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Martin O'Malley, Governor
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Earl F. Hance, Secretary
Mary Ellen Setting, Deputy Secretary

The Wayne A. Cawley, Jr. Building
50 Harry S. Truman Parkway
Annapolis, Maryland 21401

Internet: www.mda.state.md.us

410.841.5700 Baltimore/Washington
301.261.8106 Washington, D.C.
410.841.5999 Fax
800.492.5590 Toll Free

Animal Health Program

ANIMAL HEALTH NOTIFICATION – EHV-1 NEUROLOGIC CASES

To: **Maryland Veterinarians**

From: **Guy Hohenhaus, DVM, State Veterinarian**

Re: **Equine Herpesviral Myeloencephalopathy**

Date: **May 17, 2011**

An outbreak of Equine Herpesviral Myeloencephalopathy (EHM, aka neurologic EHV-1, equine neuroherpes), has been traced to horses that attended the National Cutting Horse Association (NCHA) Western National Championships in Odgen, UT on April 30 - May 8, 2011. Affected horses have been identified in several western states. Additional states are looking for animals that attended the event and returned home. Several are investigating potential cases. USDA Veterinary Services is providing national level coordination of the investigation.

At present, no exposed horses have been traced to Maryland. Based on show records, no Maryland horses attended the show. The whereabouts of each of the horses at the show is somewhat incomplete at present. That states, it is unlikely based on known movement patterns that exposed animals will be found in Maryland. If you have information on any horses present at the Ogden show in Maryland, please contact our office.

Out of an abundance of caution and because it is good management practice, all Maryland equine veterinarians and horse owners are strongly encouraged to maintain good biosecurity practices and watch for possible clinical signs of neurologic disease in any horses. **Neurologic disease of horses is reportable by veterinarians in Maryland.** Maryland veterinarians that identify any horse with central neurologic disease should report the case immediately to this office at 410-841-5810 during normal working hours or 410-841-5971 after hours and weekends.

While clinical and epidemiologic considerations are important component of the case definition for EHM, diagnostic testing is required to confirm EHV infection. You may be asked to provide samples for testing for EHV-1 in the event you encounter a case. If so, please follow the guidelines below:

Protocol for Testing for EHV-1 in Maryland
General guidelines for sampling for EHV-1 are given below. If you have questions regarding this procedure, please call 410-841-5810.

1. All samples should be sent or delivered to:
   Frederick Animal Health Laboratory
   1840 Rosemont Avenue
   Frederick, MD 21703
   301-600-1548

2. Split Samples of both nasal swabs and blood should be obtained. One set will be sent to University of Kentucky for confirmatory testing by RT PCR; the second set will be tested at the Frederick Diagnostic Laboratory for preliminary testing.

3. Blood Sample Collection: Obtain 2 sets of whole blood, 20 ml each, in EDTA tubes,

4. Nasal Swab Collection: Obtain at least 2 swabs, split into 2 sets.
    a. Equipment: Use 16" (40cm) cotton-tipped or Dacron-tipped swab (a standard uterine swab can also be used) and virus transport medium in a 5-10 ml glass/plastic centrifuge tube (with leak-proof cap) containing sufficient viral transport media to cover the swab tip. *Note – IF NO TRANSPORT MEDIA IS AVAILABLE, STERILE SALINE WILL WORK AS LONG AS THE SPECIMEN IS KEPT CHILLED!*

        Virus Transport Medium can be:
        i. Phosphate buffered saline (PBS) containing 40% glycerol, 2% antibiotic solution OR
        ii. PBS containing 2% tryptose phosphate broth, 2% antibiotic solution (penicillin [10,000 units] in sterile distilled water [100 ml]), and 2% fungizone (250 mg/ml stock).
    b. Procedure: Restrain horse, pass swab at least 6" (15 cm) into the horse's nasopharynx via the ventral meatus, twist swab onto the mucosa to absorb respiratory secretions. Repeat procedure for additional swabs.
    c. Transport on ice packs *(not wet or dry ice!)* to the laboratory for testing.

Transmission

EHV is transmitted primarily by aerosol and through direct and indirect contact. Aerosol transmission occurs when infectious droplets are inhaled. The source of infectious droplets is most often respiratory secretions. In the case of abortions, virus may be present in the placenta, fetal membranes and fluid, and aborted fetuses. Direct horse-to-horse contact is a common route of transmission of the virus, but indirect transmission is also important. This occurs when infectious materials (nasal secretions, fluids from abortions, etc.) are carried between infected and non-infected horses by people or fomites (inanimate objects such as buckets, etc).

Signs of EHV-1

Fever is one of the most common clinical signs and often precedes the development of other signs. Respiratory signs include coughing and nasal discharge. Abortions caused by EHV generally occur after 5 months of gestation. Neurologic signs associated with EHV-1 are highly variable, but often the hindquarters are most severely affected. Horses with EHV-1, neurologic type, may appear weak and uncoordinated. Urine dribbling and loss of tail tone may also be seen. Severely affected horses may become unable to rise.

In general, exposed horses should be isolated and have their temperatures monitored twice daily for 10 days. If an exposed horse develops a fever or other signs consistent with EHV infection, diagnostic testing should be performed. Testing of healthy horses is generally not recommended.

Useful Links/Resources

Suspected Case of Contagious Infectious Neurologic Disease
http://www.aaep.org/pdfs/control_guidelines/Neurologic%20Disease%20Guidelines.pdf

Equine Herpesvirus
http://www.aaep.org/images/files/EquineHerpesvirusGuidelines051711.pdf

Case Updates:

- http://www.aqha.com/
- http://www.nchacutting.com/
- http://www.nchacutting.com/ag/shows/pdf/csu_20110515.pdf
- http://www.aphis.usda.gov/vs/nahss/equine/ehv/