

Animal Health Alert: Outbreak of Presumptive Canine Influenza H1N1
8.6.2021

Dear Animal Health Colleagues,

A respiratory outbreak in dogs in a boarding kennel was reported in the southern half of Los Angeles County this week. The initial report estimated that 30-40 dogs showed respiratory signs at the facility, starting in mid-to-late July. Clinical signs reported include coughing, nasal discharge, and dyspnea. The death of one dog is being investigated as potentially being part of the outbreak. As of this report, no human illnesses have been reported. Two cats in the facility also had respiratory signs, but they have not been confirmed to be related to the outbreak. Preliminary PCR testing and sequencing results on 3 dogs, reported yesterday, identified the likely cause as **Influenza A, subtype H1N1**. Further analysis is underway.

This virus is different than the canine influenza subtypes H3N2 and H3N8 which have caused outbreaks in dogs in Los Angeles County¹ and elsewhere in the United States² before. Sporadic cases of one strain influenza H1N1 infections in pets have been documented in the US³, including one in 2009 in Los Angeles in which a person likely transmitted the pandemic 2009 H1N1 to their cat.⁴ However, those H1N1 infections have been very rare and did not spread further among dogs or cats. Outbreaks in dogs from an H1N1 subtype have not been reported before in the United States, but they have been reported in recent years in Southern China.⁵ There is currently no licensed and approved vaccine for H1N1 in pets.

The Veterinary Public Health Program is asking local veterinary professionals to take the following steps:

- **Identify possible cases.** Note any dogs with coughing, sneezing, nasal discharge, difficulty breathing (dyspnea), and/or fever.
- **Practice infection control.** Keep animals with respiratory signs away from other animals in your practice. Use Personal Protective equipment that you can discard after (e.g. mask/respirator, gloves, gown) or clean and disinfect (gown, eye protection). Clean and disinfect surfaces and equipment used near animals with respiratory signs.
- **Take a detailed history.** Ask about travel, time spent in a group setting with other pets (like boarding), and whether there are any other ill animals in the home. Since this is likely a novel virus, as a precaution, ask about whether any humans exposed to sick dogs are reporting illness as well.
- **Perform tests.** Perform PCR tests for influenza on affected dogs. Advise your laboratory that you want them to test the sample for a possibly novel strain of H1N1 influenza and follow any recommended steps.
- **Advise owners of affected dogs**
 - **Home hygiene.** As a precaution, advise pet owners to reduce direct contact with affected pets. They should avoid direct contact with the nose and mouth if ill dogs, wear gloves when handling them, and wash their hands after. Since masks are widely available and in universal use among people, wearing masks around affected dogs is another useful precautionary step.

- **Isolate for 28 days, quarantine for 14 days.** Advise pet owners to keep affected or exposed dogs at home, away from other pets and people. The ideal isolation and quarantine periods for this virus is not yet known. Longer isolation and quarantine successfully ended the outbreak of H3N2 canine influenza in LA County caused by dogs imported from Asia in 2017.⁶ Since this virus is new, as a precaution, the same isolation and quarantine periods will be used for this disease, at least initially.
- **Report Suspected and Confirmed cases** to Veterinary Public Health by completing this form: <http://www.publichealth.lacounty.gov/vet/docs/Forms/InfluenzaAnimalForm.pdf>. Send in the completed form along with any available laboratory results to vet@ph.lacounty.gov for fax (213) 481-2375
- **Consult Public Health.** Veterinarians and their staff are encouraged to connect to our Public Health Veterinarian on Call with questions or for a consultation: vet@ph.lacounty.gov or 213-288-7060.

References

1. Canine Influenza in Los Angeles County - <http://publichealth.lacounty.gov/vet/InfluenzaCanine.htm>
2. American Veterinary Medical Association – Canine Influenza - <https://www.avma.org/resourcestools/animal-health-and-welfare/canine-influenza>
3. American Veterinary Medical Association - H1N1 Flu Virus: For Pet Owners (FAQ) <https://www.avma.org/h1n1-flu-virus-pet-owners-faq>
4. Influenza H1N1 in a Los Angeles County cat, 2009 - <http://publichealth.lacounty.gov/vet/H1N1FluVeterinary.htm>
5. Chen Y et al. Emergence and Evolution of Novel Reassortant Influenza A Viruses in Canine in Southern China. *J of Clin Microbiol* 2018 <https://journals.asm.org/doi/10.1128/mBio.00909-18>
6. H3N2 canine influenza in Los Angeles County <http://publichealth.lacounty.gov/vet/InfluenzaCanineH3N2.htm>

Sincerely,
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