

## Communicable Diseases Weekly Report

### Week 22, 28 May to 3 June, and Week 23, 4 June to 10 June 2023

In this report we provide information regarding invasive meningococcal disease and a summary of notifiable conditions activity in NSW over the reporting periods Week 22, 28 May to 3 June and Week 23, 4 June to 10 June 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.

### Invasive meningococcal disease

Five cases of invasive meningococcal disease (IMD) were notified for the period 28 May to 10 June 2023. Two cases, including one death were notified in Week 22, 28 May to 3 June 2023 (see [Table 3.](#)) and three cases were notified in Week 23, 4 June to 10 June 2023 (see [Table 4.](#)).

Four of these cases were due to meningococcal serogroup B. One was due to meningococcal serogroup W; this was the person who died from their infection. NSW Health extends their condolences to the family and friends of this person.

Two of the five cases occurred in people aged 15-25 years, an age group considered at high risk for IMD. The remaining three cases (including the fatal case) occurred in people over 45 years of age.

None of the cases had received a vaccine, nor were they eligible for a funded vaccine against the serogroup which caused their illness.

Cases occurred in different local health districts and no epidemiological links between cases have been identified.

#### ***Invasive meningococcal disease***

Invasive meningococcal disease (IMD) is a rare, but serious and sometimes fatal, acute bacterial infection caused by *Neisseria meningitidis*. There are several serogroups of *N. meningitidis* bacteria which can cause IMD. In Australia serogroups B, C, W, and Y have caused the majority of IMD, with the predominant serogroup changing over time, influenced by vaccination.

Invasive meningococcal disease can affect people of any age, however children under five years (particularly those under two) and people aged 15-25 years are considered at highest risk. Aboriginal people are also considered at higher risk for IMD as rates in Aboriginal people are disproportionately higher than in non-Aboriginal people.

Symptoms of IMD are varied and depend on the site of infection (usually the blood or the fluid surrounding the brain and spinal cord) and can differ based on the age of the case. Symptoms may not all be present at once. Early symptoms can mimic other illnesses, however IMD generally progresses rapidly and can become very severe or fatal very quickly.

**Table 1: Symptoms of invasive meningococcal disease**

<b>Symptoms in persons of any age</b>	Sudden onset of fever, headache, neck stiffness, joint pain, a rash of red-purple spots or bruises which does not disappear when pressed*, dislike of bright lights, nausea and vomiting
<b>Symptoms in young children</b>	Irritability, difficulty waking, rapid or laboured breathing, high-pitched crying, refusal to eat

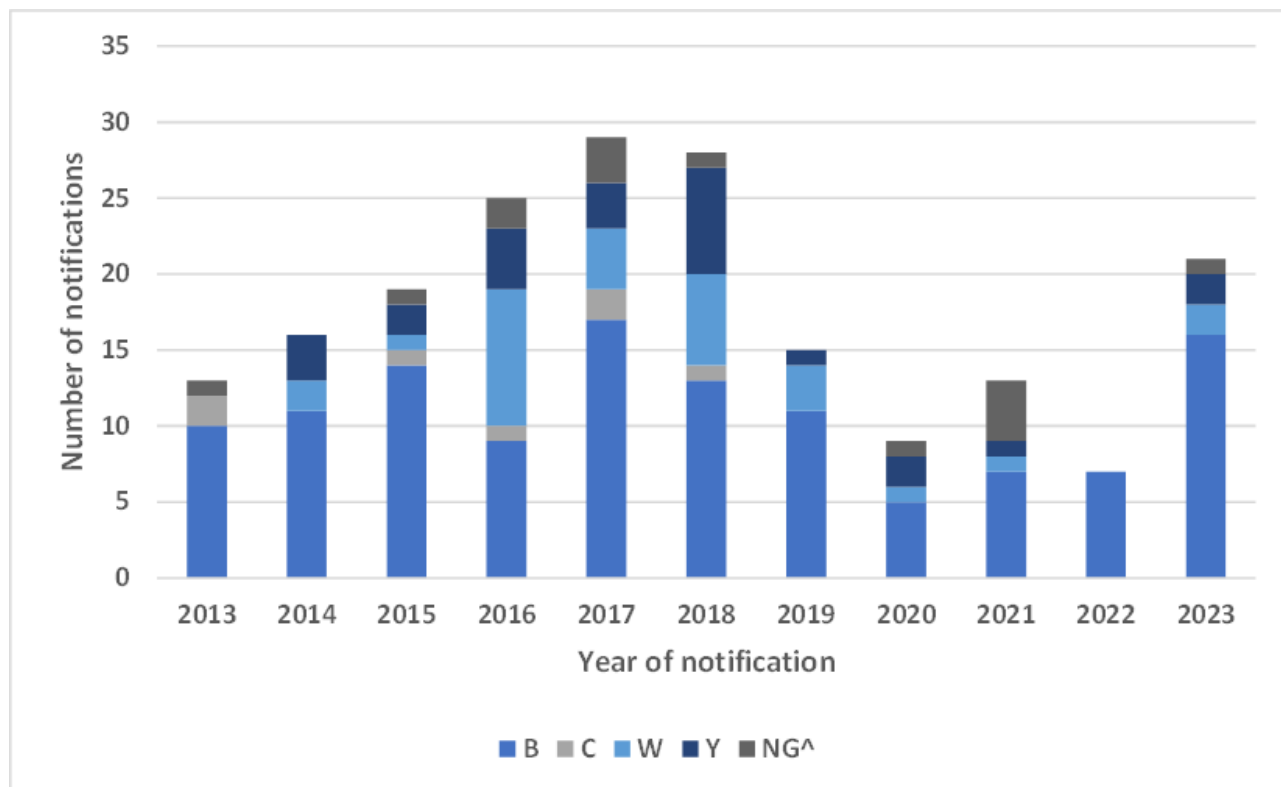
\*The non-blanching, red-purple rash which is considered characteristic of IMD may not appear, and often appears late in the illness. Do not wait for a rash to seek help or consider IMD.

