

Invasive Group A Streptococcal Disease

Information for ACT Clinicians – 12 January 2023

Key Points

- There has been an increase in cases of invasive group A streptococcal disease (iGAS) observed in New South Wales, Victoria, and internationally.
- Clinicians should be alert to signs and symptoms of iGAS and thoroughly evaluate all patients with a clinically compatible illness.
- In cases of iGAS, early recognition of sepsis and prompt initiation of specific and supportive treatment can be life-saving.
- iGAS is a notifiable condition in the ACT – if you diagnose or have reasonable clinical suspicion of iGAS in a patient, you must immediately notify ACT Health by phone on (02) 5124 9213.

What is invasive Group A Streptococcal (iGAS) Infection?

- Group A Streptococcal infection is caused by infection with the bacterium *Streptococcus pyogenes*.
- Group A streptococci can cause infection in the skin, soft tissue and respiratory tract, including infections such as pharyngitis, tonsillitis, impetigo, cellulitis and scarlet fever.
- When group A streptococcal infection involves normally sterile body sites (e.g. blood, CSF, joint spaces) it is called **invasive group A streptococcal infection (iGAS)**. This includes bacteraemia/sepsis, streptococcal toxic shock syndrome, necrotising fasciitis, maternal sepsis, meningitis, bone/joint infections and pneumonia.

What is the situation?

- A recent increase in cases of iGAS has been observed in [NSW](#), [Victoria](#) and [internationally](#).
- The overall risk of iGAS for the general population remains low; risk factors for iGAS include:
 - Age older than 65 or younger than 5 years.
 - Recent diagnosis of a group A streptococcal infection e.g. impetigo, pharyngitis or scarlet fever
 - Being a household contact of someone with group A streptococcal infection in the past 30 days.
 - Immunocompromise
 - Being pregnant or post-partum (within the first 4 weeks post-delivery)
 - Injecting drug use

Transmission of Group A Streptococcal bacteria

- Group A streptococci usually spread from one person to another by large respiratory droplets, e.g. through sneezing, or coughing. It can also spread by direct contact with other people who carry the bacteria on their skin.

- Some people carry group A streptococci in their throat or on their skin and have no symptoms but can spread the disease.
- People with group A streptococcal infection cease to be infectious 24 hours after commencing appropriate antibiotic therapy.

What are the symptoms of iGAS?

- Early invasive bacterial disease symptoms can be non-specific and mimic common viral illnesses. Onset is often sudden, and illness progresses rapidly.
- Symptoms vary depending on the site of infection but may include:
 - Fevers or chills, dizziness, shortness of breath and/or chest pain, headache and/or stiff neck, nausea and vomiting, and/or red, warm, painful and rapidly spreading skin infection which may have pus or ulceration
 - Abdominal pain, bleeding or purulent vaginal discharge can occur with maternal sepsis.
- Additional symptoms and signs in children can include:
 - Erythematous sunburn-like rash (scarlet fever rash), cold or mottled limbs, limb pain, not wanting to walk, poor feeding, abdominal pain, vomiting, sore throat, increased work of breathing, persistent tachycardia, reduced urine output
 - **Parental concern for more severe disease in children should be taken seriously.**

Clinical management

- Clinicians should be alert to signs and symptoms of iGAS and thoroughly evaluate all patients with a clinically compatible illness.
- Be particularly alert to the patient, particularly an infant or child, who is more unwell than you would expect with a viral illness or who had a viral illness and then became more unwell. **A dual diagnosis with a common respiratory virus and iGAS is possible.**
- Management of suspected iGAS should include:
 - Early fluid resuscitation
 - Empiric antibiotics (Group A Streptococcus remains susceptible to beta lactams)
 - Urgent escalation to assess the most appropriate location for management
 - Laboratory investigations of suspected iGAS cases should include blood cultures, full blood examination and venous blood gas

Notification and public health response to cases of iGAS

- iGAS is a notifiable condition in the ACT and clinicians who diagnose or have reasonable clinical suspicion of iGAS infection in a patient must immediately notify ACT Health by phone on (02) 5124 9213.
- ACT Health will provide advice to household or household-like contacts, including provision of written information about their increased risk of iGAS and assessment of the need for antibiotic prophylaxis.
- Non-invasive group A streptococcal infections (e.g. impetigo, strep throat) do not require notification to ACT Health.
- If a clinician becomes aware of two or more cases of iGAS in an institution such as residential aged care facilities, hospitals or childcare centre within a three-month period, they should contact ACT Health.

Information for clinicians working in primary care settings

- Prompt treatment of non-invasive Group A streptococcal infection (e.g. impetigo, scarlet fever, pharyngitis) reduces the risk of possible complications and limits onward transmission.

- Patients should be advised to urgently re-attend or seek care at an Emergency Department if symptoms rapidly progress or worsen.
- Patients with suspected invasive infection should be urgently referred or transferred to an Emergency Department with clear communication of concerns for invasive disease/sepsis.

How to Contact ACT Health

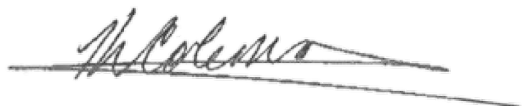
Please contact **ACT Health Communicable Disease Control** for more information (note that urgent notifications of iGAS cases should be via phone):

- Phone: 02 5124 9213
- Email: cdc@act.gov.au
- Fax: 02 5124 8810

Additional information about iGAS

More information is available from:

- NSW Health:
 - Patient fact sheet:
<https://www.health.nsw.gov.au/Infectious/factsheets/Pages/Invasive-group-A-streptococcus.aspx>



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12 January 2023