I. IDENTIFICATION

A. CLINICAL DESCRIPTION: An illness characterized by acute or insidious onset of fever and one or more of the following: night sweats, arthralgia, headache, fatigue, anorexia, myalgia, weight loss, arthritis/spondylitis, meningitis, or focal organ involvement (endocarditis, orchitis/epididymitis, hepatomegaly, splenomegaly).

B. REPORTING CRITERIA: Clinical diagnosis with confirmatory or presumptive laboratory results.

C. LABORATORY CRITERIA:

Laboratory confirmatory
- Culture and identification of *Brucella* spp. from clinical specimens
- Evidence of a fourfold or greater rise in *Brucella* antibody titer between acute- and convalescent-phase serum specimens obtained greater than or equal to 2 weeks apart

Laboratory presumptive
- *Brucella* total antibody titer of greater than or equal to 160 by standard tube agglutination test (SAT) or *Brucella* microagglutination test (BMAT) in one or more serum specimens obtained after onset of symptoms
- Detection of *Brucella* DNA in a clinical specimen by PCR assay

D. WISCONSIN CASE DEFINITION:

*Confirmed:* A clinically compatible illness with confirmatory laboratory evidence of *Brucella* infection

*Probable:* A clinically compatible illness with at least one of the following:
- Epidemiologically linked to a confirmed human or animal brucellosis case
- Presumptive laboratory evidence, but without confirmatory laboratory evidence, of *Brucella* infection

II. ACTIONS REQUIRED / PREVENTION MEASURES

A. WISCONSIN DISEASE SURVEILLANCE CATEGORY II:
   Report to the patient’s local health department either electronically through the Wisconsin Electronic Disease Surveillance System (WEDSS), by mail or fax using an Acute and Communicable Disease Case Report (F-44151), or by other means within 72 hours upon recognition of a case or suspected case.

B. EPIDEMIOLOGY REPORTS REQUIRED:
   - *Electronically* – Report through WEDSS, including appropriate disease-specific tabs
   - *Paper Copy* – Acute and Communicable Diseases Case Report (F-44151) AND Brucellosis Report Form

C. PUBLIC HEALTH INTERVENTIONS:

1. In accordance with Wisconsin Administrative rule DHS 145.05, local public health should follow the methods of control recommended in the current edition of *Control of*
Wisconsin Division of Public Health Communicable Disease Surveillance Guideline


2. **Source investigation by LHD**
   Search for history of exposure to infected animals (including dogs) or animal products (especially unpasteurized milk and cheese) and trace to place of origin. Obtain travel history. Inquire about exposure to microbiology laboratory settings, because multiple cases have been traced to clinical laboratory exposures. Additionally, check for history of exposure to the brucellosis vaccine used in livestock, since this is a live vaccine. Infections with either the cattle vaccine strain (*B. abortus* RB51) or with *B. canis* typically do not produce a detectable antibody response on standard serologic tests, although both agents can be cultured using standard microbiological methods.

3. If there is an isolate of *Brucella*, determine which lab(s) performed the isolation and identification of the bacterium. CDES can advise on the potential for exposure of laboratorians and the need for postexposure monitoring and prophylaxis of lab staff.

**III. CONTACTS FOR CONSULTATION**

A. **LOCAL HEALTH DEPARTMENT – REGIONAL OFFICES – TRIBAL AGENCIES:**

B. **BCDER / COMMUNICABLE DISEASE EPIDEMIOLOGY SECTION:** (608) 267-9003

C. **WISCONSIN STATE LABORATORY OF HYGIENE / BACTERIOLOGY:** (608) 263-3421

**IV. RELATED REFERENCES**

- Centers for Disease Control and Prevention. Laboratory-Acquired Brucellosis --- Indiana and Minnesota. MMWR 2008;57(02):39-42. [http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5702a3.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5702a3.htm)
- CDC Brucellosis webpage - [http://www.cdc.gov/ncidod/dbmd/diseaseinfo/brucellosis_g.htm](http://www.cdc.gov/ncidod/dbmd/diseaseinfo/brucellosis_g.htm)