Communicable Disease Case Reporting and Investigation Protocol
LEGIONELLOSIS (LEGIONNAIRES’ DISEASE, PONTIAC FEVER)

I. IDENTIFICATION AND DEFINITION OF CASES
A. Clinical Description: An illness with acute onset that can take two distinct forms:
   • Legionnaires’ disease, which is characterized by fever, cough, myalgia, and clinical or radiographic pneumonia.
   • Pontiac fever, a similar but milder illness without pneumonia.
B. Laboratory Criteria:
   • Confirmatory laboratory evidence:
     o By culture: Isolation of any Legionella organism from respiratory secretions, lung tissue, pleural fluid, or other normally sterile fluid.
     o By detection of Legionella pneumophila serogroup 1 antigen in urine using validated reagents.
     o By seroconversion: Fourfold or greater rise in specific serum antibody titer to Legionella pneumophila serogroup 1 using validated reagents.
   • Supportive laboratory evidence:
     o By seroconversion: Fourfold or greater rise in antibody titer to specific species or serogroups of Legionella other than L. pneumophila serogroup 1 (e.g., L. micdadei, L. pneumophila serogroup 6).
     o By seroconversion: Fourfold or greater rise in antibody titer to multiple species of Legionella using pooled antigen and validated reagents.
     o By detection of specific Legionella antigen or staining of the organism in respiratory secretions, lung tissue, or pleural fluid by direct fluorescent antibody (DFA) staining, immunohistochemistry (IHC), or other similar method, using validated reagents.
     o By detection of Legionella species by a validated nucleic acid assay (RT-PCR).
C. Wisconsin Surveillance Case Definition:
   • Confirmed: A clinically compatible case that meets one of the confirmatory laboratory criteria for diagnosis.
   • Probable: A clinically compatible case that meets one of the supportive laboratory criteria for diagnosis.

II. REPORTING
A. Wisconsin Disease Surveillance Category II – Methods for Reporting: This disease shall be reported to the patient’s local health officer or to the local health officer’s designee within 72 hours of recognition of a case or suspected case, per Wis. Admin. Code § DHS 145.04 (3) (b). Report electronically through the Wisconsin Electronic Disease Surveillance System (WEDSS), or mail or fax a completed Acute and Communicable Disease Case Report (F-44151) to the address on the form.
B. Responsibility for Reporting: According to Wis. Admin. Code § DHS 145.04(1), persons licensed under Wis. Stat. ch. 441 or 448, laboratories, health care facilities, teachers, principals, or nurses serving a school or day care center, and any person who knows or suspects that a person has a communicable disease identified in Appendix A.
C. Clinical Criteria for Reporting: Clinically compatible illness.
D. Laboratory Criteria for Reporting: Laboratory evidence of infection by culture or non-culture-based methods. All positive results should be reported.

III. CASE INVESTIGATION
A. Responsibility for case investigation: It is the responsibility of the local health department (LHD) to investigate or arrange for investigation of suspected or confirmed cases as soon as is reasonably possible. A case investigation may include information collected by phone, in person, in writing, or through review of medical records or communicable disease report forms, as necessary and appropriate.
B. Required Documentation:
1. Complete the WEDSS disease incident investigation report, including appropriate, disease-specific tabs.
3. Upon completion of investigation, set WEDSS disease incident process status to “Sent to State.”

C. Additional Investigation Responsibilities
1. Assess patient’s risk for possible nosocomial transmission (e.g., transmission in a health care setting or long-term care facility). If nosocomial transmission is suspected, notify the Wisconsin Division of Public Health (DPH), Bureau of Communicable Diseases (BCD).
2. Determine whether the case is potentially outbreak-related and, if so, notify the BCD.

IV. PUBLIC HEALTH INTERVENTIONS AND PREVENTION MEASURES

B. Strongly encourage clinicians to attempt to culture the organism from clinical specimens (e.g., lower respiratory secretions, lung tissue, pleural fluid, or other normally sterile fluid) prior to the initiation of antibiotic therapy.


V. CONTACTS FOR CONSULTATION
A. Local health departments and tribal health agencies: https://www.dhs.wisconsin.gov/lh-depts/index.htm

B. Bureau of Communicable Diseases, Communicable Diseases Epidemiology Section: 608-267-9003

C. Wisconsin State Laboratory of Hygiene: 1-800-862-1013

VI. RELATED REFERENCES


C. Centers for Disease Control and Prevention website: https://www.cdc.gov/legionella/index.html