



**DALLAS COUNTY
DEPARTMENT OF HEALTH AND HUMAN SERVICES
EPIDEMIOLOGY**

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To: Dallas County Healthcare Providers and Clinical Laboratory Staff

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Health Advisory: Imported Brucellosis

Dallas County Health and Human Services has confirmed a record number of 13 brucellosis infections in residents this year to date. All cases reported consuming unpasteurized cheese brought into the U.S. from Mexico by friends or relatives, unpasteurized cheese while traveling in Mexico, or unidentified cheese products from local street vendors. Only 2 to 6 cases are usually reported annually in Dallas, with 11 cases recorded in 2004. Affected patients in 2016 have ranged from 6 to 80 years of age, and typically required inpatient evaluation and treatment initiation. All *Brucella* infections were identified by blood culture. Two incidents of high-risk occupational exposures of hospital laboratory personnel have occurred during handling of these clinical *Brucella* isolates.

Brucella bacteria are slow-growing gram-negative coccobacilli that can infect livestock (e.g. cows, goats, sheep). The most common mode of transmission to humans is by consumption of unpasteurized dairy products originating from regions where brucellosis is endemic, such as Mexico, Central America and South America. Brucellosis is the most commonly reported laboratory-associated bacterial infection in the U.S., due to the ease of aerosolization in laboratory settings during workup of isolates, and low infectious dose of *Brucella*.¹

Onset of illness can be acute or insidious, following an incubation period ranging from weeks to months. Symptoms are nonspecific and predominantly include fever, fatigue, weakness, weight loss, night sweats, arthralgia and headache. Hepatomegaly, splenomegaly and cytopenias are common. Serious complications include osteomyelitis, meningitis and endocarditis. Prolonged treatment with combination antibiotics for weeks to months is required to reduce the risk of disease relapse. Diagnosis is best established by blood culture. Serological tests can additionally be performed on acute and convalescent serum. *Clinicians should be aware of the following recommendations:*

- Be alert for possible cases of brucellosis and elicit travel history and risk exposures from all patients with compatible clinical symptoms.
- When brucellosis is suspected, **inform the clinical (hospital or commercial) microbiology laboratory** so that laboratorians can take special precautions to prevent exposure.

Laboratorians are reminded to review published guidelines for prevention of *Brucella* exposures and management of post-exposure prophylaxis and follow-up. *Key laboratory safety processes include:*

- Incorporating controls that prevent work with slow-growing (gram-positive, gram-variable, or gram-negative) isolates from being done on open benches unless they have been identified as organisms that can be handled safely in a BSL-2 environment.²
- Immediately referring potential select agents to the DCHHS LRN laboratory when indicated, and notifying DCHHS epidemiology of all suspected brucellosis cases at (214) 819-2004.

1. www.cdc.gov/brucellosis/laboratories/risks.html; www.cdc.gov/brucellosis/laboratories/risk-level.html

2. www.aphl.org/programs/preparedness/Documents/APHL-Sentinel-Laboratory-Biothreat-Bench-Cards.pdf;
www.asm.org/index.php/guidelines/sentinel-guidelines.