

INCREASED INVASIVE INFECTION RISK

Information for NSW general practitioners

Please distribute this information to all staff

1. Cases of invasive bacterial infections including meningococcal disease and invasive group A Streptococcus infection have increased in recent weeks
2. Early identification and rapid intervention and treatment can save lives.
3. Early signs of invasive bacterial infections can be subtle and mimic viral infections. Invasive bacterial infections can occur concurrently with, or immediately follow viral infections.
4. Patients should always be advised to urgently re-attend or go to an Emergency Department if symptoms worsen or progress.

Summary

Cases of invasive meningococcal disease (IMD) and invasive group A streptococcus infection (iGAS) have increased in NSW in recent weeks. Increases in iGAS cases have also been observed in other states and overseas. While rare, these infections are severe and have resulted in death in some recent cases. Early identification and rapid intervention and treatment can save lives. Current or recent viral infection can mask early signs of invasive bacterial infection. Patients should be informed of signs and symptoms of invasive infection to look out for and be advised to urgently re-attend or go to an Emergency Department if symptoms worsen or progress. Cases of iGAS have occurred in people with a diagnosed respiratory viral illness.

Invasive meningococcal disease (IMD)

- IMD is a rare but serious disease with up to 10% fatality rates, caused by several serogroups of *Neisseria meningitidis* bacteria (including B, C, W and Y). Most recent cases have been caused by serogroup B.
- IMD presentations include sepsis and meningitis, and less commonly septic arthritis.

Invasive group A strep (iGAS)

- Group A (beta-haemolytic) *Streptococcus pyogenes* (GAS) can cause non-invasive and invasive (iGAS) infections. Common non-invasive GAS infections include pharyngitis, impetigo and scarlet fever.
- iGAS presentations include bacteraemia and sepsis, streptococcal toxic shock syndrome, necrotising fasciitis, maternal sepsis, meningitis, bone/joint infections, and pneumonia.

Symptoms of invasive bacterial disease

- Early invasive bacterial disease symptoms can be non-specific and mimic common viral illnesses. Onset is often sudden, and illness progresses rapidly.
- General symptoms of invasive bacterial disease include sudden onset of fever, nausea, vomiting, and unexplained abdominal pain. Symptoms in young children include irritability, difficulty waking, high-pitched crying, refusal to eat/feed, cold or mottled limbs, increased work of breathing, persistent tachycardia and reduced urine output. *Parental concern for more severe disease in children should be taken seriously.*
- **Symptoms particularly indicative of IMD** include severe headache, neck stiffness, photophobia, unexplained joint or limb pain, a non-blanching rash of red-purple spots or bruises. *Note: the 'meningococcal rash' does not always appear, and often occurs late in the illness.*
- **Symptoms particularly indicative of iGAS** a dry, rapidly spreading, erythematous macular rash (especially involving axillae, groin) that may desquamate. Other features may include non-purulent conjunctivitis and red/cracked lips. ARDS, soft-tissue necrosis, multi-organ impairment, and septic shock in pregnancy can occur.
- **Patients should always be advised to urgently re-attend or seek care at an Emergency Department if symptoms rapidly progress or worsen.**

Clinical management of invasive disease

- As soon as a clinician suspects IMD or iGAS clinically, administer an immediate dose of antibiotics. Refer to the current edition of [Therapeutic Guidelines: Antibiotic](https://www.tg.org.au) [https://www.tg.org.au/](https://www.tg.org.au) for treatment guidelines.
- Patients with suspected invasive infection should be urgently referred or transferred to an Emergency Department, with clear communication of concerns for sepsis or meningitis.

Public Health Management

- Suspected cases of IMD and clusters of iGAS should be urgently notified to the local public health unit on **1300 066 055**. For further public health management advice see the meningococcal disease and iGAS control guidelines <https://www.health.nsw.gov.au/Infectious/controlguideline/Pages/default.aspx>