

## Rocky Mountain spotted fever

2008 Case Total	267	2008 Rate	7.3 per 100,000
2007 Case Total	187	2007 Rate	5.4 per 100,000

In 2008, Oklahoma reported the highest incidence of Rocky Mountain spotted fever (RMSF) during the past 13 years, and remains one of the highest reporting states in the United States. The Centers for Disease Control and Prevention reports that Oklahoma and North Carolina together alone represent 35% of the cases reported in the United States<sup>2</sup>. Eastern Oklahoma has higher rates of disease due to its more favorable tick habitat. Counties with the highest incidence rates in 2008 were Roger Mills (117.51 per 100,000), Pushmataha (111.02 per 100,000), Latimer (66.28 per 100,000), and LeFlore (66.26 per 100,000). The seasonal distribution of RMSF peaks during the warmer months. Ninety-one percent of the cases reported in 2008 occurred during April through September (refer to cases by month graph).

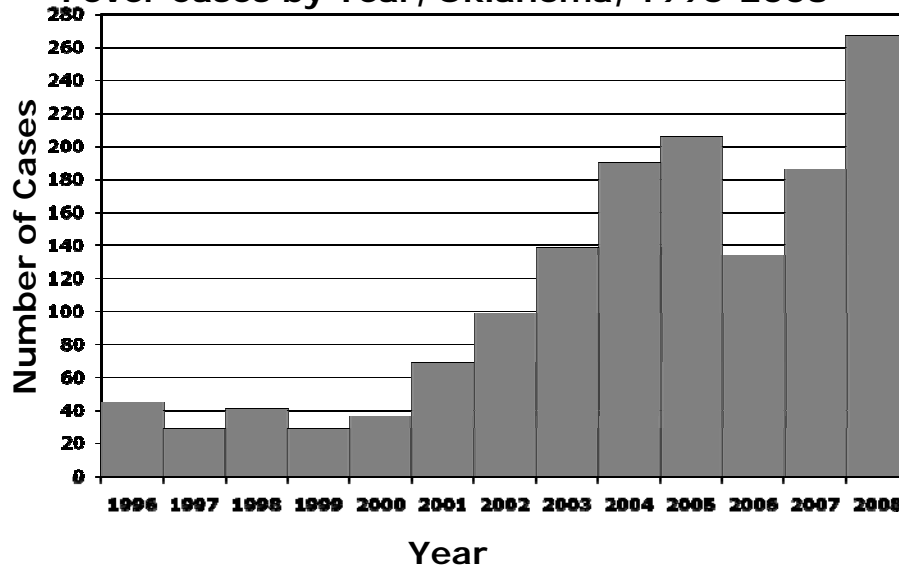
The age of RMSF cases ranged from 1 year to 108 years with a median age of 46 years. The highest incidence occurred in those 50-59 then 60-69 years old with a combined rate of 11.31 per 100,000 population. Overall, the rate among males was 1.65 times higher than that of females. The highest rates of RMSF were in the Native Hawaiian/Pacific Islander (55.77 per 100,000) followed by Native American/Alaska Native population (25.74 per 100,000), which are higher, 7.5 and 3.5 respectively, than the overall 2008 rate in Oklahoma of 7.33 per 100,000 population.

Serologic testing is the most widely available and frequently used laboratory method for diagnosis. A four-fold change in titer between acute (within a week of onset) and convalescent (2 to 4 weeks later) specimens confirms the diagnosis. A single specimen is generally not diagnostic of acute infection since it may indicate past exposure. Treatment for RMSF should be initiated before laboratory confirmation, when there is high suspicion of tickborne illness, to reduce the severity of disease. The recommended antibiotics for treatment are Tetracyclines, usually Doxycycline<sup>1</sup>.

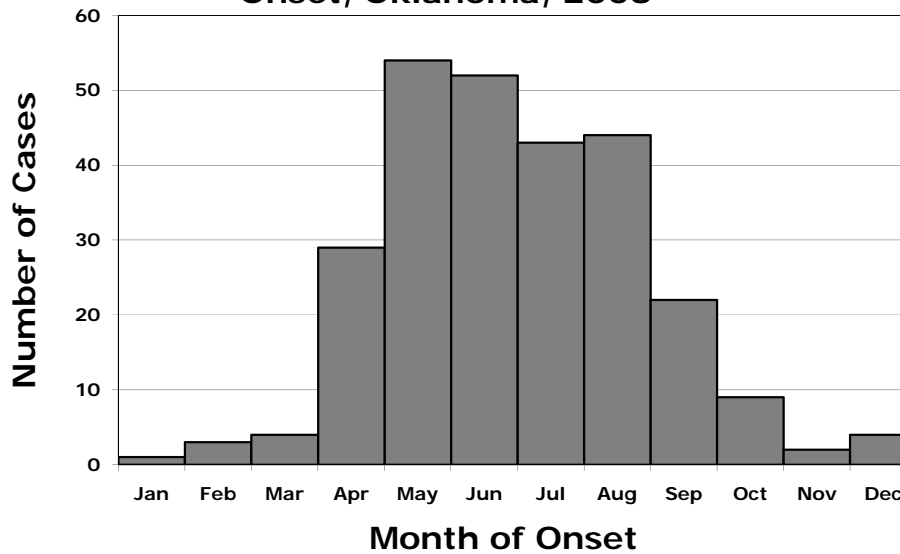
### Demographic and Clinical Summary of Reported Rocky Mountain Spotted Fever Cases, Oklahoma, 2008 (N=267)

	Frequency (%)	Rate/100,000
Gender		
Male	172(%)	9.56
Female	95(%)	5.15
Age	Median: 46 years (Range: 1 year -108 years)	
Hospitalization	52 (20%)	--
Deaths	No Deaths	--
Race		
White	152(61%)	5.34
African American	3(1%)	1.03
Native American / Alaska Native	75(30%)	25.74
Native Hawaiian/Pacific Islander	2(<1%)	51.77
2 or more races	19(8%)	12.82
Hispanic Ethnicity	4	1.44
Symptoms		
Fever	263(99%)	--
Headache	225(65%)	--
Malaise	231 (52%)	--
Chills	201(61%)	--
Myalgia	214(64%)	--
Rash	110(42%)	--
Reported Exposures		
Exposure to wooded area	222(68%)	--
History of tick bite	165(79%)	--

**Number of Reported Rocky Mountain Spotted Fever Cases by Year, Oklahoma, 1996-2008**



**Number of Reported Rocky Mountain Spotted Fever Cases by Month of Onset, Oklahoma, 2008**



1. Heymann, M.D., Control of Communicable Diseases Manual 19<sup>th</sup> Edition, APHA, 2008. Ehrlichiosis, pp 521-523.
2. Centers for Disease Control and Prevention Website, [http://www.cdc.gov/ticks/diseases/rocky\\_mountain\\_spotted\\_fever/statistics.html](http://www.cdc.gov/ticks/diseases/rocky_mountain_spotted_fever/statistics.html)