

Recommendations for an Equine Event Infectious Disease Control Plan

Developing an infectious disease control plan before an event allows for prompt implementation of controls during an infectious disease outbreak. At the first potential sign of an infectious disease outbreak, event management, in consultation with the event veterinarian, should determine the appropriate level of disease control necessary. Ideally, with the identification of a sick horse, the enhanced biosecurity measures and infectious disease control plan can be immediately implemented. Event managers should consider incorporating the following recommendations in the development of an event infectious disease control plan:

1. Sick Horse Trigger Point: Normal health parameters for an adult horse include a temperature of less than 100°F, a resting heart rate of 28-40 beats per minute and a resting respiratory rate of 10-14 breaths per minute. Transient clinical signs, such as a slight increase in body temperature or loose manure, may occur due to the stress of shipping and adjusting to a new environment.

Healthy Adult Horse Parameters

Temperature 100°F

Resting Heart Rate 28-40 bpm

Resting Respiratory Rate 10-14 bpm

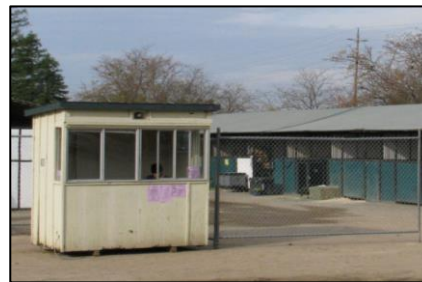
These clinical signs may or may not be cause for alarm; however, they may be the clinical signs of an infectious disease. In consultation with an equine veterinarian before the event, event management should determine the definition of a sick horse and specific trigger points warranting a response. General recommendations to consider for designation as a response trigger point would be detection of:

- a horse with a body temperature more than 102°F
- a horse that is ataxic or recumbent
- a horse that is demonstrating either aggressive behavior or stupor
- a horse with profuse diarrhea, *and/or*
- a horse with oral or coronary band vesicular or ulcerative lesions.

An adult horse with a body temperature between 101°F and 101.9°F should be monitored for other signs of disease and have the temperature retaken in one (1) hour. Consult local, state or federal animal health officials to determine specific trigger points and response action for reportable diseases. Note, the response to a reportable disease may vary by state; therefore, it is necessary to contact the state or federal official in the state where the event is held to determine reportable diseases.

(See Attachment U - California *List of Reportable Conditions for Animal and Animal Products* and Appendix V - State Animal Health Official Contact List)

2. Potential Isolation Areas: Before the event, event organizers should evaluate the event premises and designate an isolation area available for use during the event. When determining an isolation area location, consider a site as far as possible away from the public and general horse traffic areas. The external perimeter of the isolation area should be secure and clearly marked with adequate signage designating it as a restricted area. If no suitable permanent stabling is available onsite for an isolation area, consider an area on the event grounds to set up a temporary pen structure or an offsite facility for isolation. Optimal isolation stabling has non-porous flooring and is in an area where run off will not occur. Ideally, the isolation area will have water and electricity and be accessible to large equipment if necessary to handle a down or dead horse. The isolation area should be set up and fully equipped at the start of the event, ready for immediate and exclusive use if needed for a suspect horse during the event. In advance, determine the location of a veterinary clinic/hospital that can treat horses with extensive medical needs that you would not be able to address at the onsite isolation area.



Isolation stables should be secure and away from all public and general horse traffic.

(See Appendix S - UC Davis, Center for Equine Health Document *How to Set Up a Disease Isolation Unit at a Farm or Horse Show*)

3. Inventory of Protective Clothing: For use during an infectious disease outbreak, assess and stock an adequate inventory of disposable protective clothing in a variety of sizes, including coveralls, gloves, rubber boots or disposable boot covers. Secure the protective clothing supplies in a location immediately accessible to the isolation area. Biosecurity kits of personal protective clothing are available from Jorgenson's Laboratory in Loveland, CO (<http://www.jorvet.com>) or Global Protection in West Berlin, NJ (<http://www.globalprotectionllc.com>).

4. Sick Horse Reporting: Provide all owner/agents/participants with the sick horse reporting protocols before arrival at the event and again at check-in upon arrival. It is essential to provide the contact information for the designated point of contact for reporting sick horses. Participants should understand that upon receipt of a report of a sick horse, the designated event official will evaluate the situation to determine what control measures are necessary.