People with IMD require urgent treatment with antibiotics, in hospital. Anyone suspected to have IMD should receive urgent medical care.

**Recent epidemiology of invasive meningococcal disease**

As of 15 June 2023, there have been 21 notifications of invasive meningococcal disease in NSW in 2023, this is a 46% increase on the average number of notifications for the same period in the previous five years (2018-2022), but a 10% decrease on the average number of notifications for the same period in the five years prior to the COVID-19 pandemic (2015-2019). Of these notifications, 16 cases (76%) have been due to serogroup B, two (9%) have been due to each of serogroups W and Y, and the serogroup for one case remains pending. Notifications of IMD due to serogroup B are 46% higher than the average number of cases due to serogroup B for the same period in the previous 5 years (2018-2022), and 20% higher than the same period in the five years prior to the COVID-19 pandemic (2015-2019). Changes in notification numbers and serogroup prevalence in recent years have been impacted by changes in meningococcal vaccination practices and COVID-19 related social restrictions, as detailed in the [CDWR for Week 31 2022](#).

**Figure 1. Invasive meningococcal disease notifications in NSW residents by year of notification and serogroup, for the year to date 2013-2023\*.**

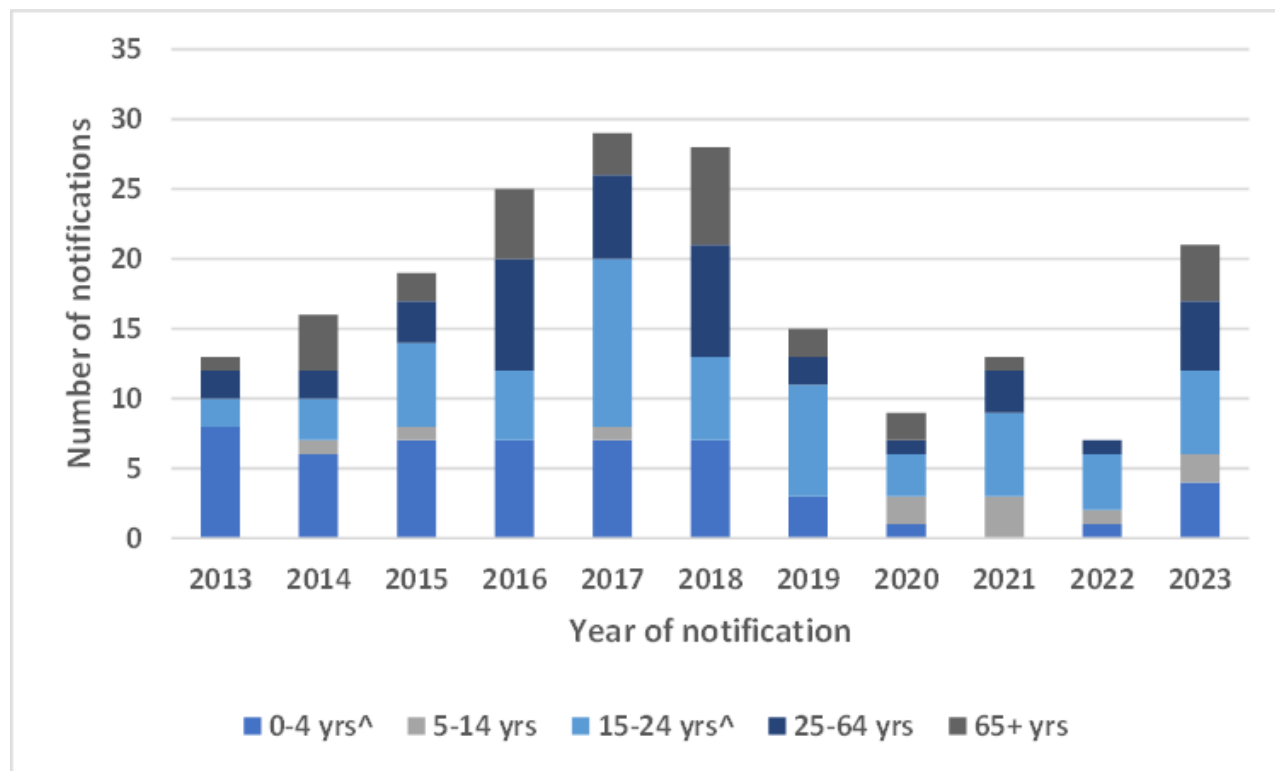


\* Data correct as of 15 June 2023

^ NG refers to cases which were not able to be serogrouped, those which were caused by non-serogroupable *Neisseria meningitidis* bacteria, and those for whom serogroup information was pending at the time of data extraction.

Of cases notified in 2023 to 15 June, 52% (n=11) occurred in age groups not considered at high risk for IMD. This is higher than the average proportion of cases in this category for the same period in the preceding five years (2018-2022) (44%) and the five years prior to the COVID-19 pandemic (2015-2019) (40%). This likely reflects increased