



Infectious Disease Epidemiology Report

Invasive Group A Streptococcal disease, 2011



Background

The Infectious Disease Epidemiology Program of Maine Center for Disease Control and Prevention monitors the incidence of invasive Group A Streptococcal (GAS) disease and Streptococcal Toxic-Shock Syndrome (STSS) through mandatory reporting by health care providers, clinical laboratories and other public health partners. This report summarizes surveillance data on cases of invasive GAS and STSS from 2011.

Methods

Invasive GAS is defined as isolation of Group A *Streptococcus* (*Streptococcus pyogenes*) by culture from a normally sterile site (e.g., blood or cerebrospinal fluid [CSF] or, less commonly, joint, pleural, or pericardial fluid).

STSS is a severe illness associated with invasive or noninvasive group A streptococcal infection. 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.). Signs of toxicity and a rapidly progressive clinical course are characteristic, and the case fatality rate may exceed 50%. All cases of STSS are also cases of GAS, but not all GAS cases meet the STSS case definition.

Standardized case report forms were completed for each reported case of invasive GAS and STSS in 2011.

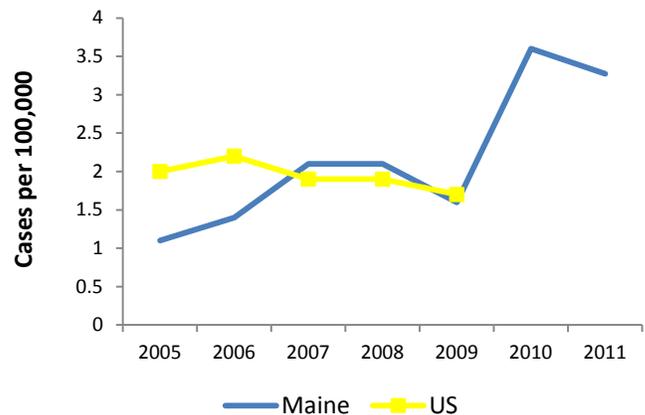
Results

A total of 43 cases of invasive GAS were reported in 2011, of these 8 cases died. This is a decrease from the 47 cases reported in 2010. The rate of invasive GAS in Maine was 3.3 cases per 100,000 persons in 2011 (Figure 1). Invasive GAS was no longer a federal

notifiable disease as of 2010, so the US rates are not available after 2009.

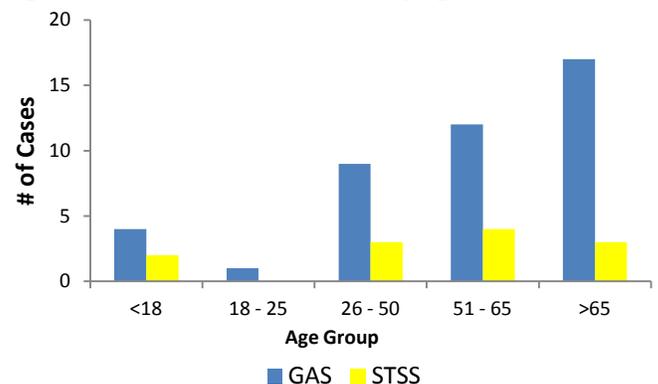
A total of 12 cases of STSS were reported in 2011, of these 4 cases died. This is a decrease from the 21 cases reported in 2010. The rate of STSS in Maine was 0.9 cases per 100,000 persons in 2011.

Figure 1: Rate of invasive GAS by year – Maine and US 2005-11



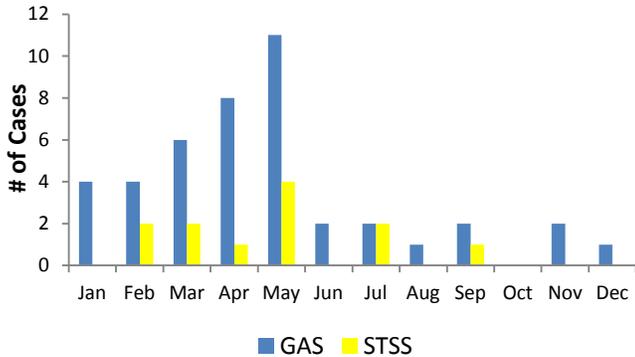
During 2011, invasive GAS and STSS infections were found primarily among older adults. Approximately 67% of invasive GAS and 58% of STSS cases occurred in individuals over 50 years old (Figure 2).

Figure 2: Invasive GAS and STSS by age – Maine, 2011



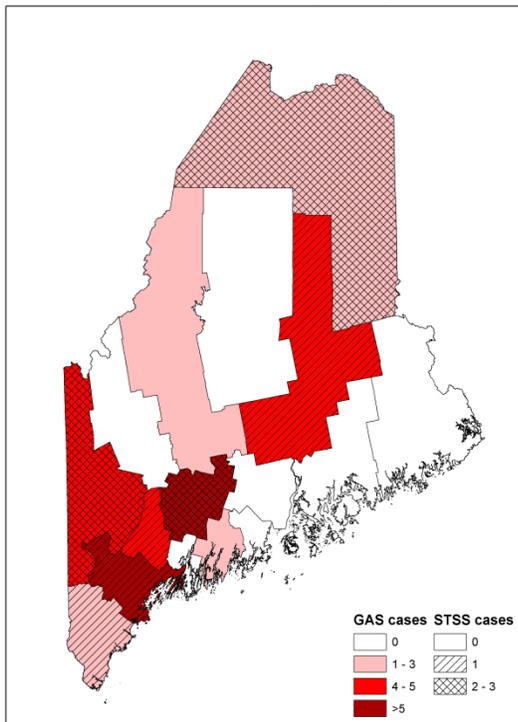
Invasive GAS and STSS cases were more common during the winter and spring months. Cases decreased dramatically during the summer and fall of 2011 (Figure 3).

Figure 3: Invasive GAS and STSS by month – Maine, 2011



Invasive GAS was identified among residents of nine Maine counties in 2011. STSS was identified among residents of seven Maine counties in 2011.

Invasive GAS and STSS cases by county - Maine, 2011*



*A case can be counted as both STSS and GAS

Discussion

Cases of invasive GAS and STSS decreased from 2010 to 2011. Over a quarter (28%) of invasive GAS cases resulted in STSS, and of those diagnosed with STSS, one third (33%) did not survive. This is an improvement from 2010 when almost half of the invasive GAS cases resulted in STSS and nearly half of the cases diagnosed with STSS did not survive.

GAS transmission can be reduced by good hand washing, especially after coughing and sneezing and before preparing foods or eating.

People with chronic illnesses like cancer, diabetes and 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/ncidod/dbmd/diseaseinfo/groupstreptococcal_g.htm