

Team (County): _____

Team Members

Team Member ID #

2012 NC State 4-H Hippology Senior Team Problem KEY (200 points)

You have 5 minutes to prepare and 10 minutes to write your response as a team (15 minutes total)

You have just opened your email and received a notification from your county extension agent about a potential EHV-1 outbreak across the state. Understandably, you are very concerned about the welfare of your two horses- a western pleasure show horse who has just returned from a 5-day horse show, and a broodmare who is three months pregnant. List the signs and symptoms of EHV-1, explain how the infection presents in various classes of horse, and finally design a thorough biosecurity and vaccination protocol for your two horses.

EHV-1, or Equine Herpes Virus 1, is also called Rhinopneumonitis, and has even been referred to as equine abortion virus.
Pregnant mares suddenly abort between 8 and 11 months of gestation with no sign of illness. Full term foals may be born alive, but typically die of pneumonia several days following birth.
First sign is typically significant nasal discharge, followed by thick mucous discharge, fever, inflamed conjunctiva, and a dry cough that lasts 2-3 weeks. Secondary complications include pneumonia and various bacterial infections.
In rare cases, EHV-1 can invade the horse's CNS and cause neurological signs including loss of coordination and a staggering gait that may progress to paralysis and recumbency.
Vaccination protocol- Foals are vaccinated between 4 to 6 months of age and are given two booster shots on four week intervals. Pregnant mares should receive booster shots at months 5, 7, and 9 of pregnancy. Horses that are exposed to unfamiliar animals on a frequent basis should be vaccinated on 3-month intervals.
Infected individuals shed EHV-1 through the respiratory tract, so it is paramount to isolate any horses who are sick. The virus can survive outside of the body for up to a week on

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contaminated surfaces such as skin, equipment and bedding. EHV-1 can be destroyed by disinfectant, so all equipment that comes in contact with an infected individual should be thoroughly cleansed using a strong disinfecting agent. Once a horse is infected, it become a latent carrier of the virus, and while the animal will appear normal and will not shed the virus, during periods of stress the latent herpesvirus may become activated, and the horse will develop clinical signs and act as a source of infection for others. If a mare aborts from EHV-1, the fetus, membranes and fluid carry high volumes of the virus, and other mares may inhale the virus when sniffing at the aborted fetus.

Biosecurity measures to prevent EHV-1 from spreading:

1. Keep pregnant mares in very small groups, based on their stage of gestation to minimize disease transfer. Do not mix pregnant mares with youngstock.
2. Isolate all new arrivals for a minimum of 21 days.
3. Make sure all your horses are current on their vaccination protocol.
4. If a mare aborts- immediately clean up the aborted fetus and membranes, making sure to thoroughly disinfect the area and send the fetus to a diagnostic lab to test for EHV-1. The mare should immediately be placed into isolation pending lab test results.
5. If an outbreak occurs- no animal should leave the premises until at least 3 weeks after recovery of the last infected animal or at least 4 weeks after the last abortion. Immediately isolate any animals, burn all bedding, and disinfect all equipment that came in contact with the infected individual.
6. Have all personnel who have been around horses on another farm (like your farrier or vet) disinfect their boots and wash their hands before handling your horses.

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