

## DESCRIPTION

Most tick bites do not result in disease, but it is a good idea to recognize and watch for the early symptoms of some of the more commonly encountered tick-borne diseases. Lyme disease and human anaplasmosis (HA) are the two most common tick-borne diseases in Minnesota. Other tick-borne diseases that occur but are less common include: babesiosis, ehrlichiosis, Rocky Mountain Spotted Fever, Powassan virus, tularemia and southern tick-associated rash illness. Incidence of these tick-borne diseases may increase with climate change.<sup>1</sup>

## HOW ARE WE DOING

Lyme disease is the most common tick-borne disease in Minnesota with a rate of 23.6 cases per 100,000 population in 2016, which is based on 1,304 confirmed cases. Minnesota has the 10th highest rate for Lyme disease in the U.S.. Confirmed cases are based on clinical testing results, so numbers likely underrepresent the actual reality. While yearly numbers fluctuate, Lyme disease cases have been increasing since the 1990s. In Ramsey County in 2016, there were 84 confirmed cases of Lyme disease and 39 of human anaplasmosis. This was 6.4 percent of the state total for Lyme disease, and 5.3 percent for HA. The third most common tick transmitted disease was babesiosis. In 2016, there were five cases in Ramsey, 13 in the metro area, and 50 statewide.<sup>2</sup>

Tick transmitted disease rates were recorded from 2007 to 2015 and translated into risk levels by county in Minnesota; of the seven-county metro area, Ramsey County is one of five counties with moderate risk of tick-borne illness. Anoka County and Washington County rank "high risk."<sup>3</sup>

## DISPARITIES

For the tick transmitted disease anaplasmosis, 385 (63 percent) cases reported in 2015 were identified in men. The median age of cases was 58 years (range, 10 to 94 years), 14 years older than the median age of Lyme disease cases.<sup>1</sup>

## RISK FACTORS

Campers, hikers, hunters, farmers and people in outdoor occupations may be at higher risk in the counties known to have blacklegged ticks (deer ticks), including Ramsey County. Some people have been exposed to blacklegged ticks in their yard, especially in yards with a lot of brush and leaf litter or adjacent to woods.<sup>4</sup>

## WHAT RAMSEY COUNTY IS DOING

Ramsey County Parks and Recreation hands out tick information cards to help residents identify tick species, tips for preventing tick bites and how to remove a tick if one does bite. Off leash dog areas in local parks have tick warning and information signs.

Public Health works with partners across Ramsey County to address residents' concerns around tick-borne illness. Staff epidemiologists help community members identify signs and symptoms of Lyme disease and connect them to primary care. Parks and Recreation staff visit parks and other popular community venues to share information about tick-borne illness (in 2016, brochures, tick cards, and posters were shared with 292 venues). In addition, the tick lab at the Metropolitan Mosquito Control District offers free identification of ticks to locals as part of their ongoing Lyme disease surveillance work.

## Information to note

- The rate of Lyme disease in Minnesota has fluctuated over the years, but is increasing. It is the most common tick-borne disease in Minnesota with a rate of 23.6 cases per 100,000 population in 2016.

<sup>1</sup>Tickborne Diseases. Minnesota Department of Health Web site. <http://www.health.state.mn.us/divs/idepc/dtopics/tickborne/index.html>. Accessed September 14, 2017.

<sup>2</sup>Minnesota Department of Health Infectious Disease Surveillance. Minnesota Department of Health Web site. <http://www.health.state.mn.us/macros/topics/stats.html>. Accessed September 14, 2017.

