

Communicable Diseases Weekly Report

Week 52, 25 December to 31 December 2022

(includes activity for the previous week – Week 51, 2022)

In this report we provide information regarding invasive group A Streptococcus (iGAS) infection, invasive meningococcal disease (IMD), and a summary of notifiable conditions activity in NSW over the reporting period 52, 25 December to 31 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.

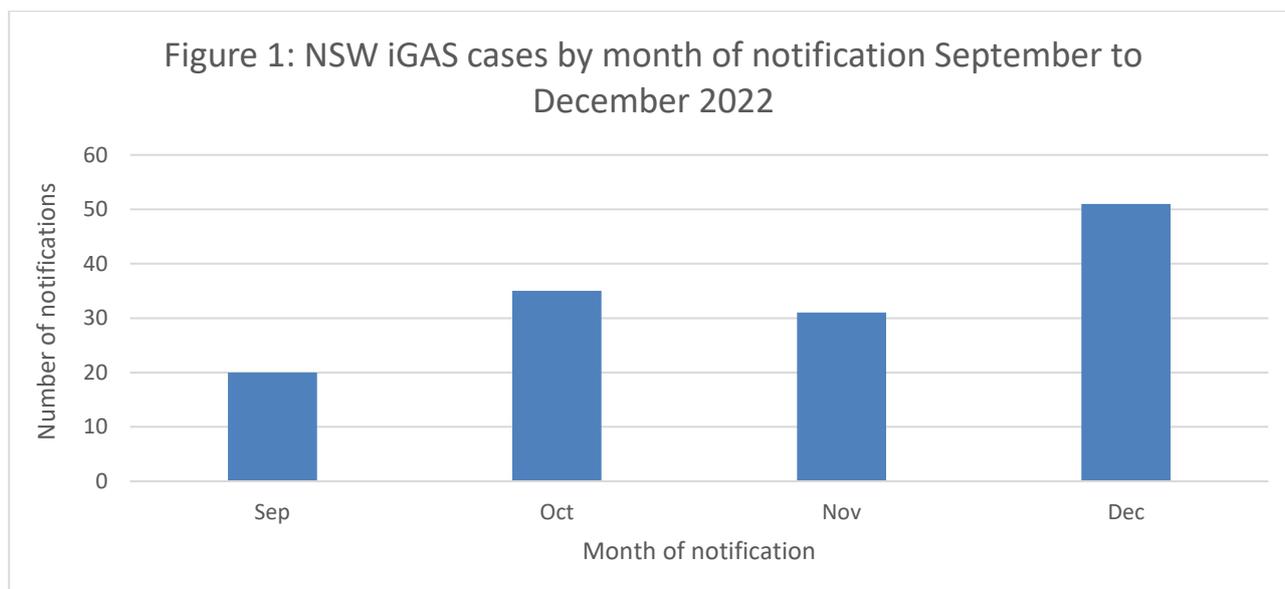
Invasive group A streptococcal disease

Eight cases of invasive group A streptococcal disease (iGAS) were notified in this reporting week, with 12 cases reported in the previous week (week 51).

Invasive group A streptococcal disease (iGAS) is caused by infection with the bacterium *Streptococcus pyogenes* (also known as group A (beta-haemolytic) Streptococcus (GAS) or Strep A). GAS can cause a spectrum of disease from non-invasive infections, such as pharyngitis, impetigo and scarlet fever, to invasive disease (iGAS) including bacteraemia and sepsis, streptococcal toxic shock syndrome, necrotising fasciitis, maternal sepsis, meningitis, bone/joint infections, and pneumonia.

iGAS became notifiable in NSW on 1 September 2022. Non-invasive infections due to GAS are not notifiable. iGAS is notified when the GAS bacteria are isolated from or detected in a specimen from a normally sterile site, such as the blood, fluid surrounding the brain and spinal cord (cerebrospinal fluid or CSF), or a deep tissue or surgical site.

While the data has only been available for a short time, there was an increase in the number of cases notified in December compared to previous months. This is consistent with reports from clinicians and laboratories that they have been seeing increased presentations of iGAS, and specimens positive for *S. pyogenes*. An increase in iGAS notifications has also been noted in [Victoria](#) and overseas there has been an increase in both cases of iGAS, and non-invasive GAS infections (see latest update from the [United Kingdom](#) and [Promed](#) for more information on the international situation).



Data is correct as of 06/01/2023

Symptoms of iGAS

iGAS is a severe disease which can include bacteraemia and sepsis, streptococcal toxic shock syndrome, necrotising fasciitis, maternal sepsis, meningitis, bone/joint infections, and pneumonia.

