Babesiosis

Babesiosis is a Class B Disease and must be reported to the state within one business day.

Babesiosis is a parasitic tick-borne zoonotic disease caused by protozoa of the genus *Babesia*. The most common species of *Babesia* that causes illness in people is *Babesia microti*. In regions where *B. microti* is endemic, the primary reservoir host is the white-footed mouse (*Peromyscus leucopus*). These mice carry the parasite in their bloodstream and serve as a natural source of infection for ticks. The disease is then transmitted by ticks, *Ixodes scapularis* (also known as the deer tick or blacklegged tick), which has been found in most of the eastern and central United States. This is the same species of tick that spreads Lyme disease, though cases of babesiosis are less frequently identified. By most recent national data, the Centers for Disease Control and Prevention (CDC) reports there are about 1,700 cases in the U.S. each year, with 94% occurring in northeastern and upper Midwestern states. This geographical distribution of cases is similar to the distribution of Lyme disease.

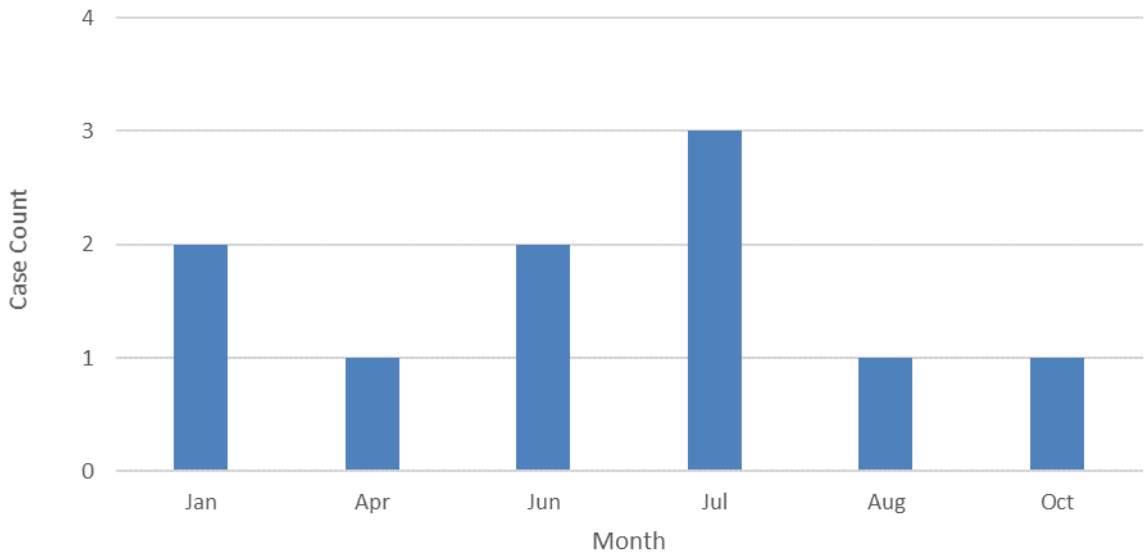
It is also possible to become infected with babesiosis through blood transfusions or congenital transmission – when an infection is passed from a mother to a baby during pregnancy. There is also a small risk that infected blood could be used in transfusions, although cases remains relatively rare.

Signs of infection includes mild to severe flu-like symptoms (such as fever, chills, sweats, headache, myalgia, arthralgia, malaise, fatigue, and weakness), which can last up to several weeks. Non-flu symptoms can include hemolytic anemia or jaundice. Severe disease can occur in the immunosuppressed or elderly and can have serious outcomes such as acute respiratory failure, congestive heart failure, liver and renal failure, splenic infarction, and disseminated intravascular coagulation.

There have only been ten reported cases of babesiosis in Louisiana since 2013. Six of these cases had recent travel to a midwestern or northeastern state prior to diagnosis, and one is suspected to have become infected during a blood transfusion. Cases have ranged in age from 28 years to 80 years, and 60% of reported cases in Louisiana have been males. Most have been residents of different parishes.

The *Babesia* parasite is most commonly spread by *I. scapularis* during the tick's nymphal stage, which is typically during warmer months. The CDC stated that about 82% of babesiosis cases in the U.S. in 2011 occurred between June and August. This seasonality is not as apparent in Louisiana due to the small amount of data (Figure 1).

Figure 1. Number of Cases of Babesiosis by Month - Louisiana, 2013-2023



Due to the difficulty in properly identifying a case of babesiosis, there are three ways that cases can be classified: confirmed, probable, or suspect. A confirmed case must have clinical symptoms and identification of *Babesia* organisms or DNA in blood samples. A probable case must have some form of lab evidence and either clinical symptoms or an epidemiological link to another case. A suspected case has lab evidence, but no symptoms or epidemiological information. In Louisiana, there have been five confirmed cases, three probable cases, and two suspect cases since 2013 (Figure 2).

Figure 2. Confirmed and Probable Cases of Babesiosis in Louisiana, 2013-2023