

## Recommendations for an Equine Event Biosecurity Plan

Disease risks are inherent when animals of varying health status commingle. Complete elimination of all disease risks at an equine event is highly unlikely, so event managers must determine the acceptable level of disease risk for their event and develop an event biosecurity plan with policies and procedures to attain the needed level of biosecurity. Working with veterinarians and stakeholders, event management should determine which risks warrant implementation of mitigation measures.

An understanding of disease transmission is an asset to the event manager in the assessment of disease risk and prioritization of needed biosecurity measures. The greatest risk for contagious disease spread is direct horse-to-horse contact, specifically susceptible horse contact with a sick horse shedding infectious disease pathogens. Secondly, body fluids, such as sweat, material from the nostrils and manure/soiled bedding from a sick horse, may contain infectious disease agents that contaminate equipment, water buckets, tack, clothing, personnel and vehicles. Horses contacting contaminated surfaces may be exposed to the disease agent indirectly. Lastly, mosquitoes, ticks and flies, may be vectors for disease transmission. Vector transmission occurs when an insect or tick acquires a pathogen from one animal and transmits the pathogen to another animal. Insects or ticks can act as mechanical vectors which simply transfer the disease agent from one host animal to another. In some cases, insects or ticks act as biological vectors which involve modification of the agent by the insect or tick before transmission to a new host animal. Biosecurity measures should target these various methods of disease transmission to prevent the spread of disease.

In an area of no known ongoing disease threat, basic biosecurity is still necessary at the event. If, however, a disease threat is known to be in the geographic area of the event, it is advisable to institute additional biosecurity measures. The plan should also outline specific infectious disease control measures to enforce if a disease outbreak occurs at an equine event.

Following the venue disease risk assessment, equine event managers should consider the following biosecurity recommendations in the development of an equine event biosecurity plan:

**1. Health Requirements for Entry:** To protect competitors/exhibitors and horses on the premises, implement horse health entry requirements to reduce the risk of disease agent introduction to the venue. Horse health requirements for the event should be made in consultation with a local veterinarian with knowledge of the specific disease risks of the geographic area. When developing equine health entry requirements, consider the following policy options:

**a. Only Healthy Horse Policy:** Restrict entry to the event grounds to healthy horses only. Prohibit entry of horses displaying obvious clinical signs of disease, such as

copious nasal discharge, persistent frequent coughing or neurologic signs, such as ataxia or marked hind limb weakness (wobbly gait).

**b. Event No Fever Policy:** Restrict entry to the event grounds to horses for which the owner/agent can provide documentation that the horse(s) has/have not displayed a temperature above 102°F for a designated time period, for example, the 48 hours immediately before arrival at the event. For events held in a geographic area of increased disease risk, the temperature monitoring time period before arrival may be increased to seven (7) days with the added requirement for submission of temperature recording log.

***Healthy Horse Parameters***

*Temperature* 100°F  
*Resting Heart Rate* 28-40 bpm  
*Resting Respiratory Rate* 10-14 bpm

**c. Health Certificate Required for Entry Policy:** Restrict entry to the event grounds to horses for which the owner/agent provides a certificate of veterinary inspection (health certificate) issued within seven (7) days of arrival at the event venue. A health certificate issued 72 hours before arrival is optimal. If a specific disease risk exists within the geographic area of the event, or a specific disease risk exists in the type of horses participating in the event, specify that additional health requirements be written statement on the health certificate by the issuing veterinarian attesting to the horse's health and exposure status. For example, an additional requirement may include a statement that "The listed horse(s) has/have not been on a premises with a confirmed case of neurologic form of EHV-1 in the preceding twenty-one (21) days". Additionally, your event may require that horses have specific vaccinations. For events with increased public exposure risks, a rabies vaccination requirement is prudent in order to protect animal and public health. Consult a local equine veterinarian for additional health certificate statement and vaccination recommendations based on disease risk of the geographic area or equine exhibitor demographic.