Symptoms of iGAS vary depending on site of infection and are often non-specific. They may include:

- dizziness or light headedness
- nausea, vomiting, abdominal pain
- red, warm, painful, and rapidly spreading skin infection which may have pus or ulceration
- bleeding or purulent discharge from the vagina with or without lower abdominal pain can occur with maternal sepsis (during pregnancy or shortly after delivery)

iGAS may initially be difficult to distinguish from a viral infection, however the persistence of these signs, the presence of multiple signs, or their extreme nature (e.g. very high fevers, severe muscle aches and tenderness, rapidly spreading and intense redness of the skin), signals likely serious bacterial infection rather than a common viral syndrome.

Specific considerations in children

Signs and symptoms of iGAS in children are non-specific but can include fever, irritability, difficulty waking or lethargy, high-pitched crying, refusal to eat/feed, fewer or no wet nappies or decreased urination, cold or mottled limbs, limb pain or not wanting to walk, abdominal pain, vomiting, difficulty breathing, or an increased heart rate. A sunburn-like rash (scarlet fever rash) may also appear but does not always, and you should not wait for a rash before seeking care.

iGAS requires rapid treatment in hospital

Effective treatments and interventions are available for iGAS infections; however, a person with iGAS can become very ill within as little as 12 to 24 hours so it is important to identify the symptoms and seek treatment early.

If you think you, your child, or someone you know or care for could have iGAS, seek urgent medical advice. See a doctor or call healthdirect on 1800 022 222. Even if you've already seen a doctor, if symptoms worsen, or you or your child are very unwell, go straight to your local Emergency Department.

More information:

- NSW Health [invasive group A streptococcus factsheet](#)
- NSW Health [invasive group A streptococcus control guideline](#)

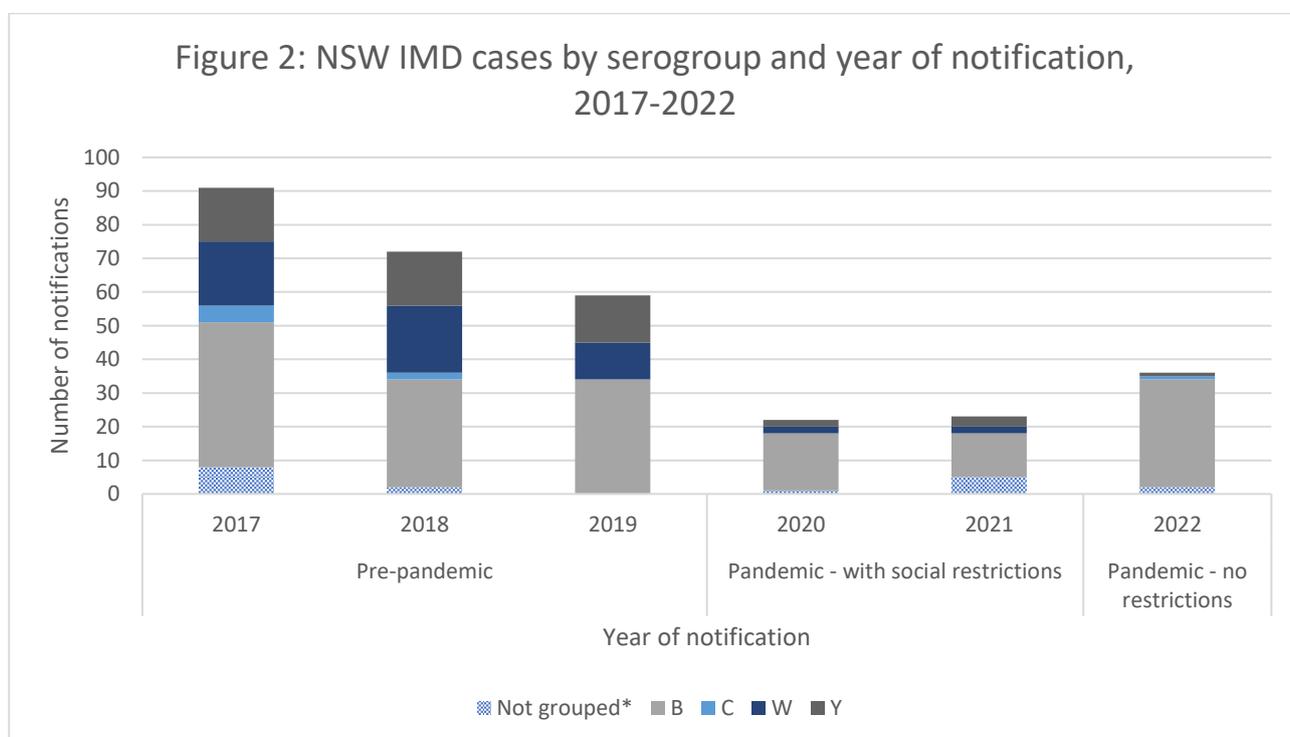
Invasive meningococcal disease

Two cases of invasive meningococcal disease (IMD) were notified in this reporting week, with a further two reported in week 51. These four cases occurred in different parts of NSW and while three were caused by the same serogroup (serogroup B), no indications of epidemiological links between cases have been identified.

