### Coxiellosis (Q-Fever) Summary Guidance for Veterinarians

**Agent**  
*Coxiella burnetii* (strictly intracellular gram negative bacteria)  
- Highly resistant and can survive week-months in the environment

**Susceptible species**  
- Livestock reservoirs: sheep, cattle, goats  
- Can infect: humans, birds, dogs, cats, wild mammals and marine mammals

**Occurrence in BC and the world**  
- 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**  
- Aerosol or direct contact, tick transmission believed important in wildlife, and can also spread to domestic ruminants  
- *C. burnetii* is shed in massive amounts during parturition, also shed in milk, feces and urine

**Diagnosis**  
- **Clinical**  
  - Variable incubation period, usually 2-3 weeks  
  - 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  

  **Differential diagnoses (ruminants): other causes of abortion , infectious and non infectious**

- **Laboratory**  
  - Culture, immunohistochemical, and PCR tests to identify *C. burnetii* in tissues. A number of serological tests are available.

**Prevention and control**  
- 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**  
- 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**  
- Q fever is a reportable disease to the Chief Veterinary Officer (CVO) in BC  
  - All suspect and confirmed 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  
  - All veterinary laboratories are required to comment on Canada's report to the OIE