ANIMAL HEALTH ALERT

County of Los Angeles Public Health

Veterinary Public Health | (213) 288-7060 | vet@ph.lacounty.gov | http://publichealth.lacounty.gov/vet/

Update on Canine Influenza H3N2 and Recommendations for LA County

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Key Points:

- In recent years, nearly all outbreaks of canine influenza H3N2 virus (CIV H3N2) in Los Angeles (LA) County have been closely linked with dogs imported from other countries. This virus does not regularly circulate in local dogs and is not enzootic in LA County.
- Veterinarians should take a complete travel and boarding/daycare history for dogs with respiratory signs, test dogs with suspected CIV H3N2, and isolate them to prevent community spread.
- The most effective tool in stopping the spread of CIV H3N2 is to isolate infected and exposed dogs immediately and to educate clients, including individual pet owners and dog rescue organizations.
- Veterinary Public Health (VPH) strongly recommends that dogs be **fully vaccinated** and kept up to date against CIV H3N2 prior to entering boarding kennels, dog daycare, dog parks, or participating in dog group activities.
- For more information visit the VPH webpage on Canine Influenza

The canine influenza H3N2 virus (CIV H3N2) was first reported in Asia in the mid-2000s. Originally an avian influenza virus, it adapted to and began spreading in dogs, possibly through the feeding of raw poultry to dogs.[1] Since its emergence, researchers have detected notable genetic variability in CIV in Asia, including CIV H3N2 viruses that include gene segments or amino acid substitutions associated with human influenza viruses. Notably, a reassortant CIV H3N2 strain caused a fatal outbreak in zoo-housed golden monkeys in China.[2,3]

In the U.S., CIV H3N2 was first detected during a large outbreak in dogs in the Chicago area in February 2015. Genomic analysis suggested that outbreak was caused by importation of infected dogs from South Korea.[4]

In California, CIV H3N2 was detected for the first time in 2015, initially in Orange County, and subsequently in a single dog in LA County. Between 2015 and 2018, multiple clusters of CIV H3N2 were detected in LA County, prompting extensive efforts to prevent further spread. However, in 2021–2022 LA County experienced a large outbreak affecting at least 1,344 dogs and resulting in 21 known deaths. Most local outbreaks have been closely associated with infected imported dogs. The absence of sustained transmission outside these clusters supports that CIV H3N2 is not enzootic in LA County.

Since the large 2021–2022 outbreak, six additional incidents of CIV H3N2 have been detected in LA County. Five involved clinically ill imported rescued dogs arriving at Los Angeles International Airport (LAX), and one incident involved privately owned dogs traveling from Iran that were reportedly ill in the cabin on the plane. Rapid reporting by veterinarians, immediate isolation of affected dogs, and quarantine of exposed dogs successfully prevented broader community outbreaks.

The following incidents summarize the reported CIV H3N2 detections in LA County since 2022:

- **June 2024**: Two Golden Retrievers imported from China by a rescue organization were infected with CIV H3N2 and were symptomatic on arrival into LA County.
- **February 2025**: One dog confirmed with CIV H3N2 after exposure to two symptomatic owned dogs with recent travel to Iran.
- **April 2025**: Outbreak of CIV H3N2 at a boarding facility traced back to nine dogs (seven Golden Retrievers, two small mixed breed dogs) imported from China by a rescue organization.
- **June 2025**: Four Golden Retrievers were imported from China by a rescue organization; one dog in the group was both ill with CIV H3N2 and pregnant on arrival with a falsified spay certificate.
- **July 2025**: Five Golden Retrievers imported from China by a rescue organization, all ill on arrival. Three of the dogs tested positive for CIV H3N2.
- **August 2025**: Four Golden Retrievers imported from China by a rescue organization; two dogs were visibly ill upon arrival and tested positive for CIV H3N2. One required hospitalization for pneumonia.

Recent local cases have been consistently linked to dogs imported from Asia. In North America, CIV H3N2 typically follows a pattern of introduction, rapid transmission (particularly in congregate settings), and eventual fade-out.[5,6] Veterinarians should be aware that CIV H3N2 may be reintroduced at any time and could trigger another large outbreak. Imported dogs may also carry novel CIV variants not previously detected in the U.S. and potentially may have the capacity to infect other species.