As of the end of this reporting period, there have been 36 cases of IMD notified in NSW in 2022.

Average notification numbers for the previous two years (2020-2021), were 69% lower than the average number of cases seen in the three-year period immediately preceding the pandemic (2017-2019). This is likely due to the combined effect of vaccination against meningococcal serogroups A,C,W, and Y and COVID-19 related social restrictions, as detailed in the [CDWR for week 31 2022](#).

Notifications in 2022 were 60% higher than the average number of cases notified in 2020 and 2021 but remains 50% lower than the average number of cases seen in the pre-pandemic period 2017-2019. However, when we look at cases due to serogroup B - which accounted for 89% of cases in 2022 – while cases remain slightly lower ($n = 32$, 11% reduction) than the average number of cases in the pre-pandemic period ($n=36$) there has been a 113% increase compared to the average cases in the previous two years ($n=15$).



Data correct as of 06/01/2023. *Not grouped refers to cases which were not able to be serogrouped and those which were caused by non-serogroupable *Neisseria meningitidis* bacteria.

IMD can occur all year round but tends to be more common in late winter and early spring. For the month of December 2022, NSW Health was notified of eight cases of IMD, which is higher than the average for the same month in the previous 5- and 10-year periods (3 and 4 cases respectively). Cases notified in November ($n=5$) were also higher than the 5- and 10-year average (4 cases per month).

IMD 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, are generally harmless, 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 secondhand 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.

Act fast if you suspect meningococcal disease

Meningococcal disease can become very severe, and even fatal very quickly. Up to 10% of people with meningococcal disease die, even with rapid treatment and 40% of those who survive suffer long term effects including learning difficulties, sight and hearing problems, liver and kidney failure, loss of fingers, toes, or limbs, or scarring caused by skin grafts.

Patients with meningococcal disease require urgent treatment with antibiotics, in hospital. If you think you, your child, or someone you know or care for could have meningococcal disease, seek urgent medical advice. See a doctor or call healthdirect on 1800 022 222. Even if you've already seen a doctor, if symptoms rapidly worsen, or you or your child are very unwell, go straight to your local Emergency Department.

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**
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, their General Practitioner or registered pharmacist immunisers

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 25 December to 31 December 2022, by date received* (includes activity for Week 51 2022)

		Weekly		Year to date				Full Year		
		This week	Last week	2022	2021	2020	2019	2021	2020	2019
Enteric Diseases	Campylobacter	143	255	12305	11960	9959	11482	12014	10054	11482
	Cryptosporidiosis	1	6	463	441	546	669	444	548	669
	Giardiasis	12	28	1368	1503	1853	3329	1504	1872	3329
	Rotavirus	88	129	1768	353	498	1777	356	500	1777
	STEC/VTEC	1	1	144	125	114	79	126	115	79
	Salmonellosis	21	48	2967	3063	2840	3552	3097	2882	3552
	Shigellosis	7	8	461	60	493	867	60	494	867
Other	Invasive Group A Streptococcus (iGAS)	8	12	137	0	0	0	0	0	0
Respiratory Diseases	Influenza	313	394	116305	123	7480	116402	124	7481	116402
	Legionellosis	4	7	262	214	162	154	214	171	154
	Respiratory syncytial virus (RSV)	162	145	5672	0	0	0	0	0	0
	Tuberculosis	2	16	529	557	622	589	558	625	589
Sexually Transmissible Infections	Chlamydia	192	547	25777	25273	27063	32473	25302	27231	32473
	Gonorrhoea	94	211	10203	7608	9808	11686	7621	9881	11686
	LGV	1	4	29	36	43	69	36	44	69
Vaccine Preventable Diseases	Meningococcal Disease	2	2	36	23	22	59	23	22	59
	Pneumococcal Disease (Invasive)	10	6	546	385	336	690	386	343	690
Vector Borne Diseases	Dengue	2	1	163	4	76	456	4	76	456
	Ross River	8	9	724	659	1989	596	659	1990	596
Zoonotic Diseases	Leptospirosis	1	2	43	96	12	9	96	12	9

* 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).
- Data for notifiable conditions are available on the NSW Health [notifiable disease data](#) page except for iGAS, monkeypox, and RSV which will be available in the near future. Note that data available on the NSW Health website are reported by onset date so case totals are likely to vary from those shown here which are by notification received date.
- 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.