

Q Fever

Agent: *Coxiella burnetii* (bacteria)

Mode of Transmission: Inhalation of air contaminated with dried placental material, birth fluids, or excreta of infected animals; direct exposure to infected animals or tissues; exposure to contaminated material, such as wool, straw, fertilizer, or laundry.

Signs/Symptoms: Acute infections are characterized by high fever, severe headache, malaise, muscle aches, confusion, non-productive cough, nausea, diarrhea, abdominal pain, and/or chest pain. Patients may have abnormal results on liver function tests and some develop hepatitis. Chronic Q fever is a severe disease occurring in <5% of acutely infected patients. It may present within 6 weeks after an acute infection, or may manifest years later. The three groups at highest risk for chronic Q fever are pregnant women, immunosuppressed persons and patients with a pre-existing heart valve defect. Endocarditis is the major form of chronic disease, comprising 60-70% of all reported cases. The estimated fatality rate in untreated patients with endocarditis is 25-60%.

Prevention: Preventive measures include appropriate disposal of potentially infectious tissues and proper hygiene when handling animal birth material.

Other Important Information: Cattle, sheep and goats are the main natural reservoirs for *C. burnetii*. The infectious form of these bacteria is highly resistant to heat, desiccation, and disinfectant substances and can persist in the environment for long periods of time. Windborne particles containing infectious organisms can travel a half-mile or more, contributing to sporadic cases with no known animal contact. This bacterium is classified by the CDC as a potential bioterrorism agent because it could easily be disseminated and result in a moderate amount of illness.

Three cases of Q fever, two chronic and one acute, were reported in 2011. This was one more case than was reported in 2010, and similar to the five-year average of 2.6 cases per year. Two of the cases were residents in the northwest region while one case resided in the central region. All three of the cases occurred in adult males. One case was associated with exposure to livestock and birthing processes, while the second case may have been exposed during employment at a poultry plant, and the third may have been exposed during several military tours of duty in Iraq and Afghanistan.