5. Immediate Identification and Isolation of Sick Horses: When the designated point of contact is made aware of a horse with a potentially infectious disease, he/she is authorized to implement the event infectious disease control plan. Immediate isolation of a horse demonstrating clinical sign(s) meeting the predetermined sick horse trigger point(s) or compatible with an infectious disease, is key to preventing the potential spread

of infection. Until evaluation and status of the suspect horse is determined, plan to hold all other horses that were exposed to the suspect horse in their assigned stalls/barns or at an offsite facility that has been identified to house exposed horses. Horse exposure with the suspect horse would be direct contact with the suspect horse or indirect contact with the suspect horse as in close stabling area, sharing a trailer or being owned/trained by the same individual. If allowing exposed horses to exercise, segregate exposed horses from unexposed horses during exercise periods. Consult a veterinarian to determine the highest risk exposed horses.

6. Monitoring the Sick Horse: The onsite event veterinarian should promptly assess the status of the reported sick horse. Depending on the clinical presentation, the veterinarian may obtain blood, nasal swabs, vesicular or ulcerative lesions samples and/or manure samples for diagnostic testing. Depending on the number of sick horses, assign event personnel to assist the veterinarian with collection and shipping of samples and preparation of necessary documentation. Infectious disease control measures should be in place while waiting for laboratory results with the confirmation of the presence or absence of an infectious disease. Determine in advance the closest diagnostic laboratory able to run the necessary test and determine the method of shipping/ delivery of sample to the laboratory. Before the event, determine the responsible party for payment of any diagnostic testing (i.e., horse owner or event organization) and communicate the testing and payment information to the event participants.

7. Entry and Exit Protocols for Isolation Area: Regulate and record all movement in and out of the isolation area. Post “*Restricted Access*” signs (in English and Spanish) at all primary perimeter access points to the isolation area. Develop isolation area entry and exit procedures to avoid potential transmission of disease from the horse(s) in the isolation area to other horses on the event premises. Restrict individuals that enter the isolation area from access to any other areas on the event grounds. Ideally, only designated trained staff should work in the isolation area and designated equipment should remain in the isolation area.



A 10% bleach footbath solution should be available for use at the entry/exit to the isolation area. Organic materials, such as straw and manure, inactivate the bleach solution, so monitor and clean footbaths regularly to maximize efficacy of the disinfectant.

Locate foot baths (for example, 10% Bleach Solution or other disinfectant the veterinarian recommends) and hand sanitizers (62% Ethyl Alcohol) at all entry points to the isolation area. Monitor foot baths and routinely change the solution when organic material builds up. To eliminate potential pathogens remaining in the nasal passages of humans, all individuals should blow their noses before exiting the isolation area. Ideally, isolation area personnel will shower and change all clothing when leaving the

isolation area. At a minimum, isolation area personnel should comply with appropriate hand hygiene and change of clothing and footwear when exiting the area. Hands should be washed under running water with pump-dispensed liquid soap (not bar soap) for a minimum of 20 seconds. As an alternative, hands may be sanitized with a 62% ethyl alcohol hand gel or foam disinfectant and allowed to dry (10-15 seconds). All supplies should be in the isolation area before movement of a sick horse into the area. If necessary, additional supplies may be brought to an area adjacent to the isolation area for easy transfer into the area. An isolated horse should remain in the isolation stall, but if necessary, arrange access to an outside area with no access by other horse or humans. Manure and soiled bedding from stalls of sick horses should not be put in open air piles or pits, but should be placed in heavy plastic bags for disposal in landfill. (See Appendix T - Equine Event Isolation Protocol Guidance)

California	
Department of Food and Agriculture	
Animal Health Branch	
Headquarters	916-900-5002
Redding District	530-225-2140
Modesto District	209-491-9350
Tulare District	559-685-3500
Ontario District	909-947-4462

8. Notification of Animal Health Officials: The infectious disease control plan should include contact information for state animal health officials. Some infectious diseases, by law, must be reported to state animal health officials within certain timelines. During plan development, the state animal health official can provide guidance on biosecurity and infectious disease control plans for reportable diseases. Following receipt of a reportable disease, state or federal animal health officials will conduct an investigation to determine if the situation warrants regulatory action. In California, state animal health officials have the authority to issue quarantine and stop movement of animals and animal products that pose a significant health risk to other animals or the public. During an infectious disease investigation at an equine event, state officials will request an exhibitor list from event management that includes horse names, current owner/agent name and contact telephone number, including cell phone number, email address and mailing address and location address for horses that participated in the event. (See Appendix V - State Animal Health Official Contact List)