protection of those in high-risk age groups against serogroups A, C, W, and Y, resulting from ongoing vaccination programs in place since 2017. This is further supported by the fact that all cases in high-risk age groups have been due to serogroup B, and all cases of serogroups W and Y notified in 2023 have occurred in persons who fell outside of the age groups eligible for funded meningococcal ACWY vaccine (see Table 2).

**Figure 2: Invasive meningococcal disease notifications in NSW residents by year of notification and age group, for the year to date 2013-2023\*.**



\* Data correct as of 15 June 2023

^ Denotes high risk age group

### Preventing invasive meningococcal disease

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

**Table 2. NIP Funded meningococcal vaccine eligibility**

Vaccine	Groups eligible for free vaccine
Meningococcal ACWY vaccine	All children at 12 months of age Children aged 15-19 years**
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

\*\* via the School Vaccination Program, general practitioners or registered pharmacist immunisers

For all other people wishing to protect themselves against IMD, the vaccines are available for purchase via prescription from a doctor. Some private health insurance companies provide rebates for privately purchased vaccines depending on the level of cover.

It is important for all people to be aware of the signs and symptoms of IMD and seek care if they suspect that they or their child have IMD, even if they are vaccinated. Clinicians should also not exclude IMD 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 IMD causing bacteria 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, cases can be caused by other serogroups or strains.

**More information**

More information on invasive 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 tables summarise notifiable conditions activity over the reporting period alongside reports received in the previous week, year to date and in previous years (Table 2 & Table 3).