**d. Horse Health Declaration Policy:** Upon arrival, require that the owner/agent sign a health certification statement attesting that the listed horse(s) arriving at the venue has/have been healthy with no clinical signs of a contagious disease or body temperature(s) above 102°F for the preceding seven (7) days. (See Appendix F - Equine Event Participation Declaration). For all event health requirements and biosecurity measures, exhibitors and visitors should be made aware of the policies both prior to and during the event.

**Animal Health Examination Notification**

- All horses and other livestock that enter the grounds, whether entered in event or not, are subject to examination by event officials and/or State Animal Health Officials to determine whether such animals are, have been infected/exposed or are likely to be infected with an infectious or contagious disease.
- If after such examination, there is reason to believe that an animal's health condition places other animals at risk, event officials may isolate such an animal, and other animals that may have been infected/exposed.
- All participants agree to fully cooperate with event officials and abide by their decisions/instructions. Failing to comply shall be grounds for immediate expulsion of the participant from the grounds and potential disciplinary action by organization, local/state or federal animal health officials.

**2. Report Suspicion of Sick Horses:** A horse entering the event grounds may be infected with an infectious disease agent or incubating a disease and not showing clinical signs of disease. The stress of travel and the stress of competition may result in a horse becoming clinically ill and displaying clinical signs of a disease during the equine event. Horses displaying clinical signs of disease pose a significant risk for disease spread to the entire population of horses. Consider an event policy requiring that any suspicion of illness in horses, including a temperature over 102°F, be immediately reported to a designated event official. All individuals on the premises should be made aware of this reporting requirement and be provided the name and telephone number of the designated event official to contact. The designated event official, who is to receive reports of illness, should have the authority and responsibility to immediately take necessary actions, such as enactment of an isolation plan to remove the suspect horse from the general population of horses at the event. The event manager should contact the event veterinarian for specific recommendations on how to manage a suspected sick horse.

**3. Isolation of Sick Horses:** Sick horses shedding an infectious disease agent can transmit an infectious disease agent directly and indirectly to susceptible horses on the event premises. The immediate isolation of a sick horse is essential for prevention of disease spread. Restrict isolation area access to the minimum number of individuals to provide needed care for the horse. Optimally, these people would not handle any other horses on the premises or have access to any other areas of the premises. If this level of control is not possible, then with veterinary consultation, institute a plan to use barrier precautions with appropriate use and disposal of personal protective equipment. The infectious disease control plan guidance documents provide additional



information for isolation protocols and procedures. (See Part 2 Enhanced Biosecurity and Infectious Disease Control for Equine Events and Appendix S - UC Davis Center for Equine Health *How to Set Up a Disease Isolation Unit at a Farm or Show*) and Appendix T – Equine Event Isolation Protocol Guidance)

**4. Temperature Monitoring of Horses:** A requirement for monitoring horse temperatures two (2) times a day and documenting temperature readings in a log is an easy, efficient, early disease detection tool for horses on the event premises. Temperatures taken immediately after transport or exercise may be temporarily elevated, so the initial temperature monitoring should be after the horse is settled in the stable. A horse rectal body temperature over 102°F should be immediately reported to a designated event official. Horses with rectal body temperatures between 101°F and 102°F should be monitored for other signs of disease and have their temperature retaken in one (1) hour. To ensure compliance with the horse temperature monitoring requirement, event staff should perform random audits of temperature monitoring logs. Consider requiring the posting of a Temperature Monitoring Log on the stall door which will allow an event official to easily perform checks on temperature recordings. (See Appendix G - Stall Temperature Monitoring Log)

**5. Monitoring of Horse Health:** Continuous health monitoring of all horses on the premises during the event is important. Designated event staff should perform a periodic walk-through of stables and event grounds to directly observe horses for any clinical sign of disease. Any sign of disease should be reported to the designated event official with the authority to initiate immediate disease control measures, such as isolation.

