



## Health Advisory – Increase in Group A Streptococcal (GAS) Infections, 13 FEB 2018

### Action requested:

- Be aware of an increase in GAS infections in King County in recent years, including invasive disease.
- Review invasive GAS disease clinical presentation, risk factors, and the need for rapid evaluation and treatment of persons with suspected necrotizing fasciitis and other invasive GAS syndromes.
- Review CDC guidance for chemoprophylaxis of household contacts of invasive GAS cases.
- Be aware that people experiencing homelessness and persons who inject drugs (IDU) are at increased risk for GAS infections.
- Report outbreaks of GAS to Public Health at 206-296-4774.

**Background:** In recent years, invasive GAS infections have been increasing in many areas of the US (as well as in British Columbia, Canada, and elsewhere). Since mid-2016, GAS infections have been increasing in King County. GAS is a common cause of skin infections and pharyngitis, and less commonly causes invasive infections such as necrotizing fasciitis, bacteremia, pneumonia, and streptococcal toxic shock syndrome. Most cases in King County have been skin and soft tissue infections with a smaller increase in invasive disease cases.

**Transmission:** GAS is primarily spread by close contact between individuals via respiratory droplets and direct skin contact; it can also spread by sharing needles and through contaminated objects that remain wet with respiratory secretions or wound drainage (e.g., cups, utensils, wound dressings). Crowding and unhygienic living conditions can facilitate GAS transmission. Close contacts of invasive GAS cases should be instructed to monitor their health for signs and symptoms of GAS infection (e.g., fever, sore throat, red or warm skin at a wound site) for 30 days and seek medical care if symptoms develop (see references below for definitions of close contacts).

**Risk factors** for GAS skin infections include IDU, breaks in the skin and chronic skin breakdown. Risk factors for invasive GAS infection include age  $\geq 65$  years, immunosuppression, chronic underlying diseases (i.e., diabetes, chronic renal failure, cancer; heart disease, steroid use); Native American people, alcoholism, IDU.

**Subsequent invasive GAS infections are rare** among household contacts of persons with invasive GAS infections, however the risk is higher than the risk among the general population. Clinicians can consider **post-exposure chemoprophylaxis** (PEP) for high-risk household (see CDC guidance, below) or high-risk community contacts (see Public Health Ontario guidance, below), although there are no US recommendations for the latter. In addition to the PEP regimens in the CDC guidance, a 10 day course of a 1<sup>st</sup> generation cephalosporin is appropriate. Based on local susceptibility data, macrolides are not recommended for empiric use.

**Necrotizing fasciitis** often begins at a site of trauma or a skin lesion that can initially appear relatively benign (i.e., minor abrasion, IDU injection site, boil); a minority of patients have no visible skin lesion. Severe pain out of proportion to physical findings is characteristic. Erythema can advance rapidly over 24-48 hours to increasing inflammation and dusky discoloration, with systemic toxicity (e.g., high temperatures, disorientation, lethargy). An erythematous tract may appear along the route of infection as it advances proximally in an extremity.

**GAS toxic shock syndrome** begins with an “influenza-like” prodrome (fever, chills, myalgias, nausea, vomiting, diarrhea) followed by hypotension. Where there is a defined portal of entry, there may be early evidence of skin infection. Confusion and/or combativeness occurs in many cases. Illness progresses to shock with organ failure.

### For More Information

- CDC Guidance for Prevention of Invasive Group A Streptococcal Infections. Clin Infect Dis. 2002;35(8):950–9. <https://academic.oup.com/cid/article/35/8/950/330363>
- Public Health Ontario: Recommendations on Public Health Management of Invasive GAS [https://www.publichealthontario.ca/en/eRepository/iGAS\\_Recommendations\\_on\\_Public\\_Health\\_Management.pdf](https://www.publichealthontario.ca/en/eRepository/iGAS_Recommendations_on_Public_Health_Management.pdf)
- CDC GAS information: <https://www.cdc.gov/groupastrep/index.html>
- Clinical information on severe GAS infections: <https://www.ncbi.nlm.nih.gov/books/NBK333425/>