Spotting Patients with Suspected Rocky Mountain Spotted Fever

Monitoring the transfer of patients with Rocky Mountain spotted fever from tribal lands to Maricopa County facilities with syndromic surveillance

Jennifer Collins, MPH | Sara Chronister, MPH
Maricopa County Department of Public Health
RMSF is a tick-borne **bacterial** disease often causing **non-specific** symptoms
Treatment should begin when RMSF is suspected.
RMSF is unique in AZ

1. Different tick vectors
   Brown dog tick

2. 

3. Children account for almost half of all cases...

4. ...the overall case-fatality rate is ~7%.

5. And developing a rash is not common.
First locally acquired RMSF case in Arizona

2003 RMSF endemic in Eastern AZ

2009 Individual from tribal lands transferred to MC hospital

2012 RMSF transfer protocol developed

2013
After transfer protocol initiated...

a Communication improved

b Still delays in notification

Disruptions in doxycycline administration
Syndromic surveillance solution:
RMSF TERMS

SYMPTOM TERMS

TRANSFER TERMS

LOCATION TERMS

ROCKY MOUNTAIN SPOTTED FEVER ALERT
1. Medical record review
2. Determine if high suspect case
3. Ensure RMSF is on differential & recommend the individual is treated with doxycycline
Limitation of using Syndromic Surveillance:

24+ hours
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24+ hours
Success using Syndromic Surveillance:
In June 2018, ESSENCE flagged

6 month old presented to hospital with fever, rash, decreased appetite, diarrhea
Upon medical record review...

a. Transferred to hospital 2 days prior

b. Infant scheduled for discharge within hours

Doxy to be discontinued
1. Call immediately placed to hospital
2. Explained importance of full doxy course, physician agreed
3. Discharged with full course of doxycycline
4. Transfer protocol initiated: MCDPH notified
An at-risk population was clearly identified.

Physician education was provided in a timely manner.

Patient care Improved.

The BioSense platform & ESSENCE more than proved its value – by helping to deliver life-saving guidance.