All Partners Call: COVID-19 and One Health Updates

Coordinated by the CDC COVID-19 One Health Working Group

OneHealth@cdc.gov

August 11, 2020
Our environmental practices make pandemics like the coronavirus more likely

The meat industry is trying to get back to normal. But workers are still getting sick — and shortages may get... There are now more than 11000 coronavirus cases tied to Tyson Foods, Smithfield Foods and JBS, and more than 60 people have died ...

Why They’re Called ‘Wet Markets’ — And What Health Risks They Might Pose

Bronx Zoo Tiger Is Sick With the Coronavirus
Several other tigers and lions have also exhibited symptoms of Covid-19, according to federal officials.

Coronavirus Patient’s Pet Dog Tests Positive for ‘Low Level’ of Virus

COVID-19 and the Environment: Is There a Relationship?
— Pollution and habitat destruction seen as laying groundwork for pandemics -- and not just this one

Two Cats Are First U.S. Pets to Be Sickened With COVID-19
Animals Positive for SARS-CoV-2 Reported Globally

Belgium: 1 cat
Denmark: 1 dog, 3 mink farms
France: 2 cats
Germany: 1 cat
Hong Kong: 2 cats, 2 dogs
Netherlands: 7 cats, 1 dog, 29 mink farms
Russia: 1 cat
Spain: 2 cats, 1 mink farm
United Kingdom: 1 cat
United States: 10 cats, 14 dogs, 3 lions, 4 tigers

www.oie.int
Data as of August 10, 2020
Animals Positive for SARS-CoV-2 Reported Globally, by Species

- 52 animals and 33 mink farms from 10 countries
  - Cats: 27
  - Dogs: 18
  - Tigers: 4
  - Lions: 3
  - Mink: 33 farms in 3 countries

- 31 of the 52 positive animals reside in the United States
  - Cats: 10
  - Dogs: 14
  - Tigers: 4
  - Lions: 3

Data as of August 10, 2020

www.oie.int
SARS-CoV-2 is considered to be an emerging disease by the World Organisation for Animal Health (OIE). USDA must report confirmed animal infections in the United States to the OIE. We are still learning about the SARS-CoV-2 virus, which causes COVID-19 in people, but it appears that it can spread from people to animals in some situations. A small number of animals worldwide, have been reported to be infected with SARS-CoV-2, mostly after close contact with people with COVID-19. More information on COVID-19 can be found at: https://www.cdc.gov/coronavirus/2019-ncov/animals/pets-other-animals.html

### Confirmed Cases of SARS-CoV-2 in Animals in the United States

<table>
<thead>
<tr>
<th>Type of Animal</th>
<th>Date Confirmed</th>
<th>State</th>
<th>Method of Initial Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tiger</td>
<td>April 4, 2020</td>
<td>New York</td>
<td>PCR</td>
</tr>
<tr>
<td>Llama</td>
<td>April 15, 2020</td>
<td>New York</td>
<td>PCR</td>
</tr>
<tr>
<td>Cat</td>
<td>April 22, 2020</td>
<td>New York</td>
<td>PCR</td>
</tr>
<tr>
<td>Cat</td>
<td>April 29, 2020</td>
<td>New York</td>
<td>PCR</td>
</tr>
<tr>
<td>Dog</td>
<td>June 4, 2020</td>
<td>New York</td>
<td>PCR</td>
</tr>
<tr>
<td>Cat</td>
<td>June 4, 2020</td>
<td>Illinois</td>
<td>PCR</td>
</tr>
<tr>
<td>Dog</td>
<td>June 24, 2020</td>
<td>New York</td>
<td>PCR</td>
</tr>
<tr>
<td>Dog</td>
<td>June 24, 2020</td>
<td>New York</td>
<td>PCR</td>
</tr>
<tr>
<td>Dog</td>
<td>July 1, 2020</td>
<td>Georgia</td>
<td>PCR</td>
</tr>
<tr>
<td>Dog</td>
<td>July 6, 2020</td>
<td>Texas</td>
<td>PCR</td>
</tr>
<tr>
<td>Cat</td>
<td>July 8, 2020</td>
<td>California</td>
<td>PCR</td>
</tr>
<tr>
<td>Dog</td>
<td>July 6, 2020</td>
<td>South Carolina</td>
<td>PCR</td>
</tr>
<tr>
<td>2 Cats and 1 Dog</td>
<td>July 22, 2020</td>
<td>Utah</td>
<td>Abs</td>
</tr>
<tr>
<td>Cat</td>
<td>July 22, 2020</td>
<td>Utah</td>
<td>Abs</td>
</tr>
<tr>
<td>Cat</td>
<td>July 22, 2020</td>
<td>Utah</td>
<td>Abs</td>
</tr>
<tr>
<td>Dog</td>
<td>July 22, 2020</td>
<td>Utah</td>
<td>Abs</td>
</tr>
<tr>
<td>Dog</td>
<td>July 22, 2020</td>
<td>Utah</td>
<td>Abs</td>
</tr>
<tr>
<td>Dog</td>
<td>July 22, 2020</td>
<td>Wisconsin</td>
<td>Abs</td>
</tr>
<tr>
<td>Dog</td>
<td>July 22, 2020</td>
<td>Wisconsin</td>
<td>Abs</td>
</tr>
<tr>
<td>Dog</td>
<td>July 22, 2020</td>
<td>North Carolina</td>
<td>Abs</td>
</tr>
<tr>
<td>Cat</td>
<td>July 21, 2020</td>
<td>Texas</td>
<td>PCR</td>
</tr>
<tr>
<td>Dog</td>
<td>July 15, 2020</td>
<td>Arizona</td>
<td>PCR</td>
</tr>
<tr>
<td>Dog</td>
<td>August 5, 2020</td>
<td>Louisiana</td>
<td>PCR</td>
</tr>
</tbody>
</table>

