

Rocky Mountain Spotted Fever

2010 Case Total	235	2010 Incidence Rate	6.37 per 100,000
2009 Case Total	342	2009 Incidence Rate	9.32 per 100,000

In 2010, the incidence rate (IR) of Rocky Mountain spotted fever (RMSF) in Oklahoma represented a 32% decrease from 2009. However, the decline in RMSF cases may have partially been affected by changes in investigation processes; Acute Disease Service did not conduct investigations of all low RMSF serologic titers of 1:64. From 2001 to 2010, the median annual number of reported cases in Oklahoma was 189 (range = 69 to 342). Oklahoma continues to report one of the highest annual incidence rates in the United States; North Carolina, Oklahoma, Arkansas, Tennessee, and Missouri account for over 60% of the cases reported in the United States.ⁱ Eastern Oklahoma has higher rates of disease due to its more favorable tick habitat. Counties with the highest incidence rates in 2010 were Latimer (141.23 per 100,000, n = 15) and Pushmataha (67.73 per 100,000, n = 8); refer to the figure for the geographic distribution of cases. The seasonal distribution of RMSF is highest during the warmer months with the majority of the cases reported from April through September and peaking in June and July (45% of cases).

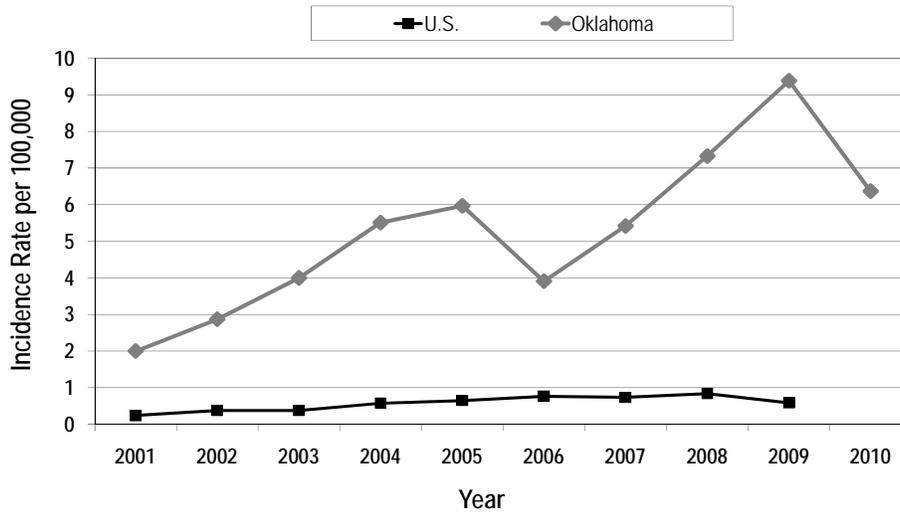
Overall, the IR among males was 2.5 times higher than that of females. The highest incidence of RMSF occurred among persons who reported their race as Native Hawaiian or Pacific Islander (76.01 per 100,000, n = 3) followed by Native American or Alaska Native (18.57 per 100,000, n = 55), which were 12 and 3 times higher respectively than the overall 2010 rate in Oklahoma.

Serologic testing is the most widely available and frequently used laboratory method for diagnosis. A four-fold change in titers 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.ⁱⁱ

Descriptive and Clinical Summary of Reported Rocky Mountain Spotted Fever Cases, Oklahoma, 2010 (N = 235)

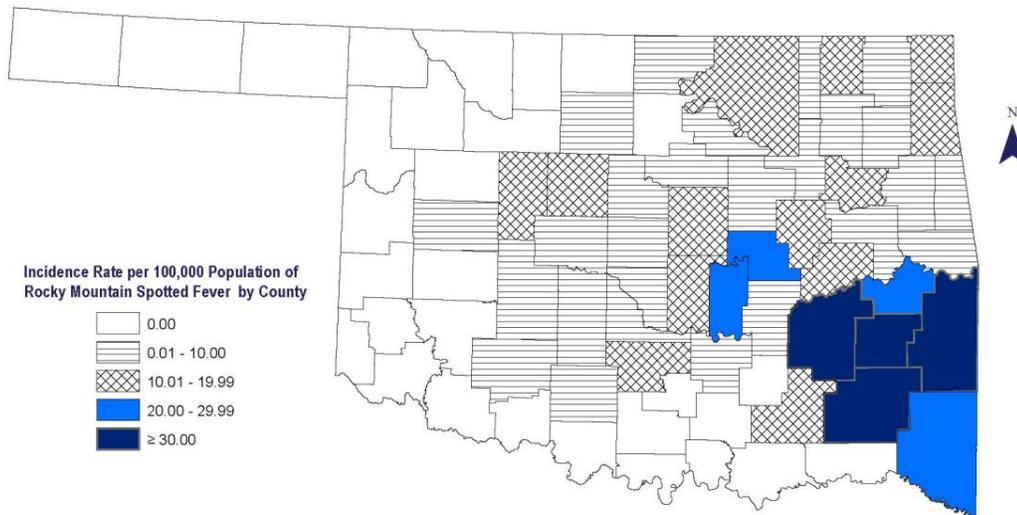
	Number (%)	Incidence rate per 100,000
Gender		
Male	166 (71%)	9.11
Female	69 (29%)	3.70
Age	Median Age: 13 months (Range: 13 months – 88 years)	
Race		
White	102 (43%)	3.55
American Indian or Alaska Native	55 (23%)	18.57
Black or African American	4 (2%)	1.35
Native Hawaiian or Pacific Islander	3 (1%)	76.01
Two or More Races	3 (1%)	1.98
Unknown	68 (29%)	--
Hispanic or Latino Ethnicity	3 (1%)	0.99
Unknown	102 (43%)	--
Symptoms		
Fever	235 (100%)	--
Headache	172 (73%)	--
Myalgia	128 (54%)	--
Chills	93 (40%)	--
Rash	80 (34%)	--
Reported Exposures		
Wooded or tick infested area	23 (10%)	--
Tick bite	93 (40%)	--
Hospitalized due to Rocky Mountain spotted fever	29 (12%)	--
Died due to Rocky Mountain spotted fever	0 (0%)	--

Incidence Rate of Reported Rocky Mountain Spotted Fever Cases by Year, Oklahoma and U.S., 2001-2010*



*U.S. 2010 Rate Unavailable

Incidence Rate of Rocky Mountain Spotted Fever Cases by County of Residence, Oklahoma, 2010 (N = 235)



Data Source: OK State Department of Health, Acute Disease Service

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ⁱ Centers for Disease Control and Prevention Website, <http://www.cdc.gov/rmsf/stats/>, accessed June 28, 2011.

ⁱⁱ Heymann, M.D., Control of Communicable Diseases Manual 19th Edition, APHA, 2008. Rocky Mountain Spotted Fever, pp 521-523.