

## Canine Influenza FAQs for Veterinary Clinics

The current outbreak of canine influenza in Minnesota has left many veterinarians with questions about handling these cases. If you don't find the answer to your question below, please reach out to the Board at [companion.animal@state.mn.us](mailto:companion.animal@state.mn.us).

### What is some basic information about canine influenza?

- Canine influenza is a highly contagious respiratory disease caused by an influenza A virus.
- There are two types of canine influenza virus (CIV):
  - H3N8- originated in horses, typically more mild clinical signs, shorter viral shedding time
  - H3N2- originated in birds, moderate to severe clinical signs, long viral shedding time
- CIV is canine specific, although H3N2 can infect cats.
- No human infection with CIV has ever been reported worldwide.

### How is CIV transmitted?

- The virus is carried in respiratory secretions and has an aerosol spread of four feet.
- Direct dog-to-dog contact is the most important mode of transmission, although the virus can remain infectious in the environment for 24-48 hours untreated. Fomite spread has played an important part in this outbreak.
- CIV enters the body through mucus membranes.
- H3N8 viral shed can last 7 days post infection
- H3N2 viral shed can last up to 30 days post infection

### What are the clinical signs, disease progression, and prognosis of canine influenza?

- Clinical signs typically begin 2-4 days after infection.
- Signs include:
  - Cough
  - Fever
  - Ocular and nasal discharge
  - Inappetence or anorexia
  - Lethargy
  - Hard swallowing or excessive throat clearing

- Some infected dogs do not display clinical signs.
- Can progress into viral pneumonia or secondary bacterial infections.
- 5-percent fatality rate.
- Majority of dogs have mild to moderate clinical signs that resolve in 2-3 weeks.

## What is the treatment?

- Supportive care with or without antibiotics as indicated.
- The use of antiviral medications is not recommended.

## What about the vaccine?

- Vaccination may not prevent infection but decreases severity of clinical disease and decreases amount and duration of viral shedding.
- Monovalent vaccines can be used if virus type is known during an outbreak but generally the bivalent vaccine is preferred.
- Vaccination is recommended for dogs who participate in higher risk activities (dog parks, boarding, day-care, etc.).
- Vaccination can be used in an outbreak setting to decrease the spread of disease.
- As of April 2023, the vaccine is currently on manufacturer backorder with an expected availability date of mid-May 2023.

## Is testing available?

- PCR
  - Nasal and deep pharyngeal swabs, can swab both sites with the same swab
  - Test is looking for a part of the matrix gene on the viral RNA
  - Sample transport is important
    - Do not use wooden stick swabs- plastic sticks only
    - Do not put sample swab in transport gel- it interferes with test
    - Call specific lab for their transport requirements- some like swab and small amount of sterile saline in sterile red or white top tube, others like dry sample swab in sterile red or white top tube
    - University of Minnesota Veterinary Diagnostic Laboratory (VDL) suggests 0.5-1ml sterile saline in a sterile red or white top tube with swab cut to length to fit.
  - Many commercial labs and state veterinary diagnostic labs offer this test.
  - UMN VDL will run CIV PCR alone as well as part of a respiratory panel which is some cost savings compared to running alone.
  - **IMPORTANT:** PCR commonly gives false negatives.
    - Need to collect sample within first 4 days of illness
    - If collected later, low viral load may cause false negative test
- Serology
  - Convalescent antibody test
    - Acute sample compared to second sample taken 7-14 days later

- Standard blood collection and sample preparation and shipping
- Many commercial and state veterinary diagnostic labs offer
- No way to determine antibodies formed secondary to vaccination versus natural infection.

## What biosecurity measures should be used at the clinic?

- Schedule dogs with respiratory signs when clinic volume is low and allow for time to clean and disinfect after.
- See patients outside if possible
- Wear full PPE when dealing with dogs with respiratory illness- isolation gown, gloves, shoe and leg coverings.
- Isolate dogs with respiratory signs while inside the clinic. Do not allow contact with other animals.
- Limit the number of staff that come in contact with the patient and owner. Consider completing all education, sample collection, and discharge activities in the exam room.
- Clean and disinfect all surfaces and items that have contact with the patient. Wash hands frequently and dispose of PPE promptly.
- Standard disinfectants are effective against CIV. Be sure to follow package directions for use, proper dilution, and contact time instructions.
- Most disinfectants are inactivated by organic material. Clean all organic material away before applying a disinfectant.

## How do I report, and what quarantine procedures should be followed?

- Canine influenza is a reportable disease in Minnesota.
- Report non-negative CIV test results to the Board of Animal Health through the [case report form on our website \(https://www.bah.state.mn.us/canine-influenza-report-form/\)](https://www.bah.state.mn.us/canine-influenza-report-form/). Please only report test confirmed cases at this time.
- After the Board receives the case report form, a Board agent will reach out to your client to issue the official quarantine and inquire about possible exposures.
- All CIV positive dogs, and any other animals in the house, must be quarantined for 30 days. Quarantines take place in the owner's home and the infected dog is allowed to move about their home and yard freely during that time.
- While under quarantine, the only movement off an owner's property that is permitted is to seek veterinary care.

**Please recommend strict isolation of any dog with respiratory illness for 30 days, even without a non-negative CIV test.**