**6. Equipment Handling:** Contamination of equipment by body fluids, such as sweat,



Hoses which make direct contact with buckets can potentially pick up and transfer disease agents

material from the nostrils and manure/soiled bedding, can spread pathogens between horses at the event. Some pathogens may be spread on shared equipment, such as grooming supplies, wipe rags, water buckets, hoses and tack. Water hoses that make direct contact with contaminated surfaces on water buckets can transmit disease agents to the next bucket contacted. Thorough cleaning and disinfection of shared equipment between uses is recommended. To decrease environmental contamination, event management can clean and disinfect all areas which are touched by a person's hands or horses, such as fences, wash racks, bathroom sinks, faucets and door handles on a daily basis. Event management should discourage participants from sharing equipment. Posting signage around the event grounds will serve as a reminder to participants.

## References:

1. Dr. Roberta Dwyer video entitled, *How to Clean/Disinfect Horse Equipment* <http://www.thehorse.com/Video.aspx?n=how-to-clean-disinfect-horse-equipment&vID=497>
2. Dr. Roberta Dwyer video entitled, *How to Clean/Disinfect Water Buckets and Troughs* provides detailed steps to decrease disease risk associated with these items. (<http://www.thehorse.com/Video.aspx?n=how-to-clean-disinfect-water-buckets-and-troughs&vID=498>)  
(See Appendix H - *Don't Share Equipment* Signage and Appendix I - *Top Tips to Keeping Your Horse Healthy at Shows* Poster)

**7. Limit Horse-to-Horse Contact:** Pathogens may be directly transmitted between horses through nose-to-nose contact, therefore, elimination of potential areas for direct horse-to-horse contact in the stabling, wash rack and exhibition areas is recommended. To reduce environmental contamination, common areas should be washed and disinfected daily.



A sick horse can spread pathogens by direct contact with another horse or indirectly by contaminating a communal surface or item, such as a fence, a hose or a lead rope.

**8. Limit Indirect Horse Contact:** Surfaces contaminated by horse secretions may serve as a source of infectious pathogens. Indirect disease transmission is possible if secretions from an infected animal remain viable on an inanimate object and a susceptible animal makes contact with the object by licking, sniffing, or having to eat or drink from the object. Horses should not be permitted to be tied to fencing outside the arenas or stabling areas since the fencing can be contaminated by secretions from an infected horse.

**9. Restrict Dog Movement:** Dogs moving freely around horses present a danger to horses and riders and may carry infectious disease agents from one location to another on the premises, potentially exposing horses to infectious disease agents. Prohibiting dogs on the event premises or restricting access to only dogs on leashes controlled by a person may improve safety and significantly reduce risks of disease transmission. If leashed dogs are permitted on the premises, they should be restricted from the stabling and feed storage areas. The event staff should have instructions for managing incidents of dogs found in restricted areas, off leash or freely roaming the premises.



An effective leash policy should be enforced to ensure dogs remain on a leash under control by an individual.

**10. Limit Human-to-Horse Contact:** Human contact with multiple horses should be avoided. Show officials required to contact multiple horses should, at a minimum, be required to perform hand hygiene procedures (hand washing or use of an alcohol-based sanitizing product) between horse contacts or between classes. Where bit inspection is mandatory, the event official conducting the inspection should use and change disposable gloves or use hand sanitizer between each horse inspection. Horse show officials can ask the rider of groom to open the horse's mouth to check bit or tattoo. Visitors can also pose a significant disease transmission risk due to the unknowns of their previous horse contacts. Visitors should not be permitted to contact horses without washing hands or using hand sanitizer immediately before and after the contact.



Strategically placed handwashing stations for exhibitor and visitor use can reduce disease agent spread throughout the premises.



Visitor contact with exhibiting animals can spread disease agents between animals and humans.

