

## Coronavirus and Our Pets

by Lori Scarlett, DVM

These are certainly wild and wacky times. I haven't talked with pet owners in person for over a month, and didn't realize how little I communicate with them by phone until it became a necessity. Thankfully, veterinary clinics are considered essential businesses. I've been able to keep my staff employed, but it's been stressful reworking our business to a drop-off and pick-up service. With this implementation, we've noticed some dogs are better behaved without their owners present while others are more anxious. And we're grateful for those who have made us face masks, sent pastries, or provided clean leggings to wear as we change out of our scrubs.

Concern for our own health through possible transmission of coronavirus on a leash or cat carrier is ever present, and there are new concerns about the possibility of spread to and from our pets. We were a little worried in late February when we heard about two dogs in Hong Kong that tested positive for SARS-CoV-2, but at the time there weren't any other reports. Mid-March brought a report of a cat in Belgium, and in early April we learned about sick tigers and lions at the Bronx Zoo. And now there are two cats in New York that have tested positive.

The first dog was a 17-year-old Pomeranian tested "weak positive" from a nasal swab. Later tests showed that SARS-CoV-2 from the Pomeranian and its owners had RNA sequences that were very similar. Further testing suggested the Pomeranian had developed an immune response to the virus. The dog never showed clinical signs of respiratory disease during quarantine and, after testing negative two days in a row, was released to its owner. Unfortunately, it died three days later due to ongoing, unrelated health issues.

The second dog was a two-year-old German shepherd whose owner tested positive for SARS-CoV-2 tested positive 3 days in a row then had negative results for 10 consecutive days. A mixed-breed dog in the same household continually tested negative, and neither dog developed signs of respiratory disease during quarantine.

During the third week of March, viral RNA of SARS-CoV-2 was detected by PCR in the feces and vomit of a cat with digestive and respiratory signs. While the cat's owner was infected with SARS-CoV-2, the cat wasn't evaluated for other more common respiratory illness causes, and little is known about the samples in which the viral material was detected. Thus, a clear link between the presence of viral RNA and clinical signs can't be established. The cat improved nine days later.

Then there are those tigers and lions. In early April, a four-year-old Malayan tiger developed abnormal respiratory signs, and PCR testing was positive for SARS-CoV-2. Another Malayan tiger, two Amur tigers, and three African lions also developed respiratory signs over the next week—mainly a dry cough and some wheezing, but no labored breathing or discharge from the nose or eyes. It's thought that an asymptomatic zookeeper infected the big cats.

At the time of this writing, there are two house cats in separate areas in New York with confirmed SARS-CoV-2 infection. A veterinarian tested the first after it showed mild respiratory signs. No one in the household was confirmed to have the virus; it's thought that the cat was infected by an asymptomatic family member or an infected person outside the house. The owner of the second cat tested positive for the virus prior to the cat showing clinical signs. There's another cat in the household that hasn't become ill.

How worried should we be? At the time of this writing, there have been over 2.7 million people confirmed human SARS-CoV-2 infections in the world with likely many more positive asymptomatic people who haven't been tested. While five confirmed pet cases seem like a drop in the ocean, serology results from more than 100 cats in Wuhan during their peak outbreak showed cats can be infected, likely by infected people, and mount an antibody response. However, IDEXX, a reference laboratory with a test for the virus in animals, has tested over 5,000 specimens, from cats, dogs, and horses with respiratory disease and found no positive results for SARS-CoV-2.

According to the CDC, at this time there's no evidence that animals play a significant role in spreading SARS-CoV-2. This doesn't mean we shouldn't take cases seriously, but there's definitely no reason to remove cats, dogs, ferrets, or hamsters from a home. While ferrets and hamsters may be good animal models for human SARS-CoV-2, there's no evidence they play any role in transmission to humans.

Information is ever evolving, but until we know more, the CDC and veterinary organizations recommend similar guidelines for pets as you or any other family member would follow:

- Don't let pets interact with people or other animals outside the household.
- Avoid dog parks or public spaces where large numbers of people and dogs gather.
- Walk dogs on a leash, maintaining a six-foot social distance with other people and dogs.
- Keep cats indoors to prevent them from interacting with other animals and people.
- If you're sick and suspect or are confirmed with coronavirus, restrict contact with your pets. This includes petting, snuggling, being kissed or licked, and sharing food or bedding.
- If you're sick, have another member of your household care for your pets. If you must be around or care for your pet yourself, wear a mask and wash your hands before and after each interaction.
- Animals can carry other germs and parasites that make people sick, so always wash your hands after handling animals, their food, waste, or supplies.
- If your pet is sick or develops respiratory signs, consult with your veterinarian and let them know if you or your pet has been around anyone with SARS-CoV-2. If your veterinarian believes your pet should be tested, they will contact state animal health officials. There's a test for animals that's different from the one for humans, and it should only be administered by a veterinarian after they contact the state health authority and if three criteria are met:
  - The pet is living with a human with SARS-CoV-2.
  - Other more common infections have been ruled out.
  - The pet, especially cats and ferrets, is showing respiratory clinical signs.

It's important to continue taking your pet to your veterinarian if they're sick or due for vaccines and testing to keep them healthy. Area clinics are doing all they can to limit contact with humans, including going to cars to get pets and to deliver foods and medications. Staff wear masks and gloves, disinfect common areas frequently, and keep animals separated in the clinic. Now if only someone would design masks for animals!

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