Contact	
California Animal Health & Food	
Safety Laboratory System	
For Necropsy	
Davis	530-752-8700
Tulare	559-688-7543
San Bernardino	909-383-4287

9. Handling Rabies Suspect: All warm-blooded animals demonstrating neurologic clinical signs have the potential to be infected with rabies. The most consistent signs in a rabid horse include irritability, hypersensitivity to touch, altered mentation (aggression or stupor), progressive paresis and paralysis. Isolate all horses demonstrating neurologic

clinical signs and clearly post a “*Rabies Suspect*” sign on the stall. Obtain the rabies vaccination status of the horse. Based on the clinical presentation and diagnostics, the onsite veterinarian may contact the local public health officer. The contact number for the local public health officer should be in the infectious disease control plan for the event. Restrict personnel access to the horse and ensure that anyone contacting the horse wears double gloves and protective clothing at all times while in contact with the horse. Record the names of all who make contact with the animal in a log. (See Appendix W - Contact List of California Local County Public Health Officer)

10. Euthanasia of a Horse; Carcass Handling: If the condition of a sick horse worsens or it is unable to stand, euthanasia may be the only option. The ideal location for euthanasia is a remote area of the show grounds, accessible to large equipment or trucks, with no public access. The infectious disease control plan should include contact information for a rendering truck or dead hauler, who can remove a carcass from the premises. For biosecurity reasons, the route for a rendering truck or dead hauler on and off the event premises should not cross any horse or exhibitor areas. A necropsy of any horse that dies or is euthanized is strongly recommended. For events in California, contact the nearest California Animal Health and Food Safety Laboratory to arrange a necropsy. An Equine Herpes Myeloencephalopathy necropsy protocol is available to equine veterinarians from The American Association of Equine Practitioners.

11. Exposure Assessment of All Event Horses: An equine event infectious disease control plan requires a mechanism to assess the exposure risk of all horses on the property. Knowledge of the location and activities of the sick horse(s) before the onset of clinical signs is essential for determining the exposure risk of other horses. In general, a horse which had direct contact (nose-to-nose, fence line) with a sick horse would be a high-risk animal and a horse which may have had indirect contact (communal water trough, shared wash rack, shared equipment, common personnel, etc.) with a sick horse would be a medium-risk animal. Any horse which had no direct or indirect contact with a sick horse would be a low-risk animal. Exposure assessments may vary based on the disease agents involved in the outbreak. For example during an influenza outbreak, all horses stabled in a location with shared airspace (i.e., same barn) would be exposed high-risk horses. A veterinarian can assist in the exposure designations based on the disease agent and the facility layout.

(See Appendix X - Exposed Horse Release Assessment)

12. Release of Horses from Event: Horses that are moved from an event premises where an infectious disease is suspected or confirmed pose a risk to the general equine population. Under some circumstance, the state animal health official may quarantine animals and determine criteria for release from quarantine. When diseases are not reportable or regulated by state animal health officials, the event management, in consultation with the event veterinarian, is responsible for establishing releasing criteria

from the premises. Event management should develop a releasing system for allowing movement of horses from the event to ensure appropriate and timely release of horses from the venue where an infectious disease event occurred. The system should evaluate individual horse exposure status; base the determination for release of horses from the event grounds on known exposure level and the ability of the owner to isolate and monitor the potentially exposed horse at the destination premises for at least fourteen (14) days. Consider prompt release of low-risk horses. Consider release of medium-risk horses only if the owner/agent can ensure adequate biosecurity measures and monitoring at the destination premises. All other horses should remain onsite until the infectious disease situation is under control. (See Appendix X - Exposed Horse Release Assessment)

13. Advice to People Leaving the Venue: Plan to allow spectators that have had no contact with horses at the venue to leave the premises without restriction. Individuals who have had direct contact with horses at the venue pose a potential risk for disease spread; advise such individuals leaving the property to take biosecurity measures of blowing their nose, hand washing, cleaning and disinfecting boots, changing clothing and potentially showering before making contact with horses on other premises. Plan to post biosecurity signage at venue exit gates and distribute prepared handouts outlining the basic biosecurity measures which should be taken to prevent disease spread. Advise horse haulers to clean and disinfect trailers after hauling horses from the event. (See Appendix R – Exhibitor Handout *Biosecurity Measures for Exposed Horse* and Appendix Y - Cleaning and Disinfecting A Horse Trailer)

14. Locating Horses Moved from the Venue: The contact information and intended destination of animals being moved from the venue that you obtain at check-out from the venue become invaluable in an infectious disease outbreak situation. If horses were moved from the premises before the infectious disease was detected, they may have been exposed to the infectious disease agent. To prevent potential disease spread at other equine premises, plan to contact the owner/agents for horses that were moved from the venue to inform them of the incident and recommend implementation of appropriate biosecurity measures and isolation and monitoring of the potentially exposed horses.

