

Ehrlichiosis

2006 Case Total 47
2005 Case Total 96

2006 Rate 1.36 per 100,000
2005 Rate 2.78 per 100,000

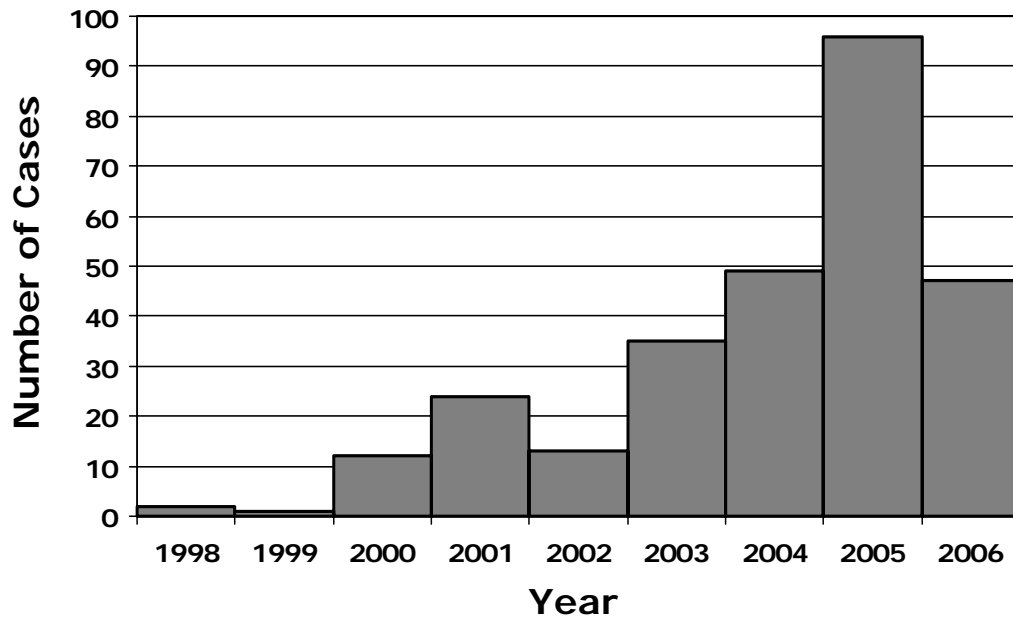
Forty-seven cases of ehrlichiosis were reported to the OSDH CDD in 2006, an incidence rate of 1.36 per 100,000 population. This is a decrease of 51% compared with 2005 (N=96) data. A similar decline was observed for RMSF and tularemia. Cases of ehrlichiosis were reported in 25 (32%) counties in Oklahoma. The counties with the highest incidence rates of ehrlichiosis were Pushmataha with a rate of 17.1 per 100,000 population, Jefferson with a rate of 14.7 per 100,000 population, Pittsburg with a rate of 11.4 per 100,000 population, Latimer with a rate of 9.4 per 100,000 population, and Okfuskee with a rate of 8.5 per 100,000 population. The highest number of cases came from Pittsburg (5) and LeFlore (3). The incidence of ehrlichiosis is higher in the eastern part of the state, which parallels with eastern Oklahoma's higher tick population.

The age of ehrlichiosis cases ranged from 2 to 81 years with a median age of 50 years. The age groups with the highest incidence rates were adults aged 50 to 59 years (3.4 per 100,000 population) followed by adults aged 60 to 69 years (2.2 per 100,000 population). Twenty-eight cases (60%) were male and nineteen (40%) were female. Thirty-five (75%) cases reported their race as white, nine (19%) as Native American, two (4%) as black, and one (2%) unknown. Native Americans had a rate of illness of 3.29 per 100,000 population which was 2.5 times higher than whites with a rate of 1.33 per 100,000 population. Native Americans disproportionately higher rates of illness may be correlated with their geographical distribution in the Oklahoma.

While cases were reported throughout the year, seventy-four percent were reported from May through August, which correlated with the period of increased tick vector activity. Symptoms reported by cases included fever (100%), headache (87%), myalgia (72%), anorexia (70%), nausea (64%), cramps (38%), rash (37%), dyspnea (36%), confusion (35%), and vomiting (33%). Twenty-three cases (49%) were hospitalized and 3 deaths were reported. All deaths were adult age and two deaths had a delay in diagnosis/treatment. Thirty-two (68%) cases reported a tick bite and thirty-one (66%) reported being in a wooded area during their exposure period.

Serologic testing is the most widely available laboratory method and used most frequently in testing for ehrlichiosis. It is important to measure both IgG and IgM antibody titer levels using paired serum specimens, first, during the acute stage of illness (within a week of onset) and again during the convalescent stage (2 to 4 weeks later) for case confirmation. Diagnosis is confirmed by a four-fold change in antibody titers. Treatment for ehrlichiosis should be initiated before lab confirmation, when there is a high suspicion of tickborne illness, to reduce the severity of the disease.

Reported Number of Ehrlichiosis Cases by Year, Oklahoma, 1998-2006



Rate of Reported Ehrlichiosis Cases by County of Residence, Oklahoma, 2006

