable Diseases	Meningococcal Disease	2	2	48	51	70	72	91
	Mumps	1	2	43	60	90	72	127
	Pertussis	120	155	4693	3519	4275	6280	5366
	Pneumococcal Disease (Invasive)	14	20	504	515	524	681	683
Vector Borne Diseases	Barmah Forest	1	0	51	63	105	74	127
	Dengue	6	5	318	214	224	299	306
	Malaria	1	2	50	54	55	66	68
	Ross River	4	15	503	469	1525	571	1653
Zoonotic Diseases	Q fever	1	3	177	164	167	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.