



Infectious Disease Epidemiology Report

Babesiosis Surveillance Report, Maine - 2014



Background

Babesiosis is a parasitic disease transmitted through the bite of an infected deer tick (*Ixodes scapularis*). Patients may be asymptomatic or may experience symptoms including extreme fatigue, aches, fever, chills, sweating, dark urine, and anemia. Persons with underlying conditions such as asplenia are at higher risk of severe disease.

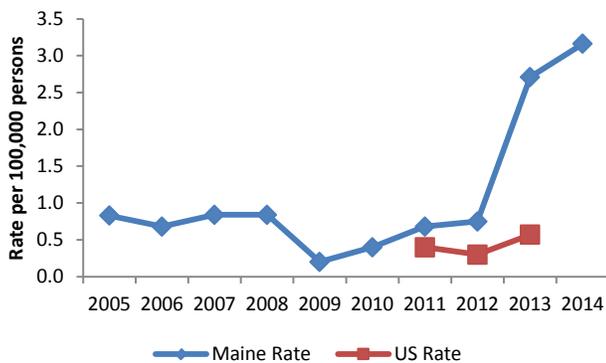
Methods

Babesiosis is a reportable condition in Maine and standardized case report forms are completed for all cases. Confirmed and probable cases are reported to federal CDC. Cases are classified using CSTE's case definition.

Results

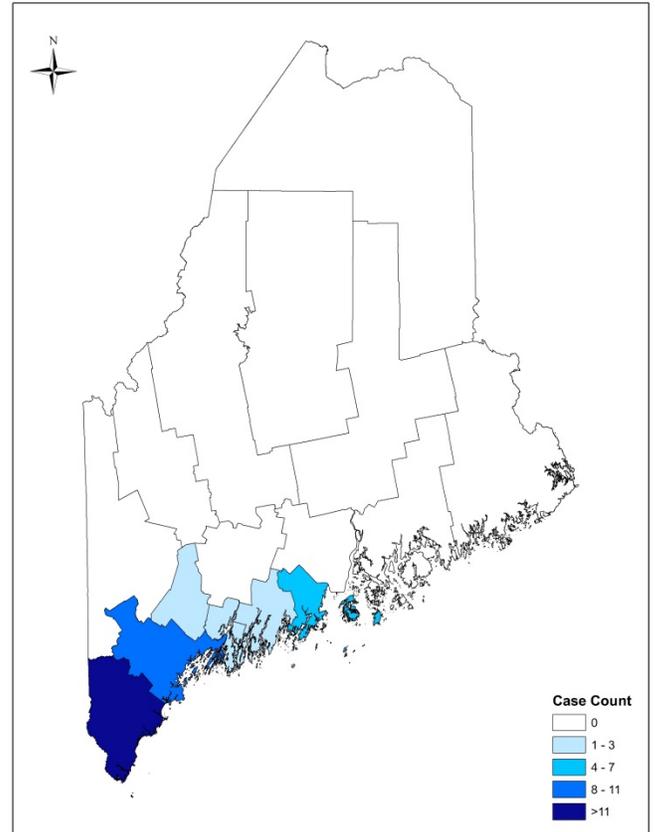
In 2014, a total of 42 confirmed and probable babesiosis cases were reported to Maine CDC. This represents a state case rate of 3.2 cases per 100,000 persons, a slight increase from 2013. (Figure 1). (Note: Babesiosis became nationally notifiable in 2011, US data is not available before that time).

Figure 1: Babesiosis incidence – Maine and US, 2005-2014



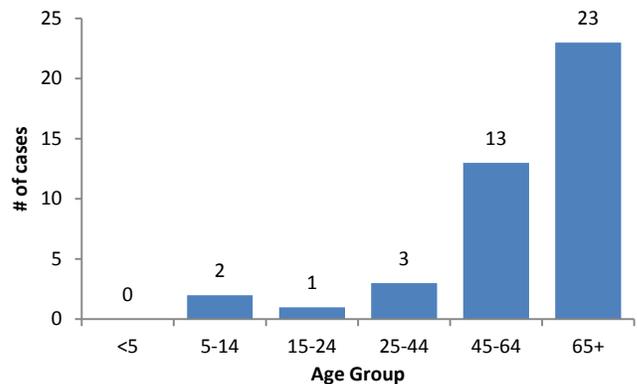
Babesiosis cases were reported in six Maine counties (Figure 2). These counties demonstrate the expected expansion of disease area as it follows the habitat of the deer tick.

Table 1: Confirmed and probable babesiosis cases, by county – Maine, 2014



Sixty-seven percent of babesiosis cases were male. The median age was 67 years, with a range from 8 to 92 years. Babesiosis affects adults more than children with the 65 years and older group having the most reported cases (Figure 3).

Figure 3: Babesiosis cases by age group – Maine 2014



Seventeen cases (40%) were hospitalized.

Babesiosis – Maine, 2014

Discussion

Lyme disease is firmly established in Maine, but there are other tick-borne illnesses that are becoming more common. The agents that cause anaplasmosis and babesiosis are transmitted by the same tick that carries Lyme disease, and the numbers of both of these diseases are on the rise. The number of cases of babesiosis increased again from 2013 to 2014.

A single tick can carry more than one pathogen. In 2014, there were twelve reported co-infections of Lyme disease and anaplasmosis, six reported co-infections of Lyme disease and babesiosis, one reported co-infection of Lyme disease and ehrlichiosis, and one reported co-infection of Lyme disease and ehrlichiosis/anaplasmosis undetermined.

Babesiosis is a risk to the blood supply, and blood donations are not currently screened for this disease. In 2014, three cases of babesiosis in Maine were identified through blood donation trace-backs. These individuals were not symptomatic, but carried the parasite in their blood which was transmitted to another individual through a blood transfusion.

Health care providers are encouraged to consider tick-borne diseases in patients with appropriate clinical presentations. Polymerase Chain Reaction (PCR) is the preferred method of testing for babesiosis.

Treatment for babesiosis is different than treatment for Lyme disease or anaplasmosis and a two drug combination is recommended. IDSA's clinical guidance is available at <http://cid.oxfordjournals.org/content/43/9/1089.full> and federal CDC's guidance is available at http://www.cdc.gov/parasites/babesiosis/health_professionals/index.html#tx.

Prevention

To lower the chances of contracting a tick-borne disease, measures should be taken to prevent tick bites both at home and while traveling:

- Using caution in tick-infested areas

- Using EPA-approved repellents on uncovered skin and clothing
- Wearing long sleeved shirts and long pants
- Checking for ticks after being outside
- Removing attached ticks with tweezers or a tick spoon immediately to avoid them becoming engorged
- Using "tick-safe" landscaping such as removing leaf litter, tall grass and brush, creating borders between woods and lawn and discouraging deer with physical barriers

All cases of babesiosis in Maine must be reported within 48 hours by calling 1-800-821-5821, or by faxing reports to 207-287-6865.

Ticks can be identified for free by UMaine Cooperative Extension: <http://extension.umaine.edu/ipm/tickid/>. Ticks will not be tested for presence of disease.

Additional information about babesiosis can be found at:

- Maine CDC
<http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/vector-borne/babesiosis/index.shtml>
- Federal CDC
<http://www.cdc.gov/parasites/babesiosis/>