



The Austin/Travis County Health and Human Services (ATCHSD) received their first confirmed¹ Typhus report on May 22, 2009. As of 1:00 PM on May 29, 2009, three additional probable cases of typhus have been identified in Travis County. The ages of the confirmed and probable¹ cases ranged from 9 to 61 years. At the time of this report, 75% of the cases have been hospitalized. Fever, headache and malaise were present in 75% of the cases. Symptoms of chills, myalgia, and anorexia were present in 25% of the reported cases. Onset of illness in these cases occurred between April 29 through May 6, 2009.

To date, cases reside in the Austin zipcodes of 78703, 78704 and 78752. Seventy-five percent of the cases reported having pets or wildlife near or in their homes.

When assessing patients presenting with: high fever **and/or** headache, chills, body aches and pains, rash (half of cases will develop rash on chest, back, arms or legs) **and** potential exposure to domestic pets or wildlife that could harbor fleas, please consider typhus in the differential diagnosis. Early antibiotic treatment can shorten illness and prevent further complications. Case definition and lab confirmation are defined below.

A summary of 2008 Typhus cases in Travis County can be found at: <http://www.dshs.state.tx.us/region7/documents/EPI/Epi-Report08Q4.pdf>, page 4 of the TDSHSR7 Epidemiology and Surveillance Quarterly Newsletter.

¹ Texas Department of State Health Services, Infectious Disease Control Unit, Epi Case Criteria Guide, 2009, January 2009.

Case Definition/Case Classification

Murine typhus is a rickettsial disease, with variable onset, often sudden and marked by headache, chills, prostration, fever and general pains. A macular eruption appears on the fifth to sixth day, initially on the upper trunk, followed by spread to the entire body, but usually not to the face, palms or soles. Toxemia is usually pronounced, and the disease terminates by rapid defervescence after about 2 weeks of fever. The case-fatality rate for all ages is less than 1% but increases with age. Absence of louse infestation, geographic and seasonal distribution and sporadic occurrence of the disease help to differentiate it from louseborne typhus.

Confirmed: Clinically compatible case that is laboratory confirmed

Probable: Clinically compatible case with supportive laboratory results:

- IFA serologic titer of ≥ 128 , or
- a single CF of ≥ 16 , or
- other supportive serology (single titer ≥ 128 by an LA, IHA, or MA test)

Lab Confirmation Tests

Fourfold or greater rise in antibody titer to *Rickettsia typhi* or *Rickettsia felis* antigen by indirect fluorescent antibody (IFA), complement fixation (CF), latex agglutination (LA), microagglutination (MA), or indirect hemagglutination antibody (IHA) test in acute – and convalescent – phase specimens ideally taken at least 3 weeks apart, or

- Positive PCR assay to *R. typhi* or *R. felis*, or
- Demonstration of positive IF of skin lesion (biopsy) or organ tissue (autopsy), or
- Isolation of *R. typhi* or *R. felis* from clinical specimen
- In South Texas areas where murine typhus is endemic, clinically compatible cases with IgM titers of $\geq 1:1024$ are considered confirmed cases. IgG results alone will not be considered.

Note: The IFA test is most commonly used for laboratory confirmation, but it does not discriminate between louse-borne and murine typhus unless the sera are differentially absorbed with the respective rickettsial antigen prior to testing.