



Infectious Disease Epidemiology Report

Invasive Group A Streptococcal Disease, Maine 2015



Background

Group A *Streptococcus* (GAS) is a bacterium often found in the throat and on the skin. People may carry group A streptococci and have no symptoms of illness. Most GAS infections are relatively mild illnesses such as “strep throat” or impetigo.

Severe, sometimes life-threatening GAS disease may occur when the bacteria become invasive. Streptococcal Toxic Shock Syndrome (STSS) is a severe illness associated with invasive or noninvasive GAS infection that results in a rapid drop in blood pressure and organ failure. Signs of toxicity and a rapidly progressive clinical course are characteristic, and the case fatality rate may exceed 50%.

GAS bacteria are spread through direct contact with mucus from the nose or throat of persons who are infected, or through contact with infected wounds or sores on the skin.

Methods

Invasive GAS is defined as isolation of group A *Streptococcus* (*Streptococcus pyogenes*) from a normally sterile site (e.g., blood or cerebrospinal fluid [CSF] or, less commonly, joint, pleural, or pericardial fluid). Invasive GAS is not nationally reportable.

In order to meet the STSS case definition, a patient must have GAS infection, hypotension, and at least two other clinical findings characteristic of STSS (e.g., renal impairment, coagulopathy, liver involvement etc.). All cases of STSS are also cases of GAS, but not all GAS cases meet the STSS case definition.

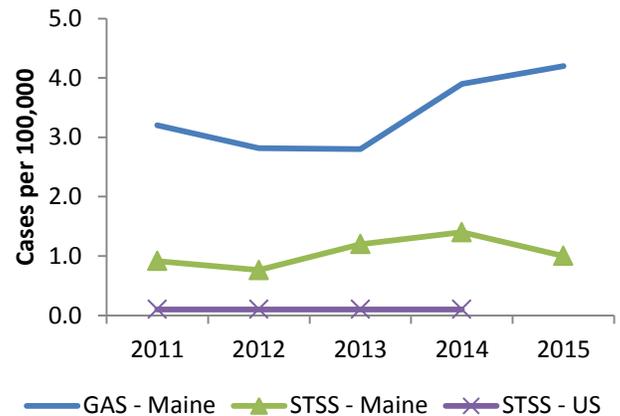
Results

A total of 56 cases of invasive GAS were reported in 2015, of which 8 (14%) cases died. This is an increase from the 52 cases reported in 2014. The rate of invasive GAS in Maine

was 4.2 cases per 100,000 persons in 2015 (Figure 1).

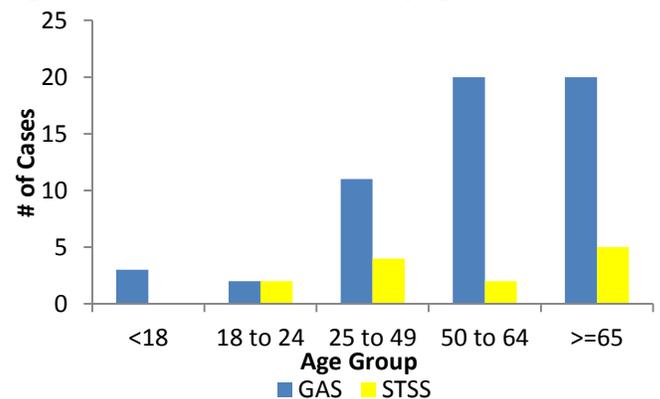
In 2015, 13 cases of GAS were found to also have STSS, of which 5 (38%) cases died. The rate of STSS in Maine was 1.0 cases per 100,000 persons in 2015 (Figure 1).

Figure 1: Rate of invasive GAS and STSS by year – Maine and US 2010-15



During 2015, invasive GAS cases were highest in individuals aged 50 years or older (Figure 2). STSS cases were highest in individuals aged 65 years and older.

