



United States Department of Agriculture

Animal and Plant
Health Inspection
Service

Veterinary Services

APRIL 2020

SARS-CoV-2

Case Definition – April 29, 2020 *subject to change as situation evolves*

(Notifiable Emerging Disease)

1. Disease Information

1.1 General disease and pathogen information: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the virus that causes the disease known as COVID-19 in humans, is an enveloped, positive sense, single-stranded RNA virus that belongs to the family Coronaviridae. Based on phylogenetic analyses, SARS-CoV-2 is currently believed to originate from an animal host (likely a bat); however, investigations are ongoing. Since its introduction to human populations, SARS-CoV-2 has been spreading predominantly human to human. At this time, evidence is lacking to support companion animals as a source of infection for SARS-CoV-2, however; mounting evidence suggests that SARS-CoV-2 may be spread from an infected person to some animal species.¹

1.2 Clinical Signs:

- 1.2.1 Canine: Clinical signs at this time are unknown.
- 1.2.2 Felids: Clinical signs are inconclusive but may include dry cough, wheezing, difficulty breathing, sneezing, runny nose, lethargy, vomiting, or diarrhea.
- 1.2.3 Other species: It is possible that other species may be affected.

2. Laboratory criteria: The decision to test any animal for the SARS-CoV-2 virus will be made collaboratively between local, state or federal public health and animal health officials², or between federal agencies³, using a One Health approach. As an OIE reportable disease in animals, confirmation of SARS-CoV-2 infection is performed at the USDA APHIS VS National Veterinary Services Laboratories (NVSL).

- 2.1 PCR:** Oral, nasal and rectal/fecal swabs are recommended per OIE. Store oral and nasal swabs in separate vials of viral transport media and maintain the cold chain at 2-8°C.
- 2.2 Serology:** blood samples may be collected; remove from clot prior to storage. Serum may be frozen at -20°C.
- 2.3 Virus characterization:** genomic sequence generated either direct from diagnostic sample or from virus isolate.

¹ For more information see the [OIE COVID-19 Q&A](#)

² For more information see [FAQ for State Animal and Public Health Officials on Animal Coronavirus Testing](#)

³ Federal officials will consult on decisions concerning animals maintained in federal facilities or on federal lands

3. Case definition and Reporting Criteria

3.1 Suspect case: Animal determined to be at high risk of exposure to an infected person, AND demonstrating compatible clinical signs as determined by an animal health professional.

3.2 Presumptive positive case: Animal tests positive by SARS-CoV-2 real time RT-PCR.

3.3 Confirmed positive case: Sequence confirmation of virus either direct from sample or from virus isolate, OR demonstration of SARS-CoV-2 neutralizing antibody. All confirmatory testing will occur at NVSL.