Communicable Diseases Weekly Report

Week 48, 27 November to 3 December 2022

In this report we provide information regarding invasive meningococcal disease (IMD) and a summary of notifiable conditions activity in NSW over the reporting period 48, 27 November to 3 December 2022

Due to the rapidly evolving nature of the situation, data on **COVID-19** notifications can be found separately on the NSW Health Latest Updates on COVID-19 page.

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.

Invasive meningococcal disease

One case of invasive meningococcal disease IMD was notified in this reporting week, in a young person from Illawarra Shoalhaven Local Health District (ISLHD). Sadly, the person died from their infection. NSW Health extends their condolences to the family and friends of this person during this difficult time. A media release was issued by NSW Health following the death.

This is the second death due to IMD in the region in the past four weeks, and the third death in NSW in 2022. Information regarding the previous deaths can be found in the media releases (25 November 2022, 5 August 2022) and previous Communicable Diseases Weekly Reports (CDWR week 31).

As of the end of this reporting period, there have been 29 cases of IMD notified in NSW in 2022. All cases with serogroup data available have been due to meningococcal serogroup B. Where cases have been clustered in time and place (as with the recent deaths and additional cases in ISLHD) or found to have a common exposure (such as the cases who had attended the Splendour in the Grass festival in July), thorough public health investigations have been undertaken to confirm or exclude direct crossover between cases and their contacts which might indicate a discrete outbreak of IMD. Where possible, genomic analysis has been undertaken to assess relatedness of meningococcal bacteria. To date, investigations have found no indications of an outbreak, and genomic analysis has found no relatedness between strains of meningococcal serogroup B bacteria obtained from cases. The situation continues to be closely monitored.

Invasive meningococcal disease can occur all year round but tends to be more common in late winter and early spring. For the month of November, NSW Health was notified of six cases of IMD, which is higher than the average for the same month in the previous 5 and 10 year periods.

Invasive meningococcal disease can affect people of all ages but is more common among children under the age of five (particularly those under two) and in people aged 15-25 years.

The bacteria that cause IMD (*Neisseria meningitidis*) reside in the back of the nose and throat, arare generally harmlessly, and usually require close and prolonged contact to spread, such as sharing the same household. Activities like deep, intimate kissing also facilitate the transfer of bacteria from one person to another. Smoking and exposure to second hand smoke increases your risk of developing IMD when exposed to meningococcal bacteria. Certain smoking activities, such as sharing smoking apparatus can also increase the risk of transmission. While the apparatus itself is not likely to transfer the bacteria, the setting in which these activities may occur (huddled around a shared Shisha, in close proximity), and the increased likelihood of coughing, as well as the damage

to the respiratory epithelium caused by smoking activities increase the risk of bacterial transfer and development of IMD.

Testing for meningococcal disease

The preferred method of testing for meningococcal disease is through collection of blood or cerebrospinal fluid (the fluid surrounding the brain and spinal cord) depending on the site of infection. For suspected cases of septic arthritis (a rarer presentation), synovial fluid (fluid from the joint) can be used. The specimen is then tested for the presence of *Neisseria meningitidis* bacteria via bacterial culture or PCR test. Identifying the serogroup requires additional testing which is carried out after the presence of *N. meningitidis* bacteria have been confirmed.

Meningococcal vaccination

Vaccination is a key component of meningococcal disease prevention. Under the National Immunisation Program, the following groups are eligible for free meningococcal vaccine

Vaccine	Groups eligible for free vaccine
Meningococcal ACWY vaccine	All children at 12 months of age
	Children aged 15-19 years (via the School Vaccination Program or their GP)
Meningococcal B vaccine	Aboriginal children < 2 years of age
Both vaccines	People with certain medical conditions that cause increased risk of infection*

*including asplenia, hyposplenia, complement deficiency and those receiving eculizumab treatment

For all other people wishing to protect themselves against meningococcal disease, the vaccines are available for purchase via prescription from your doctor. Some private health insurance companies provide rebates for privately purchase vaccines depending on your level of cover. As not all practices store all meningococcal vaccines on site, you should discuss how best to access meningococcal vaccines with your doctor.

It is important for all people to be aware of the signs and symptoms of meningococcal disease and seek care if they suspect that they or their child have meningococcal disease, even if they are vaccinated. Clinicians should also not exclude meningococcal disease based on a history of meningococcal vaccination. This is because:

- The vaccination schedule has changed over time, including the eligibility groups and serogroups covered, so individuals may be immunised against some serogroups of meningococcal disease and not others.
- The meningococcal vaccines available in Australia:
  - are highly effective however, like any vaccine, they are not 100% effective. More information on the effectiveness of individual vaccines, and how this is determined can be found in the Australian Immunisation Handbook.
  - Cover the most common serogroups (B, C ,W and Y) and strains (there are several strains within the meningococcal B serogroup), historically associated with causing invasive disease in Australia. However, we cannot rule out cases being caused by other serogroups or strains known to cause disease, or the bacteria evolving to develop other serogroups or strains of concern.

More information on meningococcal disease is available from:

- NSW Health meningococcal disease website and meningococcal disease factsheet
- The Australian Immunisation Handbook for more information on meningococcal vaccines
- NSW Health meningococcal disease data

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 27 November to 3 December 2022, by date received*

		Weekly		Year to date				Full Year		
		This week	Last week	2022	2021	2020	2019	2021	2020	2019
Enteric Diseases	Campylobacter	297	250	11320	11010	9010	10531	12014	10054	11482
	Cryptosporidiosis	8	11	446	405	511	586	444	548	669
	Giardiasis	28	35	1279	1443	1747	3118	1504	1872	3329
	Hepatitis A	2	1	29	7	19	59	8	19	61
	Rotavirus	101	83	1237	328	473	1458	356	500	1777
	STEC/VTEC	3	2	136	113	94	68	126	115	79
	Salmonellosis	52	51	2744	2831	2620	3288	3097	2882	3552
	Shigellosis	7	17	424	55	483	801	60	494	867
Other	Invasive Group A Streptococcus	10	6	93	0	0	0	0	0	0
Respiratory Diseases	Influenza	251	217	114908	94	7472	115306	124	7481	116402
	Legionellosis	3	4	236	199	144	143	214	171	154
	Respiratory syncytial virus (RSV)	167	193	5079	0	0	0	0	0	0
	Tuberculosis	8	22	480	526	554	550	558	625	589
Sexually Transmissible Infections	Chlamydia	560	577	23937	23936	25103	30084	25301	27234	32473
	Gonorrhoea	187	192	9514	7189	9165	10867	7620	9880	11686
Vaccine Preventable Diseases	Meningococcal Disease	1	2	29	22	20	56	23	22	59
	Mumps	1	1	17	6	54	54	6	56	58
	Pertussis	4	0	76	43	1397	5904	43	1400	6386
	Pneumococcal Disease (Invasive)	7	10	510	369	307	638	386	343	690
Vector Borne Diseases	Barmah Forest	4	0	84	104	268	61	111	271	63
	Chikungunya	1	0	6	0	8	30	0	8	35
	Dengue	2	7	146	4	76	432	4	76	456
	Malaria	1	3	38	8	24	67	8	25	73
	Ross River	12	17	690	637	1958	577	659	1990	596
Zoonotic Diseases	Leptospirosis	3	2	34	95	11	8	96	12	9
	Q fever	2	4	185	189	198	235	206	212	249

* 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.
- Due to the rapidly evolving nature of the situation, data on COVID-19 notifications can be found separately on the NSW Health Latest Updates on COVID-19 page.
- 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.