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Spotted Fever Rickettsiosis (including Rocky Mountain Spotted Fever) (SFR, including RMSF) 2020 Case Definition | CDC  
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Spotted Fever Rickettsiosis (including Rocky Mountain Spotted Fever) (SFR, including RMSF)  
2020 Case Definition  
Spotted Fever Rickettsiosis (including Rocky Mountain Spotted Fever) (SFR, including RMSF)  
2020 Case Definition  
NOTE:  
A surveillance case definition is a set of uniform criteria used to define a disease for public health surveillance. Surveillance case definitions enable public health officials to classify and count cases consistently across reporting jurisdictions. Surveillance case definitions are not intended to be used by healthcare providers for making a clinical diagnosis or determining how to meet an individual patient’s health needs.  
CSTE Position Statement(s)  
19-ID-07  
Background  
Spotted fever rickettsioses (SFR), which captures cases of Rocky Mountain spotted fever (RMSF),  
Rickettsia parkeri  
rickettsiosis, Pacific Coast tick fever (caused by infection with  
Rickettsia  
species 364D), and others, are a group of diseases caused by spotted fever group  
Rickettsiae  
(SFGR). These pathogens cause acute febrile illnesses, with headache, malaise, thrombocytopenia, rash, and occasionally eschars (dark necrotic scabs at the site of tick or mite bite). RMSF, caused by  
R. rickettsii  
, is well recognized as the most severe rickettsial illness.  
Currently, only 3% of SFR cases are reported as confirmed, with most probable cases supported by a single serology titer. Antibodies to SFGR can rise in the first week of illness and stay elevated for months to years following infection. Data suggest that the prevalence of IgG antibodies reactive to SFGR in asymptomatic individuals may be more common than previously thought. The use of a single elevated IgG titer result for diagnosis may produce a skewed understanding of SFR epidemiology and national disease burden.  
Clinical Criteria  
Fever as reported by the patient or a healthcare provider,  
AND  
one or more of the following: rash, eschar, headache, myalgia, anemia, thrombocytopenia, or any hepatic transaminase elevation.  
Laboratory Criteria  
Confirmatory laboratory evidence:  
Detection of SFGR nucleic acid in a clinical specimen via amplification of a  
Rickettsia  
genus- or species-specific target by Polymerase Chain Reaction (PCR) assay,  
OR  
Serological evidence of a fourfold increase in IgG-specific antibody titer reactive with SFGR antigen by indirect immunofluorescence antibody assays (IFA) between paired serum specimens (one taken in the first two weeks after illness onset and a second taken two to ten weeks after acute specimen collection)\*,  
OR  
Demonstration of SFGR antigen in a biopsy or autopsy specimen by immunohistochemical methods (IHC),  
OR  
Isolation of SFGR from a clinical specimen in cell culture and molecular confirmation (e.g., PCR or sequence).  
Presumptive laboratory evidence:  
Serologic evidence of elevated IgG antibody at a titer ≥1:128 reactive with SFGR antigen by IFA in a sample taken within 60 days of illness onset.\*\*  
Supportive laboratory evidence:  
Serologic evidence of elevated IgG antibody at a titer <1:128 reactive with SFGR antigen by IFA in a sample taken within 60 days of illness onset.  
\*A four-fold rise in titer should not be excluded (as confirmatory laboratory criteria) if the acute and convalescent specimens are collected within two weeks of one another.  
\*\*This includes paired serum specimens without evidence of fourfold rise in titer, but with at least one single titer≥1:128 in IgG-specific antibody titers reactive with SFGR antigen by IFA.  
Epidemiologic Linkage  
None.  
Criteria to Distinguish a New Case from an Existing Case  
A person previously reported as a probable or confirmed case-patient may be counted as a new case-patient when there is an episode of new clinically compatible illness with confirmatory laboratory evidence.  
Case Classification  
Suspect  
A case with confirmatory or presumptive laboratory evidence of infection with no clinical information available,  
OR  
A clinically compatible case (meets clinical criteria) that has supportive laboratory evidence.  
Probable  
A clinically compatible case (meets clinical criteria) that has presumptive laboratory evidence.  
Confirmed  
A clinically compatible case (meets clinical criteria) that is laboratory confirmed.  
Related Case Definition(s)  
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Rickettsia  
spp.) | 2010 Case Definition  
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