14 10 4 3


as of 10 August 2020
Number of Published or Pre-print Articles – COVID-19 and Experimental or Natural Infection in Animals

- **Cats**: 8
- **Ferrets & Mink**: 6
- **Golden hamster**: 15
- **Non-human primates**: 22
- **Tree shrew**: 2
- **Deer Mice**: 1
- **Dogs**: 3
- **Egyptian fruit bats**: 1
- **Mice**: 12
- **Poultry**: 3
- **Pigs**: 2

- **= Highly susceptible to SARS-CoV-2 infection**
- **= Moderately susceptible to SARS-CoV-2 infection**
- **= Not susceptible to SARS-CoV-2 infection**

As of: Aug 7, 2020
Studies Associated with the Previous Slide

- Egyptian Fruit Bat – Schlottau et al. 2020
- Dog – Bosco-Lauth et al. 2020, Shi et al. 2020, Sit et al. 2020
- Pig - Schlottau et al. 2020, Shi et al. 2020, Gu et al. 2020
- Tree Shrew - Zhao et al. 2020, Xu et al. 2020b
- Deer Mouse - Griffin et al. 2020
One Health Coordination for COVID-19 in the United States

One Health Federal Interagency COVID-19 Coordination Group (OH-FICC)

17 federal agencies, 5 subgroups

- Companion Animal
- Wildlife and Zoo Animals
- Livestock
- Animal Diagnostics and Testing
- Environmental Health

State-Federal One Health Coordination Calls

Weekly calls >165 partners

- State Public Health Veterinarians
- State Wildlife Officials
- State Animal Health Officials
- Local, Territorial, and Tribal Partners
- OH-FICC Partners

Bring together partners on One Health aspects of COVID-19 to collaborate, share updates, disseminate information, and address issues.
One Health Partner Collaborations during COVID-19 Response

- State, Local, Tribal, and Territorial officials
  - State and local Public Health Veterinarians, State Animal Health Officials, State Wildlife Officials
- Federal officials
- Global organizations (WHO, FAO, OIE)
- Non-governmental organizations
- Academia
- Industry
- And more.....
CDC Guidance: Pets and Other Animals Landing Page

- General Information on Animals and COVID-19
- Information for Pet Owners
  - If You Have Pets
  - If Your Pet Tests Positive
- Handlers of Service and Therapy Animals

