Communicable Diseases Weekly Report

Week 12, 19 March to 25 March 2023

In this report we provide information regarding tetanus and a summary of notifiable conditions activity in NSW over the reporting period Week 12, 19 March to 25 March 2023.

For surveillance data on COVID-19 and influenza please see the latest *NSW Respiratory Surveillance Report*.

For up-to-date information regarding the Japanese encephalitis outbreak and the NSW response, please visit the NSW Health Japanese encephalitis page.

Information on notifiable conditions is available at the 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.

Tetanus

One case of tetanus was notified in this reporting week (Table 1). A woman in her 80s suffered a wound while outside on her property in regional NSW. Seven days later she developed an illness which included neck stiffness, 'lock-jaw' (spasm of the jaw muscles that prevents the mouth from opening) and decreased mobility. A wound swab did not grow *Clostridium* bacteria but her clinical illness and history was considered consistent with tetanus. She had no record of previous tetanus vaccination.

Tetanus is uncommon in Australia. This is the first tetanus case reported in NSW since 2019, and is one of only seven cases reported in the last 10 years. In Australia, tetanus is most common in older people who are inadequately immunised. In areas with lower immunisation coverage, younger people are also at risk.

Tetanus is caused by a neurotoxin produced by the bacterium *Clostridium tetani* which is widely found in soil, dust and animal faeces. *C. tetani* spores are extremely hardy and are resistant to a number of disinfectants. Infection occurs through breaks in the skin, including minor wounds. The toxin causes painful involuntary muscle spasms. Symptoms evolve gradually over several days with a characteristic feature being 'lock-jaw'. Other features include violent generalised spasms, abdominal rigidity, and autonomic dysfunction such as fever, high blood pressure and rapid heart rate. Spasm of muscles surrounding the airway can also cause breathing difficulties.

The incubation period (the time from exposure to onset of symptoms) is usually 3-21 days, but ranges from one day to several months. The case fatality rate for tetanus ranges from 10-80%. A shorter incubation period, often related with more heavily contaminated wounds and early manifestations of autonomic dysfunction, young age, and old age, are associated with more severe disease and higher case fatality.

Tetanus vaccination

Tetanus is preventable through vaccination. It is the only vaccine preventable disease to be solely acquired from the environment. Because the infection does not spread from person to person, 'herd' immunity from widespread vaccination coverage does not provide protection to those that are unvaccinated. Individual vaccination is the primary mechanism of defence against tetanus.

A primary course of vaccines is needed to provide protection against tetanus. A three-dose primary course is offered in infancy under the National Immunisation Program (at 6 weeks, 4 and 6 months), followed by boosters at 18 months, 4 years and in the first year of high school. Tetanus boosters are also recommended for adults at 50 years and 65 years if it has been more than 10 years since their

last dose. Vaccination is recommended every 10 years for travellers to countries where health services are not readily available, and every five years for travellers with a higher risk of tetanus-prone wounds.

Adolescents and adults who have never had a tetanus-containing vaccine are recommended to have three doses of tetanus-containing vaccine with at least 4 weeks between doses, followed by booster doses 10 and 20 years following the primary course.

Passive immunisation with tetanus immunoglobulin can also be used to prevent tetanus The need for tetanus-containing vaccine or immunoglobulin in people presenting with a tetanus-prone wound depends on the nature of the wound and the person's vaccination history. More information about tetanus-prone wound management is available in the Australian Immunisation Handbook.

More information about tetanus is available via the following links:

- Tetanus factsheet: https://www.health.nsw.gov.au/Infectious/factsheets/Pages/tetanus.aspx
- Australian Immunisation Handbook: https://immunisationhandbook.health.gov.au/contents/vaccine-preventable-diseases/tetanus

Summary of notifiable conditions activity in NSW

The following table summarises notifiable conditions activity over the reporting period alongside reports received in the previous week, year to date and in previous years (Table 1).

Table 1. NSW Notifiable conditions from 19 March – 25 March 2023, by date received*

		Weekly		Year to date					Full Year			
		This week	Last week	2023	2022	2021	2020	2019	2022	2021	2020	2019
Enteric Diseases	Campylobacter	180	203	3053	2942	3355	3103	2914	13029	13015	10885	11930
	Cryptosporidiosis	10	10	158	93	203	289	285	463	444	548	669
	Giardiasis	68	65	590	318	498	810	1103	1408	1585	1986	3420
	Hepatitis A	2	0	21	4	0	17	22	37	8	19	61
	Hepatitis E	1	0	4	1	0	9	4	8	1	15	24
	Listeriosis	1	0	8	3	5	3	2	33	22	20	16
	Paratyphoid	1	2	16	2	0	12	23	12	1	17	39
	Rotavirus	50	63	868	98	72	289	150	1803	356	500	1777
	Salmonellosis	77	70	957	987	1153	1385	1208	2967	3100	2885	3552
	Shigellosis	28	20	242	58	23	331	209	460	60	494	867
	STEC/VTEC	4	2	44	31	35	35	23	144	126	115	79
	Typhoid	2	3	31	9	0	28	31	47	2	37	64
Other	Invasive Group A Streptococcus	12	7	152	0	-	-	-	144	-	-	-
Respiratory Diseases	Influenza	710	574	5150	226	16	6909	6718	116314	124	7481	116402
	Legionellosis	4	3	58	65	64	36	51	269	215	171	154
	Respiratory syncytial virus (RSV)	978	819	5177	1	-	-	-	5669	-	-	-
	Tuberculosis	13	11	141	83	128	114	128	529	559	625	589
Sexually Transmissable Infections	Chlamydia	617	712	7571	5496	7214	8026	7734	25856	25309	27227	32473
	Gonorrhoea	242	242	2917	2098	2222	2808	2743	10228	7626	9878	11684
	LGV	1	2	10	3	9	25	17	29	36	44	69
Vaccine Preventable Diseases	Meningococcal Disease	1	1	10	3	4	6	9	36	23	22	59
	Mumps	4	1	8	0	3	37	15	25	6	56	59
	Pertussis	2	3	24	9	9	1046	1510	81	44	1400	6387
	Pneumococcal Disease (Invasive)	4	12	87	49	76	101	78	535	386	342	686
	Tetanus	1	0	1	0	0	0	1	0	0	0	1
Vector Borne Diseases	Barmah Forest	2	1	38	24	35	31	14	89	111	271	63
	Dengue	7	5	72	7	1	62	108	169	4	78	460
	Malaria	1	2	32	4	2	14	17	42	8	25	73
	Ross River	9	6	138	377	274	74	160	726	661	1990	596

*** 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.
- Surveillance data on COVID-19 can be found in the *NSW Respiratory Surveillance Report.*
- 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.

- 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.