

Brucellosis

2009 Case Total	2	2009 Rate	0.05 per 100,000
2008 Case Total	0	2008 Rate	0.00 per 100,000

Brucellosis is a systemic bacterial disease of acute or insidious onset resulting from zoonotic transmission. Common symptoms include continued, intermittent or irregular fevers, headache, weakness, sweating, chills, arthralgia, depression, weight loss, and generalized aching.¹ Brucellosis primarily occurs in those who work with infected animals or tissues.¹ Consumption of raw milk from infected cattle, sheep, and goats is another important risk factor.¹ Brucellosis is caused by *Brucella* species, usually *B. abortus*, *B. melitensis*, *B. ovis*, *B. suis*, and rarely *B. canis*.² Isolated cases of *B. canis* have been reported in animal handlers with contact with dogs.¹ Brucellosis is a reportable disease in Oklahoma; two cases were reported during 2009 to the Oklahoma State Department of Health. This summary describes the clinical and exposure history collected during the case investigation.

During May 2009, the OSDH Acute Disease Service (ADS) Epidemiologist-on-call was notified by the Choctaw County Health Department regarding an adult (50-59 year age group) female, Choctaw County resident, hospitalized with a three week history of intermittent fevers and right lower quadrant pain. Other symptoms included anorexia, chills, fatigue, headache, malaise, sweating, weakness, diarrhea, vomiting, and weight loss. *Brucella* species was isolated from a blood specimen indicating brucellosis. The isolate was forwarded to a public health reference laboratory where *Brucella canis* was confirmed by reverse transcriptase polymerase chain reaction (RT-PCR).

Upon interview, the individual reported owning multiple dogs, one of which gave birth to a litter of puppies during March 2009. All of the puppies died within a few hours after birth. Serum was collected from two dogs by a local veterinarian for *Brucella* serologic testing; both dogs had elevated antibody levels for *Brucella canis*. The case's spouse, who assisted with the delivery of the puppies, also became ill with intermittent fevers, chills, and a cough approximately one week exposure to the puppies during delivery. Paired sera specimens collected from the spouse were negative for *Brucella* antibodies; however, the individual was placed on doxycycline based on clinical presentation and exposure history. This individual was classified as a probable case of brucellosis since he had a clinically compatible presentation and was epidemiologically linked to a confirmed case.

Healthcare providers should report suspected cases of brucellosis to the OSDH ADS for investigation and coordination of submitting clinical specimens for confirmatory testing. The treatment of choice for brucellosis is combination therapy with doxycycline and rifampicin or streptomycin for at least six weeks¹. Relapse rates can be as high as 50% with monotherapy¹. More information on brucellosis is available at the ADS website at <http://ads.health.ok.gov/>.

References:

¹Heymann, David L., Editor. Control of Communicable Diseases Manual. 19th Edition. American Public Health Association, 2008.

²Corbel MJ Brucellosis: An overview. Emerg Infect Dis 1997;3:213-21