Infectious Disease Epidemiology Report

Invasive Group A Streptococcal disease, 2010

Background

The Infectious Disease Epidemiology Program of the 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 2010.

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 one other clinical symptom 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.

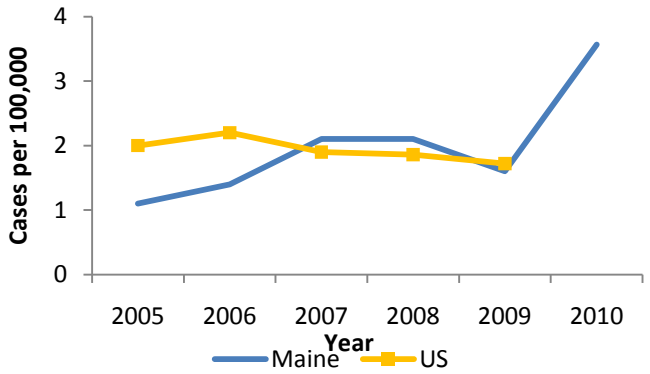
Standardized case report forms were completed for each reported case of GAS and STSS in 2010.

Results

A total of 47 cases of invasive GAS were reported in 2010, of these 12 cases died. The rate of GAS in Maine was 3.6 cases per 100,000 persons in 2010 (Figure 1).

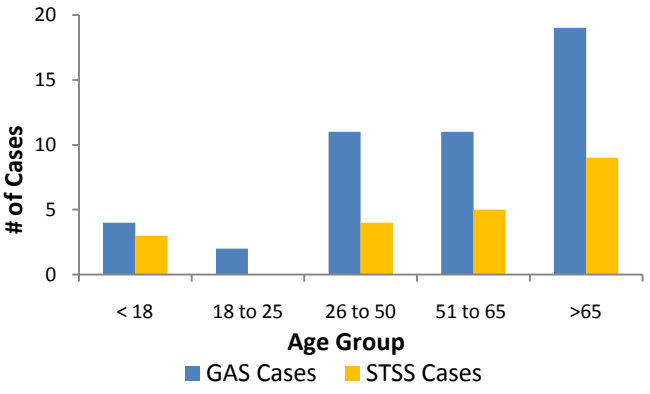
A total of 21 cases of STSS were reported in 2010, of these 10 cases died. The rate of STSS in Maine was 1.6 cases per 100,000 persons in 2010.

Figure 1: Rate of invasive GAS by year – Maine and US 2005-10



During 2010, invasive GAS and STSS infections were found primarily among older adults. Approximately 64% of GAS and 67% of STSS cases occurred in individuals over 50 (Figure 2).

Figure 2: Invasive GAS and STSS by age – Maine, 2010



GAS and STSS cases are more common during the winter and spring months. Cases decrease dramatically during the summer and fall (Figure 3).

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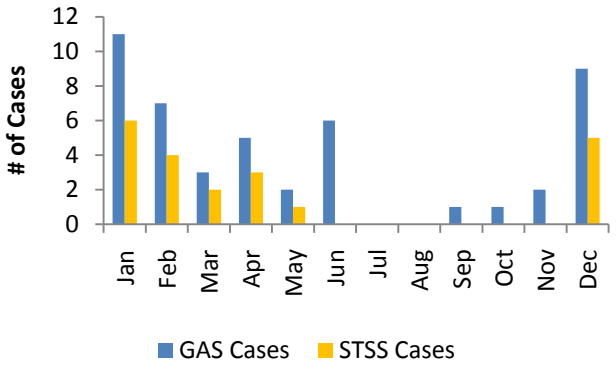
Figure 3: Invasive GAS and STSS by month – Maine, 2010



Invasive GAS was identified among residents of eleven Maine counties in 2010. STSS was identified among residents of ten Maine counties in 2010 (Table 1).

Table 1: Invasive GAS and STSS by county – Maine, 2010*

County	GAS Cases	STSS Cases
Androscoggin	4	1
Aroostook	0	0
Cumberland	10	6
Franklin	3	0
Hancock	1	1
Kennebec	7	1
Knox	0	0
Lincoln	2	0
Oxford	6	3
Penobscot	4	3
Piscataquis	0	0
Sagadahoc	0	0
Somerset	4	3
Waldo	2	1
Washington	0	1
York	4	1
Total	**47**	**21**

* A case can be counted under both STSS and GAS

Discussion

Cases of invasive GAS more than doubled from 2009 to 2010. 2010 is the first year during which GAS cases where further investigated to determine STSS status. Almost half (45%) of GAS cases resulted in STSS, and of those diagnosed with STSS, nearly half (48%) 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, 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/boh/ddc/epi/airborne/group-a.shtml
- Federal CDC's website: http://www.cdc.gov/ncidod/dbmd/diseaseinfo/groupastreptococcal_g.htm

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