**Table 3. NSW Notifiable conditions from 28 May – 3 June 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	173	217	5435	5061	5946	4539	4988	13346	13015	11052	12071
	Cryptosporidiosis	19	13	271	200	271	388	389	463	444	548	669
	Giardiasis	63	58	1116	559	903	1096	1830	1410	1585	1986	3420
	Hepatitis A	2	6	44	10	0	18	34	37	8	19	61
	Paratyphoid	2	0	24	6	0	17	32	12	1	17	39
	Rotavirus	21	20	1186	171	148	340	282	1802	356	500	1777
	STEC/VTEC	5	1	83	61	60	47	30	144	126	115	79
	Salmonellosis	45	59	1545	1621	1713	1844	1950	2968	3100	2885	3552
	Shigellosis	20	17	389	117	37	363	398	460	60	494	867
	Typhoid	3	1	48	17	0	32	38	47	2	37	64
Other Diseases	Invasive Group A Streptococcus	14	13	274	0	-	-	-	142	-	-	-
Respiratory Diseases	Influenza	3981	2791	21394	31666	38	7277	18360	116315	125	7481	116402
	Legionellosis	3	4	110	132	103	75	78	268	216	171	154
	Respiratory syncytial virus (RSV)	1605	1613	20489	1	-	-	-	5669	-	-	-
	Tuberculosis	5	12	233	190	255	239	243	528	556	625	589
Sexually Transmissible Infections	Chlamydia	647	567	13507	10500	12760	12202	13773	25855	25300	27214	32466
	Gonorrhoea	220	234	5243	4181	4012	4397	5107	10230	7626	9861	11670
Vaccine Preventable Diseases	LGV	1	0	18	7	20	33	23	29	36	44	69
	Diphtheria	1	0	2	1	0	0	1	4	0	0	1
	Meningococcal Disease	2	0	16	6	11	9	11	36	23	22	59
Vaccine Preventable Diseases	Pertussis	3	3	61	19	24	1286	2662	81	44	1400	6387
	Pneumococcal Disease (Invasive)	23	13	205	125	175	139	177	533	386	342	686
Vector Borne Diseases	Barmah Forest	1	3	58	41	60	125	36	89	111	271	63
	Chikungunya	1	0	4	1	0	8	9	7	0	8	35
	Dengue	5	2	132	22	1	76	204	170	4	78	460
	Malaria	1	1	39	11	2	18	27	42	8	25	73
	Murray Valley Encephalitis	1	0	5	0	0	0	0	0	1	0	0
Zoonotic Diseases	Ross River	8	11	212	516	486	1474	354	725	661	1990	596
Zoonotic Diseases	Q fever	3	2	64	91	100	107	130	198	209	212	249

Table 4. NSW Notifiable conditions from 4 June – 10 June 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	170	173	5605	5286	6157	4689	5148	13346	13015	11052	12071
	Cryptosporidiosis	16	19	287	204	277	390	394	463	444	548	669
	Giardiasis	57	63	1173	574	938	1124	1876	1410	1585	1986	3420
	Haemolytic Uremic Syndrome	1	0	3	2	0	1	3	6	0	2	4
	Rotavirus	20	21	1206	180	159	345	293	1802	356	500	1777
	STEC/VTEC	2	5	85	65	60	48	31	144	126	115	79
	Salmonellosis	39	45	1584	1679	1751	1877	1997	2968	3100	2885	3552
	Shigellosis	13	20	402	119	41	364	403	460	60	494	867
	Typhoid	1	3	49	20	0	32	39	47	2	37	64
	Other Diseases	Invasive Group A Streptococcus	16	14	290	0	-	-	-	142	-	-
Monkeypox		1	0	3	5	-	-	-	56	-	-	-
Respiratory Diseases	Influenza	4737	3981	26131	55226	42	7282	22359	116315	125	7481	116402
	Legionellosis	1	3	111	137	103	76	80	268	216	171	154
	Respiratory syncytial virus (RSV)	4743	1605	25232	1	-	-	-	5669	-	-	-
	Tuberculosis	9	5	242	200	268	248	253	528	556	625	589
Sexually Transmissible Infections	Chlamydia	543	647	14050	11052	13311	12588	14283	25855	25300	27214	32466
	Gonorrhoea	212	220	5455	4389	4180	4561	5298	10230	7626	9861	11670
Vaccine Preventable Diseases	LGV	1	1	19	7	20	33	23	29	36	44	69
	Meningococcal Disease	3	2	19	7	12	9	11	36	23	22	59
	Mumps	4	0	17	3	3	48	26	27	6	56	59
	Pertussis	7	3	68	20	26	1295	2780	81	44	1400	6387
Vector Borne Diseases	Pneumococcal Disease (Invasive)	26	23	231	143	189	142	184	533	386	342	686
	Barmah Forest	1	1	59	42	62	133	40	89	111	271	63
	Dengue	3	5	135	25	1	76	217	170	4	78	460
Zoonotic Diseases	Ross River	9	8	221	528	500	1550	363	725	661	1990	596
	Leptospirosis	1	0	11	19	69	7	5	44	96	12	9
	Q fever	2	3	66	95	108	111	133	198	209	212	249

\* Notes on Tables 3 and 4: 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.