Key Messages on COVID-19 and Animals

- Currently 31 confirmed cases of SARS-CoV-2 infection in animals in the United States.
  - Of these animals, some have shown signs of illness while others have not appeared sick.
- There is no evidence that animals, including pets, are playing a significant role in the spread of COVID-19.
- Based on the limited information available to date, the risk of animals including pets spreading COVID-19 to people is considered to be low.
- If you are sick with COVID-19 (either suspected or confirmed by a test), you should restrict contact with your pets and other animals, just as you would with people.
- Talk to your veterinarian if your pet gets sick or if you have any concerns about your pet’s health.
# Evaluation for SARS-CoV-2 Testing in Animals

Table 1: Criteria to Guide Evaluation and Laboratory Testing for SARS-CoV-2 in Animals

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Epidemiological Risk</th>
<th>Clinical Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Animal with history of close contact¹ with a person or animal suspected or confirmed to be infected with SARS-CoV-2.</td>
<td>AND Animal has clinical signs suspicious of SARS-CoV-2 infection³.</td>
</tr>
<tr>
<td>B</td>
<td>Animal with exposure to a known high-risk environment (i.e., where human cases or animals cases have occurred), such as a residence, facility, or vessel (e.g., nursing home, prison, cruise ship).</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Threatened, endangered or otherwise imperiled/rare animal⁴ in a rehabilitation or zoological facility with possible exposure to SARS-CoV-2 through an infected person or animal.</td>
<td>AND Animal is asymptomatic; OR Animal has clinical signs suspicious of SARS-CoV-2 infection³.</td>
</tr>
<tr>
<td>D</td>
<td>Animals in a mass care or group setting (e.g., farm, animal feeding operation, animal shelter, boarding facility, zoo, or other animal holding) including companion animals, livestock, and other species, where their exposure history to people with COVID-19 is unknown.</td>
<td>AND A cluster of animals show clinical signs suspicious of SARS-CoV-2 infection³.</td>
</tr>
</tbody>
</table>

¹: Close contact is defined as having been within 6 feet of an infected person for at least a 15-minute period starting 2 days before illness onset until 10 days after illness onset.

²: High-risk environment includes places where infected cases or close contacts of cases have been identified.

³: Clinical signs include fever, cough, shortness of breath, difficulty breathing, fatigue, muscle or body aches, new loss of taste or smell, sore throat, congestion or runny nose, nausea or vomiting.

⁴: Imperiled/rare animals are those that are at risk of extinction due to factors such as habitat loss, hunting, or disease outbreaks.

Veterinary Guidance

- **Interim Infection Prevention and Control Guidance for Veterinary Clinics Treating Companion Animals During the COVID-19 Response, updated July 21, 2020**

- **Key Concepts**
  - This interim guidance is for veterinarians and their staff who may be treating or advising on companion animal medical care during the COVID-19 pandemic.
  - Veterinary facilities have unique characteristics that warrant unique infection control considerations.
  - At this time, there is no evidence that companion animals play a significant role in spreading SARS-CoV-2, the virus that causes coronavirus disease 2019 (COVID-19). Based on the limited data available, the risk of animals spreading COVID-19 to people is considered to be low. We are still learning about this virus, and it appears that in some rare situations, people can spread the virus to animals. Further studies are needed to understand if and how different animals could be affected by the virus, and the role animals may play in the spread of COVID-19.
  - To protect staff and preserve personal protective equipment (PPE) and supplies during the COVID-19 pandemic, veterinary clinics should prioritize urgent and emergency visits and procedures until regular business operations resume in your community. Curbside service and telemedicine can be effective options to support patient care while social distancing.
  - Proactively communicate to both staff and pet owners the need for them to stay at home if sick.
  - Develop a plan for what to do if a pet owner with respiratory symptoms comes into your clinic, or if a pet with a history of exposure to a person with suspected or confirmed COVID-19 needs to be seen.

Toolkit: One Health Approach to Address Companion Animals with SARS-CoV-2

- Resource for public health and animal health officials involved in managing companion animals diagnosed with SARS-CoV-2 and other One Health partners
  - Preparing and planning for positive animals
  - Managing test-positive animals
  - Ending management of test-positive animals

COVID-19 Considerations for Animal Activities at Fairs, Shows, and Other Events

- Precautions to take with animals
  - Susceptible species
  - Biosafety
  - PPE, hand hygiene
- Maintaining safe facilities
  - Petting zoos and animal interaction areas
- Considerations for horse and livestock shows
- Maintaining healthy operations
  - Social distancing, masks
  - Cleaning and disinfection

COVID-19 and Animals: Frequently Asked Questions

- Equestrian facilities
- Wildlife interactions and risk
- Dog parks, doggy daycare, groomers
- Animals in long-term care facilities
- Can animals carry the virus on their skin or fur?

