

January 25, 2024

Dear Healthcare Partners:

RE: Group A *Streptococcus* in Alberta

As you may be aware, there has been an increase in group A streptococcal (GAS) and invasive group A streptococcal (iGAS) infections in Alberta. While this increase is being seen in many jurisdictions, the underlying reason(s) remain unclear.

iGAS results from bacterial invasion of a normally sterile site and is relatively rare in Alberta (0.06% - 0.1% of all cases of GAS, as per AHS). Most iGAS cases and deaths occur in adults, particularly those who are vulnerable, unstably housed and/or suffer from substance abuse-related issues. However, severe iGAS can also occur in children.

Although rates of iGAS have been increasing since 2017, there has been a 77% increase in cases from 2022 to 2023. The case fatality rate is stable but there were 55 deaths in 2023 compared with 33 in 2022. All zones have experienced an increasing number of iGAS cases in 2023 compared with previous years. Alberta has seen an increase in pediatric pneumonia with iGAS, with 20% of cases having pneumonia in 2023 compared to 10% in past years.

Alberta Health and AHS are actively monitoring the situation and encourage healthcare providers to be aware of GAS signs and symptoms, testing, and treatment options, and to consider GAS and iGAS in the differential diagnosis as appropriate.

Signs and Symptoms

GAS can cause various infections including pharyngitis, skin and soft tissue infections, and less commonly, scarlet fever, rheumatic fever, necrotizing fasciitis, and toxic shock syndrome. Symptoms can be vague and include swelling, chills, muscle and joint aches, macular rash, bullae, nausea, vomiting, diarrhea, malaise, and pain of unusual severity.

Scarlet fever is less common but should be considered when pharyngitis is accompanied by a diffuse papular (sandpaper) rash, with accentuation in the skin folds (Pastia's lines), circumoral pallor, and a 'strawberry tongue'. Desquamation of the hands and feet is common during the resolution phase of the illness.

Rheumatic fever is a delayed reaction that can develop due to inadequate or lack of treatment for a GAS infection. Signs and symptoms include fever, arthritis, carditis (usually valve involvement), chorea, subcutaneous nodules and rash (erythema marginatum – an evanescent, spreading ring with sharp borders and fading center).

Actions to Address Increasing iGAS Rates

Testing and Treatment

Antibiotic treatment is recommended for those with confirmed GAS pharyngitis to prevent Rheumatic Fever and rare suppurative complications.

Beta-lactam antibiotics (e.g., Amoxicillin, Penicillin, Cephalexin) are preferred treatment options. Macrolides (e.g., Azithromycin, Clarithromycin) or Clindamycin can be used in cases of severe beta-lactam allergy, but resistance to these agents has increased.

Clinical decision tools, such as the Centor criteria, provide guidance on who to test for GAS. Practical information for management of GAS pharyngitis in children (and more generally) can be found here: <https://cps.ca/documents/position/group-a-streptococcal>).

Immunization

Vaccinations for viral infections can help prevent secondary bacterial infections. Encourage all Albertans to stay up to date on immunizations for influenza, COVID-19, and varicella (with varicella virus being clearly linked to secondary GAS infections).

Patient Education

GAS is transmitted person-to-person through respiratory droplets and close contact with a case. Strict adherence to good hand hygiene and respiratory etiquette (i.e., covering coughs and sneezes) are most effective in preventing spread.

Resources

For Provincial management and reporting on iGAS, please visit the [Alberta Disease Management Guidelines for GAS and iGAS](#).

For more information on Group A Streptococcal diseases, Scarlet Fever, and Rheumatic Fever please visit:

- [The Government of Canada: Scarlet Fever Fact Sheet](#)
- [CDC: Diseases Caused by Group A Strep](#)
- [The Government of Canada: Group A Streptococcal diseases for health professionals](#)

For guidance on Wise Use of Antibiotics please refer to: dodbugsneeddrugs.org

We appreciate your commitment to providing safe care for Albertans.

Yours sincerely,



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