15. Monitoring Exposed Horses Onsite: Plan to continually monitor all horses which remain onsite for signs of disease. Institute strict biosecurity measures for each remaining horse to include isolation, cleaning and disinfection of all equipment, no sharing of equipment (if equipment must be shared, clean and disinfect it between use) and hand washing or use of hand sanitizer by individuals between horse contacts. Procedures similar to those used in isolation go a long way toward ensuring no further disease spread among exposed horses. Plan for event staff to make routine visits around the stabling area to enhance compliance with biosecurity procedures.

16. Feed and Bedding Delivery: The plan should include feedstore contact information to arrange for feed and bedding delivery if horses are held on the premises for more than twelve (12) hours. Event management staff should assess the potential feed and bedding needs on the premises and consider necessary arrangements for a single delivery to a designated area. To minimize disease spread on the event grounds, designate personnel to be responsible for the delivery of the feed to the barns.

17. Cleaning and Disinfection (C & D): Once an outbreak is controlled and all horses have been permitted to be moved from the premises, the entire premises must be cleaned and disinfected. Organic material, such as manure and soiled bedding, can inactivate disinfectants and render them less effective. It is important to remove all manure, soiled bedding and uneaten feed first. Then remove residual organic matter by washing all surfaces with soap and water before the application of a disinfectant. For maximum efficacy, disinfectants require adequate contact time with the surface being disinfected. Always use disinfectants according to the manufacturer labeled instructions. Sunlight inactivates/kills many pathogens. After cleaning and disinfecting buckets, tack and equipment allow them to dry in the sunlight if possible. After C & D for some pathogens, like Salmonella, it may be necessary to obtain test swabs of the environment to determine elimination of the organism. Work with the event veterinarian or a subject matter expert on appropriate C & D for difficult to kill pathogens. (See Appendix N - Equine Event Cleaning and Disinfection Recommendations and Appendix O - Characteristics of Selected Disinfectants - Center for Food Security and Public Health.)

18. Delegation of Responsibility: A well-written infectious disease control plan should clearly outline event staff roles and responsibilities during the outbreak. The plan should specifically name individuals for assigned tasks during an outbreak response. Before the event, designate a single person responsible for control of the situation during an infectious disease outbreak at the event site. This person should be the sole person communicating with the onsite veterinarian, the event organizing body and the state animal health official. Clearly communicate the assignments in advance of the event to ensure that individuals have time to read and understand their responsibility. The plan should also clearly articulate a timeline for actions to occur during a disease outbreak. (See Appendix Z - Checklist of Responsibilities for Infectious Disease Control Plan)

19. Disciplinary Policies: It is essential that all individuals on the event grounds comply with the infectious disease control measures to prevent disease spread during an outbreak. Before the event, event managers should consult with organization leaders to determine what disciplinary actions will be taken against individuals who fail to comply with necessary disease control measures. Owner/agents and event participants should receive the infectious disease control plan and disciplinary measures for noncompliance with the plan before the event.

20. Communication Plan: Notification of all affected parties is a critical component for an effective infectious disease control plan. Development of clear, concise and accurate messages about a situation, the measures being taken and the procedures for event participants to follow is critical to prevent the spread of disease and panic among event participants and the general horse-owning public. Before the event, outline a communication plan notification scheme to notify event staff, participants, venue owners, event organizers and vendors in the event of an incident. Consider incorporating several communication modalities to ensure rapid, unified messaging to a large audience. Contact information for other individuals who may be able to assist during an infectious disease outbreak should be organized and readily available. Create a complete emergency contact list and provide it to all event staff and volunteers at the beginning of the event. Consider having a public relations specialist develop a communication plan and have their contact information readily available for provision of messaging at the appropriate level and preparation of timely updates. For events held by associations with public relations specialists, preparation of a press release with daily updates allows for clear, concise and accurate information sharing. (See Appendix AA – Communication Contact List Template)