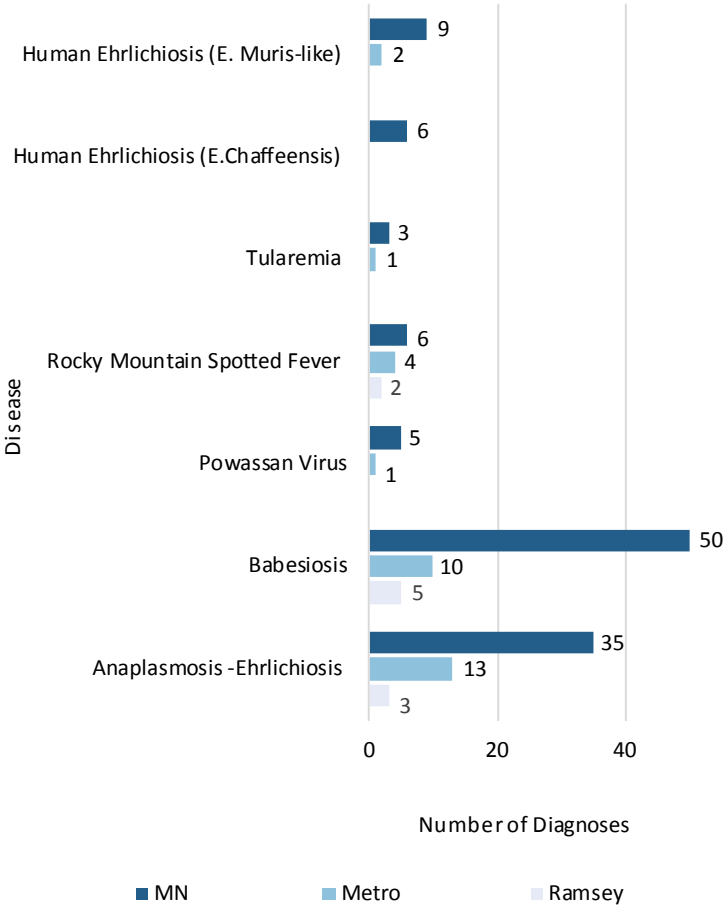
<sup>3</sup>Tickborne Disease Risk in Minnesota. Minnesota Department of Health Web site. <http://www.health.state.mn.us/divs/idepc/diseases/lyme/highrisk.pdf>. Accessed November 4, 2017.

<sup>4</sup>Preventing Tickborne Disease. Minnesota Department of Health Web site. <http://www.health.state.mn.us/divs/idepc/dtopics/tickborne/prevention.html>. Accessed September 14, 2017.

# Tick Transmitted Disease

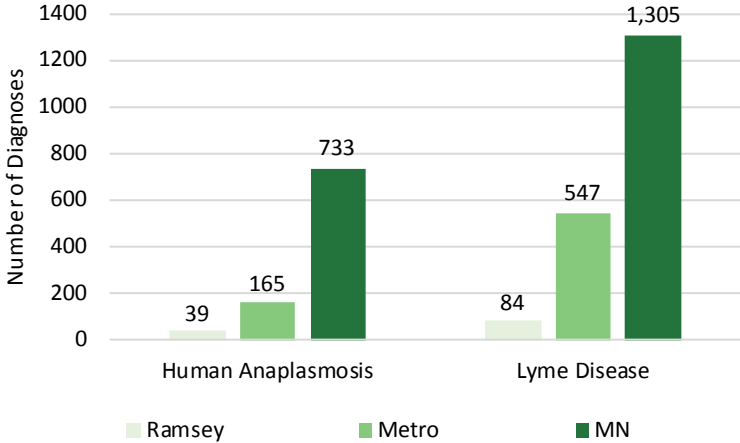
Tick Transmitted Disease figures

Select Tick Transmitted Diseases, Confirmed Cases, 2016



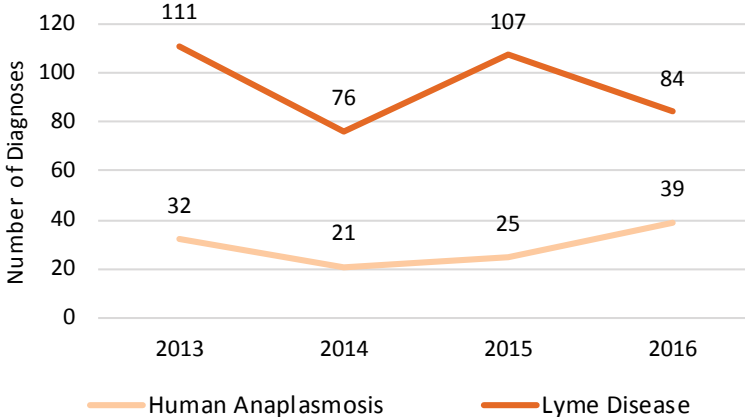
Source: Minnesota Department of Education Web site.<sup>5</sup>

Most Common Tick Transmitted Diseases, Confirmed Cases, 2016



Source: Minnesota Department of Health Web site.<sup>5</sup>

Top Tick Transmitted Diseases, Confirmed Cases, Ramsey County



Source: Minnesota Department of Health Web site.<sup>5</sup>

<sup>5</sup>Source: Minnesota Department of Health Infectious Disease Surveillance. Minnesota Department of Health Web site. <http://www.health.state.mn.us/macros/topics/stats.html>. Accessed September 14, 2017.