CDC One Health – Highlighted Resources

**COVID-19 and Animals**
- Pets and Other Animals
- FAQs: COVID-19 and Animals
- COVID-19 and Animals
- If You Have Pets
- What to Do if Your Pet Tests Positive for the Virus that Causes COVID-19
- Guidance for Handlers of Service and Therapy Animals
- Interim Infection Prevention and Control Guidance for Veterinary Clinics Treating Companion Animals During the COVID-19 Response
- Interim Guidance for Public Health Professionals Managing People With COVID-19 in Home Care and Isolation Who Have Pets or Other Animals
- Toolkit: One Health Approach to Address Companion Animals with SARS-CoV-2
- COVID-19 Recommendations for Pet Stores, Pet Distributors, and Pet Breeding Facilities
- COVID-19 Considerations for Animal Activities at Fairs, Shows, and Other Events
- Evaluation for SARS-CoV-2 Testing in Animals
- Interim Guidance for SARS-CoV-2 Testing in North American Wildlife
- Interim recommendations for intake of companion animals from households where humans with COVID-19 are present

**Federal COVID-19 Websites**
- USA.gov
- Coronavirus.gov
- US Department of Agriculture
  - USDA Confirmed Cases of SARS-CoV-2 in Animals in the US
- US Food and Drug Administration
- US Fish and Wildlife Service
- US Environmental Protection Agency

**Partner COVID-19 Websites**
- World Health Organization (WHO)
- Food and Agriculture Organization of the United Nations (FAO)
- World Organisation for Animal Health (OIE)
- American Veterinary Medical Association (AVMA)

**One Health**
- CDC One Health
- CDC Healthy Pets, Healthy People
- CDC Pet Emergency Preparedness
- CDC Pet Disaster Kit
- CDC Pets in Evacuation Centers
- Zoonoses and One Health Updates Call
Recommendations for Disaster Sheltering of Household Pets, Service Animals, and Support Animals during the COVID-19 Pandemic

- Intended to assist emergency planners in the disaster sheltering of household animals, service animals, and support animals during the pandemic
- General recommendations
- Animal intake triage and housing
- Veterinary medical care
- PPE, cleaning, and disinfection
- Shelter staff responder and volunteer monitoring


*If an animal has an examination that is suggestive of a contagious disease, including SARS-CoV-2, that animal should be examined by a veterinarian.
FDA Necropsy Resources

- General information
- Recommendations for sample collection
- Submission form

Coronavirus Postmortem Examination (Necropsy) Sample Inventory Check List and Photo Log

Notes: The scientific name of the new strain of coronavirus is SARS-CoV-2. In people, the disease caused by the virus is commonly referred to as COVID-19. Because we are addressing the virus itself in the context of animal health, we refer to it as SARS-CoV-2.

The necropsy sample inventory is to provide a centralized inventory of necropsied animals and samples to aid in sample collection and tracking, sample disposition, and sample analysis. The sample inventory list also includes a photo log for necropsy photos.

General Information
- For any animal testing non-negative for SARS-CoV-2, contact USDA-NVSL to discuss necessary next steps and confirmatory testing: NVSL.DVLSA.Heads@usda.gov or (515)337-7551 (during business hours)
- This sample inventory list is designed to assist prosecutors who may not routinely perform necropsies and/or provide guidance to individuals who may perform a necropsy on a SARS-CoV-2 positive (or suspected positive) animal.
- The sample inventory list is not intended to replace necropsy forms, sample submission forms, or any other internal forms utilized in clinical, diagnostic laboratory, or research facilities. This list is a supplemental form to aid in assessment of collected samples for tracking purposes.
- The sample inventory list is comprehensive and can be utilized for limited sample and tissue collection (i.e. cosmetic necropsies) or during complete necropsies where more robust tissue collection occurs.
- A complete necropsy and collection of a full set of samples and tissues is optimal but not always feasible. If a complete postmortem examination cannot be performed, sample collection should be focused on the respiratory and digestive systems.
- The document can be printed out. Mark the appropriate check boxes including samples not collected. Scanned or photos of the checklist can be submitted.

