

Infectious Disease Epidemiology Report

Invasive Group A Streptococcal Disease, Maine 2014



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).

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.

This report summarizes surveillance data on cases of invasive GAS and STSS from 2014.

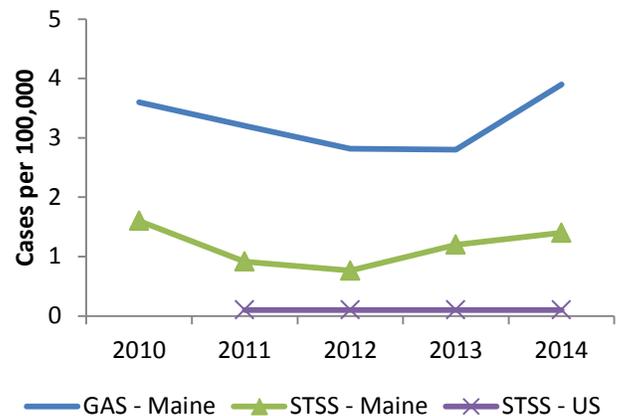
Results

A total of 52 cases of invasive GAS were reported in 2014, of which 6 (12%) cases died.

This is an increase from the 37 cases reported in 2013. The rate of invasive GAS in Maine was 3.9 cases per 100,000 persons in 2014 (Figure 1). Invasive GAS is not a nationally notifiable disease (Figure 1).

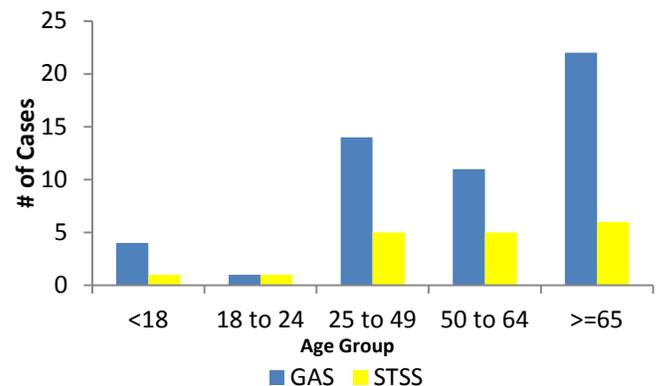
A total of 18 cases of STSS were reported in 2014, of which 3 (17%) cases died. This is an increase from the 16 cases reported in 2013. The rate of STSS in Maine was 1.4 cases per 100,000 persons in 2014 (Figure 1) compared to the national rate of 0.1 cases per 100,000 persons. STSS is nationally notifiable.

Figure 1: Rate of invasive GAS and STSS by year – Maine and US 2010-14



During 2014, invasive GAS and STSS cases were highest in the 65 years and older age group. This is consistent with previous years (Figure 2).

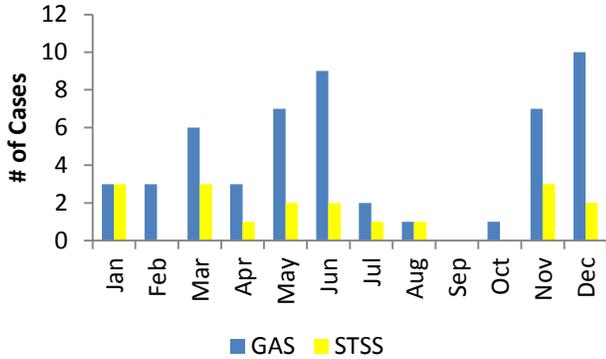
Figure 2: Invasive GAS and STSS by age – Maine, 2014



Invasive Group A Streptococcus, Maine 2014

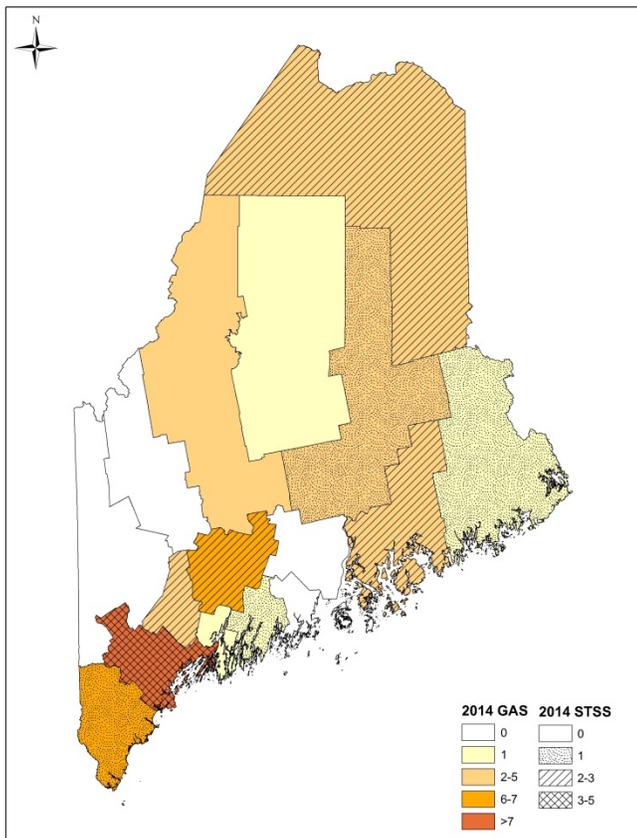
Invasive GAS and STSS cases occurred year round in 2014, with the highest number of GAS cases reported in December (Figure 3).

Figure 3: Invasive GAS and STSS by month – Maine, 2014



Invasive GAS was identified among residents of twelve Maine counties in 2014. STSS was identified among residents of nine Maine counties in 2014 (Figure 4).

Figure 4: Invasive GAS and STSS cases by county – Maine, 2014*



*A case can be counted as both STSS and GAS

Discussion

Cases of invasive GAS and STSS increased from 2013 to 2014. Over a third (35%) of invasive GAS cases resulted in STSS, and of those diagnosed with STSS, 17% did not survive.

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>