

Coxiellosis (Q-Fever) Summary Guidance for Veterinarians

Agent	<p><i>Coxiella burnetii</i> (strictly intracellular gram negative bacteria)</p> <ul style="list-style-type: none"> Highly resistant and can survive week-months in the environment
Susceptible species	<ul style="list-style-type: none"> Livestock reservoirs: sheep, cattle, goats Can infect: humans, birds, dogs, cats, wild mammals and marine mammals
Occurrence in BC and the world	<ul style="list-style-type: none"> Worldwide distribution, except New Zealand Enzootic in BC, 0-3 cases per year in sheep, cattle and goats (1998-2011); The true incidence is likely higher. 7 documented human cases of Q fever in BC, 1998-2011
Transmission	<ul style="list-style-type: none"> Aerosol or direct contact, tick transmission believed important in wildlife, and can also spread to domestic ruminants <i>C. burnetii</i> is shed in massive amounts during parturition, also shed in milk, feces and urine
Diagnosis <i>Clinical</i>	<p>Variable incubation period, usually 2-3 weeks</p> <ul style="list-style-type: none"> Usually subclinical infection, may be lifelong Sheep, cattle, goats: anorexia and reproductive disease including abortion, infertility and retained placenta Dogs: fever, neurological syndrome with vasculitis, lethargy, anorexia, ataxia and seizures Cats: anorexia, lethargy, fever and abortion <p><i>Differential diagnoses (ruminants): other causes of abortion, infectious and non infectious</i></p>
Laboratory	<p>Culture, immunohistochemical, and PCR tests to identify <i>C. burnetii</i> in tissues. A number of serological tests are available.</p>
Prevention and control	<ul style="list-style-type: none"> Prevention through maintaining closed herd/flock and tick control Control through isolation of infected pregnant animals and appropriate disposal of reproductive waste. Regular cleaning, especially of birthing areas.
Zoonotic implications	<ul style="list-style-type: none"> Q fever is usually asymptomatic or mild in humans, although a few people develop serious disease Human outbreaks can result from the inhalation of aerosolized organisms. More often, sporadic cases occur in people due to occupational exposure to ruminants
Reporting	<ul style="list-style-type: none"> Q fever is a reportable disease to the Chief Veterinary Officer (CVO) in BC <ul style="list-style-type: none"> All <u>suspect and confirmed</u> cases should be reported within 24 hours (604-556-3013) Veterinarians may be contacted by public health authorities for follow-up Q fever is an annually notifiable disease to the CFIA <ul style="list-style-type: none"> All veterinary laboratories are required to comment on Canada's report to the OIE