Coronavirus

Disease Name: Equine Coronavirus, ECoV-

Disease Type: Viral (RNA virus)

Transmission: Coronavirus is spread when feces from an infected horse is ingested by another horse (fecal-oral transmission). The virus can also be transmitted when horses make oral contact with surfaces or objects that are contaminated with infected feces. Stalls, muck forks, manure spreaders, thermometers and clothing are common fomites (objects or materials that carry infection). Coronavirus is most commonly diagnosed in the winter months.

Frequency: Low

Incubation period: 2-4 days

Carrier status: Carrier status is currently unknown but subclinical horses (horses with no clinical signs) have been found to shed the virus.

Shedding period: Shedding period is unknown but the virus can be present in samples 5-21 days post infection; subclinical horses can shed the virus.

Latency: It is unknown how soon infected horses become infectious, but the feces of infected horses does pose a risk to other horses.

Severity: Low but mortality does occur in complicated cases. Miniature horses seem to be more affected more often than other breeds/types, but all breeds can be affected.

Clinical signs and symptoms:

- Fever up to 105° F (40.5° C)
- Lack of appetite
- Depression
- Colic
- Laying down frequently
- Diarrhea (may or may not present)
- Low white blood cell count

Complications can occur in rare cases:

- Protein loss
- Dehydration
- Neurologic signs (such as lethargy, depression, loss of body control) secondary to an excess of ammonia in the system
- Recumbency (inability to stand)

- Death

Diagnoses: Diagnosis is made by a veterinarian using PCR (polyamerase chain reaction) tests of a fecal sample. Serological IFA (testing done on a serum sample from blood collection) is in development. Positive results on viral PCR have been found in nasal swabs and blood samples.

Treatment: The primary treatment is supportive care of clinical signs. Severe cases may require hospitalization for IV fluid treatment or treatment for secondary infections.

Prognosis: Good. Exposure to the virus can result in up to 85% infection rate but most animals do not show clinical signs. Mortality is low but can occur in complicated cases.

Prevention: There is no vaccine for Equine Coronavirus. The best method of prevention is to maintain high standards of sanitation in all equine facilities and careful disposal of manure. When cleaning surfaces that may be contaminated with feces, clean first to remove all traces of organic matter, then disinfect.

Biosecurity: Any horse with a fever and no evidence of respiratory illness may have ECoV and feces may be infective. These animals should be handled last when feeding, grooming and cleaning stalls to prevent possible infection of other animals. Horses that are moved to a new facility from a facility with horses positive for the virus should be isolated for 3 weeks.

