



Health Alert Network

Tri-County Health Department

Serving Adams, Arapahoe and Douglas Counties

Phone 303/220-9200 • Fax 303/741-4173 • www.tchd.org

Follow us on Twitter @TCHDHealth and @TCHDEmergency

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**

Message ID: 7/2/2015 4:00:00 PM

Recipients: HAN Community Members.

From: TRI-COUNTY HEALTH DEPARTMENT

Adams, Arapahoe and Douglas County, Colorado

Recipient Instructions: **For your information. No response required.**

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>



HEALTH ALERT NETWORK BROADCAST

MESSAGE ID: 07022015 11:55

FROM: CO-CDPHE

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

HEALTH ADVISORY

Consider tularemia in the differential diagnosis for patients with fever of unknown origin
7/2/15

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

KEY POINTS:

- Fifteen Colorado residents have been diagnosed with tularemia since May, 2015.
- Patient exposures have been primarily to soil and vegetation. This included mowing, landscaping, gardening and soil excavation. Fourteen of these cases had no direct contact with sick or dying animals or insects.
- Patients presenting with fever of unknown origin who engage in outdoor activities involving soil, vegetation and dust exposures should be evaluated for tularemia.
- Clinical laboratories can culture *F. tularensis* from blood, ulcerations, aspirates, sputum, or biopsy tissue (depending on the clinical presentation). If you suspect tularemia, please contact the lab in advance to alert them of your clinical suspicion as the organism grown in culture poses a risk to laboratory workers if not handled properly.
- The state health department laboratory can confirm *F. tularensis* isolates identified by clinical laboratories and can also test samples collected during the acute phase of illness for tularemia by PCR and culture; serological assays are not useful for tularemia diagnosis during the acute phase of illness.
- 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.

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 and this year Colorado has experienced extensive 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.

Fifteen cases of tularemia have been diagnosed in Colorado this year. Patient exposures are primarily to soil and vegetation. This includes mowing, landscaping, gardening and soil excavation. Other patients have been engaged in construction work, trail running, truck driving and camping.

The patients presented with pneumonic, glandular and ulceroglandular tularemia. Samples from nine patients were culture positive. These samples included material from pustules and abscesses, lymph node aspirates, BAL (broncho-alveolar lavage), lung tissue biopsies and blood. These clinical specimens are all recommended samples for the diagnosis of acute tularemia.

Most of the 15 reported patients sought healthcare with complaints of fever, often undulant. Gastrointestinal symptoms such as nausea, diarrhea, vomiting and sometimes abdominal pain were reported by the majority of patients, including those with pneumonic tularemia. Cough, sore throat, and chills were also commonly reported. The majority of patients reported in 2014 and 2015 demonstrated lymphadenopathy. Cervical lymphadenopathy is a typical finding in glandular cases. Submandibular, inguinal, axillary and subclavicular lymphadenopathy was also observed. Hilar and mediastinal lymph node enlargement is common with pneumonic tularemia cases. Patients presenting with pneumonic tularemia may complain of chest pain; several of the recent cases were initially evaluated for myocardial infarction. More than half of the 2015 cases were hospitalized.

RECOMMENDATIONS / GUIDANCE:

Healthcare providers should consider a diagnosis of tularemia in patients presenting with fever of unknown origin who have engaged in outdoor leisure and occupational activities involving exposures to soil, vegetation and dust. The state health department laboratory can test samples collected during the acute phase of illness for tularemia by PCR and culture. Questions about *F. tularensis* testing at the state public health laboratory should be directed to CDPHE at 303-692-2700.

Examples of appropriate samples to collect for laboratory testing for suspect cases are, 1) swabs of ulcerations or materials from pustules, 2) biopsy tissues (e.g. from lungs), 3) lymph node aspirates, 4) BAL, sputum or pharyngeal washes, 5) abscess materials, 6) gastric aspirates, and 7) whole blood drawn before antibiotic treatment is started [EDTA, purple top].

Serological assays are not useful for tularemia diagnosis during the acute phase of illness. An antibody response can take up to 2 weeks to develop. Serological testing is not available at the state health department laboratory. Serum samples from patients who have been ill for two or more weeks should be sent out to commercial laboratories.

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 so that staff can take extra precautions to protect themselves from exposure.

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.