Current federal regulations dictate which U.S. airports dogs can enter through based on the originating country of the dog. LAX is currently the only airport on the West Coast that is authorized to receive dogs imported internationally from all countries, placing LA County and neighboring areas at increased risk for introduction of foreign animal diseases. LA County VPH, federal authorities, and LAX airport staff have maintained a unique relationship, working closely together since 2008 to rapidly detect contagious diseases in imported dogs and prevent local spread. These coordinated efforts have helped prevent recent CIV H3N2 detections from escalating into widespread outbreaks.

However, additional airports on the West Coast (including San Francisco International Airport and Seattle-Tacoma International Airport) and around the U.S. are expected to receive approval to accept imported dogs from all countries. These locations may not have equivalent local veterinary public health infrastructure for animal disease tracing and containment. Consequently, dogs infected with imported strains of CIV may arrive through other airports, travel into LA County, and may experience delays in diagnosis, increasing the risk of community outbreaks.

Private practice veterinarians and shelter veterinarians are critical partners in outbreak prevention. **Consider CIV H3N2 as a differential diagnosis for dogs presenting with respiratory signs, especially those recently imported or with a recent travel history.**

What Veterinarians Should Do:

- **Isolate coughing dogs.** Do not allow coughing dogs into lobbies, shared treatment room, kennel areas, or other shared space. Place them directly in a closed exam room, or request the owner wait in their vehicle with their dog. Implement appropriate isolation and infection control measures to prevent transmission via direct contact or fomites.
- **Take a travel history.** Always obtain and document a thorough travel, boarding, daycare, or group activity history for all new patients and new illnesses.
- **Ask about other sick animals.** Identify any reports of additional ill animals with exposure to the coughing dog, to detect potential outbreaks early.
- **Test.** If CIV H3N2 is suspected, test for the virus early via PCR testing (typically nasopharyngeal or oropharyngeal swabs +/- conjunctival swab; confirm with your veterinary diagnostic laboratory). For recently imported dogs or suspected outbreaks, request expedited laboratory testing if possible.
- **Isolate and quarantine.** These steps are crucial for preventing another large outbreak.
    - Confirmed or suspected cases: home isolation for 28 days

    - Dogs exposed to confirmed or suspected cases: home quarantine and monitoring for clinical signs for 14 days

- **Educate.** Educate clients, rescue organizations, and pet importers about the risks associated with large CIV H3N2 outbreaks, the importance of isolation and quarantine to limit spread, and best practices in animal importation to minimize disease risk.
- **Vaccinate.** Dogs that interact with other dogs (e.g. boarding, daycare, dog park, grooming facilities) should be vaccinated against CIV H3N2.
- **Report.** Immediately report any suspected or confirmed cases of influenza in dogs or cats in LA County to VPH using this reporting form.
- **Seek a consultation.** Animal health professionals in LA County are encouraged to contact VPH and request to speak to the veterinarian on call regarding any suspected cases of CIV H3N2 (or other diseases), Monday–Friday, 8:00 am–5:00 pm at 213-288-7060, or email vet@ph.lacounty.gov.
- For more information visit the VPH webpage on Canine Influenza

Resources:

1. Zhu, H. et al (2015). Origins and evolutionary dynamics of H3N2 canine influenza virus. *J Virol* 89(10), 5406-5418.
2. Wen, X., et al(2025). Fatal infection of a novel canine/human reassortant H3N2 influenza A virus in the zoo-housed golden monkeys. *Vet Microbiol*.
3. Li, S. et al. (2025). Genetic characterization of an H3N2 canine influenza virus strain in China in 2023—acquisition of novel human-like amino acid substitutions. *Front Vet Sci* 12.
4. Voorhees, I. E., et al (2017). Spread of canine influenza A (H3N2) virus, United States. *Emerg Infect Dis* 23(12), 1950.
5. Voorhees, I. E., et al (2018). Multiple incursions and recurrent epidemic fade-out of H3N2 canine influenza A virus in the United States. *J Virol* 92(16), 10-1128.
6. Wasik, B. R., Damodaran, L., Maltepes, M. A., Voorhees, I. E., Leutenegger, C. M., Newbury, S., ... & Parrish, C. R. (2025). The evolution and epidemiology of H3N2 canine influenza virus after 20 years in dogs. *Epidemiol Infect* 153, e47.

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