



Health Alert Network

Tri-County Health Department

Serving Adams, Arapahoe and Douglas Counties

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John M. Douglas, Jr., M.D. Executive Director

The pages that follow contain information critical to protecting the health of your patients and the citizens of Colorado.

HAN Advisory

Number of pages including cover: 3

Subject: **Advisory - Consider tularemia in the differential diagnosis for patients with fever of unknown origin 05/28/15.**

Message ID: 6/1/2015 11:30:00 AM

Recipients: HAN Community Members.

From: TRI-COUNTY HEALTH DEPARTMENT

Adams, Arapahoe and Douglas County, Colorado

Recipient Instructions: **Tri-County Health Department is forwarding you the attached HAN. You may have already received this broadcast if you are on the CDPHE distribution list, however, we wanted to ensure you did not miss this important information. No response is required.**

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You have received this message based upon the information contained within our Health Alert Network Notification System. If you have a different or additional e-mail or fax address that you would like us to use, or if you have additional questions, call 720-200-1477.

Categories of Health Alert Network Messages:

Health Alert: Conveys the highest level of importance; warrants immediate action or attention.

Health Advisory: Provides important information for a specific incident or situation; may not require immediate action.

Health Update: Provides updated information regarding an incident or situation; unlikely to require immediate action.

Info Service/Public Health Brief: Provides general information that is not necessarily considered to be of an emergent nature.

You may download a copy of this HAN from the TCHD website at
<http://www.tchd.org/259/Health-Alert-Network>



COLORADO

Department of Public
Health & Environment

Dedicated to protecting and improving the health and environment of the people of Colorado

HEALTH ALERT NETWORK BROADCAST

MESSAGE ID: 05292015 16:15

FROM: CO-CDPHE

SUBJECT: HAN Advisory - Consider tularemia in the differential diagnosis for patients with fever of unknown origin

RECIPIENTS: Local Public Health Agencies / Clinical laboratories/ Infection preventionists / EDs / ID Physicians

RECIPIENT INSTRUCTIONS: Local Health Public Health Agencies -please forward to healthcare providers

HEALTH ADVISORY

Consider tularemia in the differential diagnosis for patients with fever of unknown origin
5/28/15

*****Health care providers: Please distribute widely in your office*****

KEY POINTS:

- Three Colorado residents were diagnosed with tularemia during the week of May 18.
- Two had pneumonic tularemia and one had ulceroglandular tularemia
- All three were exposed to the bacterium through landscaping or gardening activities
- None of the three had direct animal contacts or insect or tick bites
- In 2014, 12 of 16 tularemia cases had similar, cryptic exposures
- Healthcare providers are advised to consider tularemia in patients presenting with fever of unknown origin who engage in outdoor activities working with soil or vegetation

BACKGROUND INFORMATION:

Tularemia is a disease caused by the gram negative bacterium *Francisella tularensis*. Tularemia normally circulates in nature in lagomorphs (rabbits and hares) and rodents such as voles, mice, and beaver. Last year Colorado experienced widespread tularemia activity in wildlife populations resulting in the widespread dispersion of bacteria in the environment. The tularemia bacterium can persist for long periods of time in soil, water, and decaying animal carcasses; thus the environment can pose an exposure risk.

In 2014 sixteen Colorado residents were diagnosed with tularemia infections. One case was exposed to tularemia through a tick bite, two by direct contact with dead rabbits, and one had an unknown exposure. The remaining 12 cases had cryptic exposures. Epidemiological investigations into these



cases determined those individuals were most likely exposed by engaging in outdoor leisure or occupational activities involving exposures to soil and vegetation. Most of these patients presented to healthcare with pneumonic or glandular tularemia. Eleven of the 16 patients had lymphadenopathy (inguinal, axillary, cervical, mediastinal and hilar). Patients reported temperatures ranging from 100.6 to 106°F.

Altogether these patients had 59 healthcare encounters, 20 of which were visits to urgent care centers or emergency departments. The average length of time a patient engaged in healthcare seeking before receiving appropriate antibiotic therapy for tularemia was 14.4 days (range 0 - 62 days). Eleven patients were ultimately hospitalized. It is likely that the cryptic nature of their exposures led to delays in diagnosis and treatment of tularemia.

RECOMMENDATIONS / GUIDANCE:

Healthcare providers are advised to consider a diagnosis of tularemia for patients presenting with fever of unknown origin who have engaged in outdoor leisure and occupational activities involving exposures to soil and vegetation. The state health department laboratory can test samples collected during the acute phase of illness for tularemia by PCR and culture. Examples of appropriate samples to collect for laboratory testing for suspect cases are, 1) whole blood drawn before antibiotic treatment is started, 2) swabs of ulcerations or materials from pustules, 3) biopsy tissues (e.g. from lungs), 4) lymph node aspirates, 5) sputum or pharyngeal washes, and 6) gastric aspirates.

Serological assays are not useful for tularemia diagnosis during the acute phase of illness. An antibody response (both IgM and IgG) can take a week or longer to develop. Serological testing is not available at the state health department laboratory. Serum samples should be sent out to commercial laboratories for timely turn-around.

Tetracycline (500 mg qid) or doxycycline (100 mg bid po) is recommended for treatment of mild cases of tularemia. Streptomycin (15 mg/kg every 12 hours IM) or gentamicin (1.5 mg/kg every 8 hours IV) is recommended for treatment of severe cases of tularemia.

Suspected cases of human tularemia should be reported to CDPHE (303-692-2700) or your local public health agency so that disease control measures can be implemented. Tularemia also poses a significant hazard in clinical laboratories, so alert the laboratory in advance that you suspect tularemia.

FOR MORE INFORMATION:

For more specific information about tularemia diagnosis and treatment go to [CDC - Clinicians - Tularemia](http://www.cdc.gov/tularemia/clinicians/index.html) [http://www.cdc.gov/tularemia/clinicians/index.html]. For questions or consultation you may call your local public health department or CDPHE at 303-692-2700.