https://www.fda.gov/media/139430/download
USDA-APHIS COVID-19 One Health Response

One Health Federal Interagency COVID-19 Coordination Group (OHFICCG) and Subgroup representation

- APHIS providing subject matter experts (SMEs) on all subgroups

- APHIS SMEs lead/co-lead OHFICCG subgroups
  - Livestock
  - Animal Testing and Diagnostics
  - Animal Mass Care subcommittee (under the Companion Animal subgroup)

Examples of animal testing and livestock working group outputs:

- Animal testing guidance and Case Definition
- Farmed Mink FAQ
- Response plan guidance for farmed mink (under development)
- Farmed Rabbit FAQ (under development)

USDA-APHIS COVID-19 One Health Response

**Other APHIS COVID-19 OH Activities**

- Provide consultation and guidance to state animal and public health agencies on decisions and testing of animal for SARS-COV-2.

- Work with national and international animal health, public health and communications subject matter experts to develop processes for coordinating messages, on COVID-19/SARS-CoV-2 in animals.

- Collaborations with QUADS partners to exchange information on animal health and agriculture COVID-19 activities.


USDA-APHIS COVID-19 One Health Response

APHIS One Health Coordination Office
- Supports communication across Federal and USDA agencies, State animal health officials and State public Health veterinarians.

National Veterinary Services Laboratories
- National Reference Laboratory for NAHLN.
- Provides confirmatory testing.
- SARS-CoV-2 testing (PCR, Sequencing, VN).
- Reports positive animals to OIE.

32 NAHLN Laboratories testing for SARS-CoV-2
- 17 testing Animal samples only*
- 12 testing both Animals and Humans
- 3 testing Humans samples only*

*8 more labs pursuing CLIA

Zoo and Wildlife Subgroup

- Membership includes CDC, USDA (Forest Service, Animal Care, and APHIS), DOI (USGS, NPS, USFWS), NOAA
Zoo and Wildlife Subgroup Goals and Objectives

- Facilitate preparedness and establish practices for specific sectors related to the One Health aspects of COVID-19 that can help people and animals stay safe and healthy

- Provide subject matter expertise to develop and update guidance around One Health aspects of COVID-19 for wildlife and zoo animals

- Review and provide input on recommendations or guidance documents for external partner organizations as needed

- Synthesize and present key research findings or other updates on One Health Coordination Team calls

- Identify research needs and potential avenues to address these

- Serve as a point of contact for partner organizations on One Health communications, activities, and other needs as relevant for COVID-19
Zoo and Wildlife Subgroup Products

- Currently working on considerations to minimize the spread of SARS-CoV-2 from humans to wildlife
- Wildlife epidemiology investigation form
One Health Federal Interagency COVID-19 Coordination Group
Environmental Health Subgroup

- ~35 people from 9 agencies
  - CDC
  - EPA
  - NOAA
  - NASA
  - FDA
  - USDA
  - USGS
  - DOD
  - DHS
One Health Federal Interagency COVID-19 Coordination Group Environmental Health Subgroup

Current Topics of Focus for the Group

- Sewage/Wastewater Risks to Animals and Humans

- Environmental Transmission Factors (includes Weather/Meteorological Impact on Transmission)

- PPE/Masks/Equipment/IH testing
  a. Efficacy
  b. Reuse and Disinfection

- Disinfectants / Pesticides
  a. Efficacy
  b. Misuse/non-target impacts

- Environmental Sampling Methods
Stay Connected for Future Updates!

Get the latest news from the One Health Office.

Subscribe to the One Health Newsletter

Subscribe to the Healthy Pets, Healthy People Newsletter

Sign up for ZOHU Call updates

Contact us!
onehealth@cdc.gov
www.cdc.gov/onehealth

For ZOHU inquiries:
zohucall@cdc.gov
Future One Health Partners Webinars

- Webinars will take place on second Tuesday of each month at 3:00p.m. ET

- Next call: Tuesday, September 8, 2020 at 3:00p.m. ET
Find updates and links for information on COVID-19 and animals at:
www.cdc.gov/coronavirus/2019-ncov/animals/pets-other-animals.html

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of HHS (CDC, FDA), DOI, USDA or individual presenters.