

Ehrlichiosis

2008 Case Total	121	2008 Rate	3.3 per 100,000
2007 Case Total	106	2007 Rate	3.1 per 100,000

One hundred twenty-one cases of ehrlichiosis were reported to the OSDH during 2008 resulting in an incidence rate of 3.3 per 100,000 population. The number of cases reported in 2008 is a 14% increase compared to the number of cases reported in 2007. There are two forms of human ehrlichiosis that primarily occur in the U.S., human monocytic ehrlichiosis (HME) and human granulocytic anaplasmosis (HGA). HME is the most common form of ehrlichiosis reported in Oklahoma. Eastern Oklahoma had higher incidence rates of ehrlichiosis due to its higher tick population. The counties with the highest rates of disease were Latimer county (28.41 per 100,000), followed by Craig county (26.43 per 100,000), then Pittsburg county (24.38 per 100,000 population). The majority of the cases reported occurred during the warmer months of the year. Eighty-eight percent of reported cases in Oklahoma occurred during the months of May through September. Thirty-eight percent of cases required hospitalization; no deaths due to ehrlichiosis were reported in 2008.

Serologic testing is the most widely available and frequently used laboratory method for diagnosis. It is important to collect both IgM and IgG antibody titer levels. Collections of acute (within a week of onset) and convalescent (2 to 4 weeks later) specimens are important to evaluate titer changes and confirm diagnosis. A single specimen is generally not diagnostic of an acute infection and may indicate past exposure. Diagnosis is confirmed by a four-fold change in antibody titers. Treatment for ehrlichiosis should be initiated before lab confirmation, when there is high suspicion of tickborne illness, to reduce the severity of disease. Doxycycline is the primary drug of choice for the treatment of ehrlichiosis.¹

Demographic and Clinical Summary of Reported Ehrlichiosis Cases, Oklahoma, 2008, (N=121)

	Frequency (%)	Rate/100,000
Gender		
Male	74 (61%)	4.11
Female	47 (39%)	2.55
Age	Median 38 Years (Range 11 months-79 Years)	--
Hospitalization	46 (38%)	--
Race		
White	89 (75%)	3.13
Native Hawaiian/Pacific Islander	1 (1%)	25.89
Native American/Alaska Native	20 (17%)	6.86
Asian	1 (1%)	1.59
2 or more Races	7 (6%)	4.72
Symptoms		
Fever	119 (98%)	--
Headache	99 (85%)	--
Myalgia	95 (83%)	--
Anorexia	83 (75%)	--
Rash	48 (42%)	--
Reported Exposures		
Exposed to a Wooded Area	98 (88%)	--
Tickbite	76 (78%)	--

1. Heymann, M.D., Control of Communicable Diseases Manual 19th Edition, APHA, 2008. Ehrlichiosis, pp 212-215.