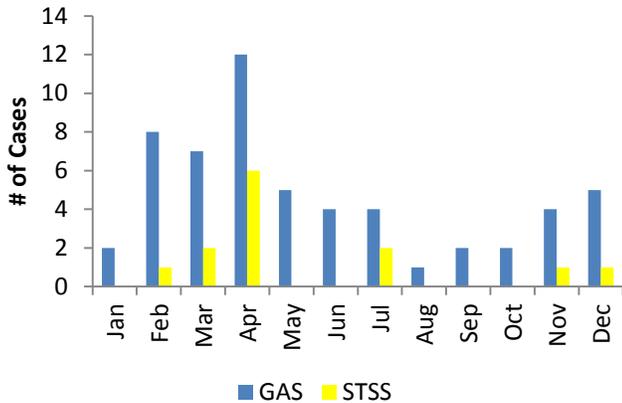
Figure 2: Invasive GAS and STSS by age – Maine, 2015



Invasive Group A Streptococcus, Maine 2015

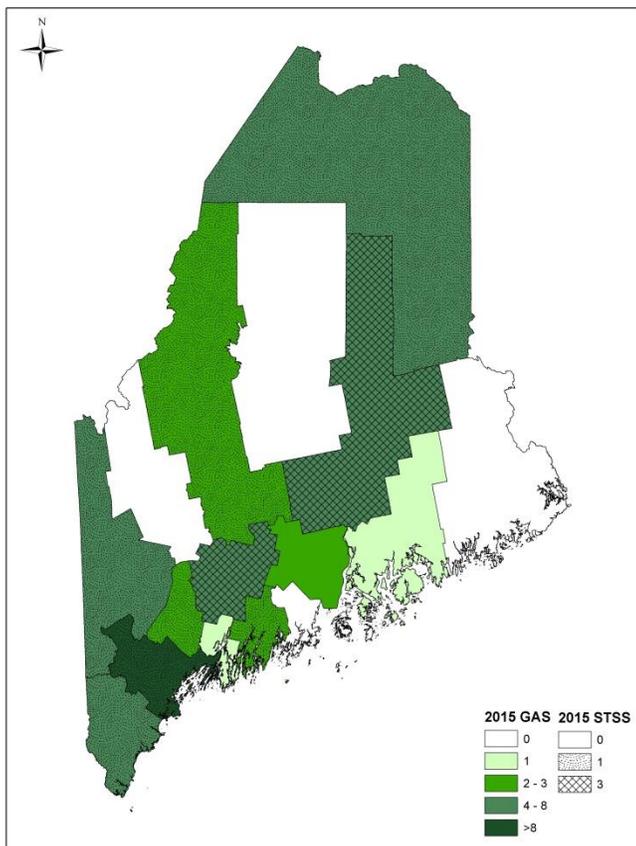
Invasive GAS and STSS cases occurred year round in 2015, with the highest number of GAS cases reported in April (Figure 3).

Figure 3: Invasive GAS and STSS by month – Maine, 2015



Invasive GAS was identified among residents of twelve Maine counties in 2015. STSS was identified among residents of nine Maine counties in 2015 (Figure 4).

Figure 4: Invasive GAS and STSS cases by county – Maine, 2015*



*A case can be counted as both STSS and GAS

Discussion

Cases of invasive GAS have continued to increase since 2013, while the number of cases of STSS dropped in 2015.

GAS transmission can be reduced by good hand washing, especially after coughing and sneezing and before preparing foods or eating, and by keeping wounds or skin lesions covered and dry.

People with chronic illnesses like cancer, diabetes, chronic heart or lung disease, and those who use medications such as steroids have a higher risk of developing invasive GAS. Persons with skin lesions (such as cuts, chicken pox, or surgical wounds), the elderly, and adults with a history of alcohol abuse or injection drug use also have a higher risk for disease.

Invasive GAS should be reported to Maine CDC by calling 1-800-821-5821 or faxing to 1-800-293-7534. For more information contact your healthcare provider or local health center.

Additional information about invasive GAS disease and STSS can be found at:

- Maine CDC's website: <http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/airborne/group-a.shtml>
- Federal CDC's website: <http://www.cdc.gov/groupastrep/index.html>