LOCAL HEALTH DEPARTMENT DISEASE INVESTIGATION STEPS

NC REPORTABLE DISEASE/CONDITION	INFECTIOUS AGENT(S)
SPOTTED FEVER RICKETTSIOSIS (FORMERLY RMSF)	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) RMSF, caused by *R. rickettsii*, is well recognized as the most severe rickettsial illness.

PREPARING FOR INVESTIGATION	
KNOW THE DISEASE/CONDITION	• Read about Spotted Fever Rickettsiosis in the CD Manual. • See the case definition for Spotted Fever Rickettsiosis in the CD Manual. • Study the most current APHA *Control of Communicable Diseases Manual* • Refer to CDC MMWR: Diagnosis and Management of Tickborne Rickettsial Diseases: Rocky Mountain Spotted Fever and Other Spotted Fever Group Rickettsioses, Ehrlichioses, and Anaplasmosis — United States. May 13, 2016 / 65(2);1–44 Available from: https://www.cdc.gov/mmwr/volumes/65/rr/rr6502a1.htm
CONDUCTING INVESTIGATION	
COLLECT CLINICAL INFORMATION	• If patient hospitalized for this disease, obtain medical record (admission note, progress note, other lab report(s), and discharge summary). • Obtain healthcare provider clinical notes from date(s) of service for this disease/condition. Request SFR lab results for the preceding 10 weeks, this is especially important if the current titer is a convalescent sample. • Look for evidence in the medical record that supports clinical findings described in the case definition.

REVIEW LABORATORY INFORMATION	• Review laboratory report(s) specific to this disease.
	• Evaluate laboratory results to determine if requirements of the case definition are satisfied.
	  ◦ A single serum positive is laboratory supportive and may meet probable case definition.
	  ◦ IgG test results **greater than** 1:64 meet the laboratory supportive definition.
	  ◦ In NC it is not necessary to investigate a single IgG titer of <1:128. ELISA and IgM tests are not strongly supported for use in serodiagnosis and will not be used for surveillance purpose in NC.
	• Contact healthcare provider if further testing of the patient is indicated. If commercial testing was utilized, determine if testing of convalescent specimens was done or is planned. If the SLPH was utilized, pursue convalescent titers aggressively if still within 2 to 6 weeks of the acute test.

APPLY THE CASE DEFINITION	Use the case definition to determine if the clinical and laboratory findings meet the case definition criteria. The decision to report should not be based solely on laboratory findings. • Reportable cases of this disease must have reported **fever** ***and*** • at least one other clinically compatible symptom.
IMPLEMENTING CONTROL MEASURES	
ATTEMPT TO IDENTIFY SOURCE OF EXPOSURE	• Review clinical records for potential source(s) of exposure. • If probable source of exposure is not evident in clinical information, interview patient to obtain additional information.
COMPLETING INVESTIGATION	
REPORT TO NC COMMUNICABLE DISEASE BRANCH (CD)	• Update the existing event if already entered in NCEDSS, if event does not already exist, enter Part 1 and Part 2 Communicable Disease Reports into NC EDSS as a new event • Assign event to State Disease Registrar when case investigation complete.
SPECIAL CONSIDERATIONS	
STATE LABORATORY OF PUBLIC HEALTH (SLPH) TESTING	• In high profile cases, consider verifying the laboratory test results by sending specimen(s) to the SLPH/CDC for reference testing. Examples of high-profile cases: death of a child, multiple cases in one geographic area, etc. • Consider reference lab testing by SLPH/CDC for isolated cases with a high degree of suspicion for Rickettsial disease when commercial test results do not satisfy the CDC case definition if within time frames for obtaining serum samples or original serum samples can be recovered. • In cases of death, ensure specimens are not discarded and are available for testing.
RISK COMMUNICATION	• Consider risk communication messages to public and health professionals during the beginning of “tick season.”
ADDITIONAL INFORMATION	• **Rickettsial diseases can be life threatening, treatment of suspected cases should not be delayed waiting for laboratory confirmation of diagnosis and physicians should treat empirically when it is suspected.** • Rickettsial Diseases can occur concurrently with other tick-borne diseases.