**11. Visitor Access Policy:** Human traffic at event venues can be a potential mechanism for spread of infectious disease agents. Restrictions or limitations on direct visitor access to animals can protect both human and animal health. Visitors should not be permitted to feed horses at the venue. If visitors are permitted to have direct contact with horses, event management should encourage hand-washing or use of hand sanitizers before and after direct contact with horses. (See Appendix J - Center for Disease Control(CDC) *Wash Hands When Leaving Animal Exhibits* Poster and Appendix K - CDC *Be Safe Around Animals* Poster)

**12. Vector Control Program:** Vector borne diseases are those in which transmission of a pathogen is by a vector, such as mosquitoes, ticks, fleas and flies. Vector transmission occurs when an insect acquires a pathogen from one animal and transmits the pathogen to another animal. Insects can act as a mechanical vector, which simply transfers the disease agent from one host animal to another. In some cases insects act as a biological vector, which involves modification of the agent by the insect or tick before transmission to a new host animal. Elimination of insects, or at least maintaining separation from the host, is critical to controlling vector borne diseases. Elimination of standing water, manure piles, tall weeds and brush are some methods for controlling insects and ticks. A multifaceted vector control program should be part of a biosecurity plan. For large events anticipating significant horse traffic and accumulation of manure, consult an insect control specialist for the most appropriate recommendations. During the event, recommend application of topical insect repellent for horses at the event. (See Appendix L - Routes of Disease Transmission and Control Measures for Equine Events)

**13. Wildlife Control Program:** Wildlife, birds and vermin may introduce and spread infectious disease agents. Hay and grain attract such pests and if contaminated may serve as a point of distribution of an infectious disease agent. Human food attracts raccoons and other wildlife that may transmit disease, such as rabies, to animals or humans. For reducing disease transmission risks at the event premises consider incorporating a control plan for wildlife, insects, ticks, birds and rodents. Simple control measures, such as securing feed storage areas from unwanted wildlife, removing brush and wildlife habitats, instituting rodent control measures and eliminating areas of standing water, will contribute significantly to the reduction of disease transmission risks on the event premises. (See Appendix M - Wildlife, Bird and Rodent Control Measures)

**14. Control and Track Horse Movement:** It is important for event management to know what horses are on the event premises and where they are stabled. A comprehensive check-in and check-out procedure will provide the event manager the opportunity to obtain and/or validate essential information from owner/agents. Check-in information should include valid contact information of the party responsible for the horse(s). For each horse entering the premises, management should also obtain the address of the home premises or horse location prior to the event if other than the home premises and confirm the stabling location on the event premises. Information that should be collected from the owner/agents when moving horses from the event (check out information) should include: owner/agent contact information (including cell phone number and email address) and the intended destination for the horse(s) after leaving the event. This information becomes essential in an infectious disease outbreak at or following an event. This information allows for tracing and contacting owner/agents of potentially exposed horses.



Tracking horse movement at an equine event is critical to determining disease exposure when an infectious disease occurs at the event.

**15. Post Adequate Biosecurity Signage:** Clearly communicate event biosecurity measures to event participants before and during the event. Place appropriate signage around the grounds to remind participants of expected compliance with biosecurity measures. Stable and barn signage should target biosecurity practices to prevent animal-to-animal contact, equipment sharing and feed contamination. Show ground signs should target parking and access areas, hand washing/ sanitization stations and event policies for dogs. Wash stall signage should discourage horse-to-horse contact, sharing of equipment and direct horse contact with hoses. Adequate signage for traffic flow on designated routes to parking areas for exhibitors, vendors, haulers, and visitors is also essential to minimize risks of disease introduction.



**16. Medical Device Use and Disposal:** Needles and syringes used to administer medications at an event pose a safety hazard and potential disease transmission risk. Pathogens in blood can be transmitted from one horse to another through the use of contaminated needles. Event policies should include no needle reuse and mandatory disinfection of any blood contaminated equipment, such as dental and lip tattoo equipment. Appropriate medical waste disposal protocols should be implemented which includes proper needle disposal into sharps containers and medical waste removal of full sharps containers.



Needles and syringes are a safety hazard; if contaminated with blood they have the potential to spread disease. All needles should be disposed of in a sharps container and all syringes should be placed securely in medical waste.

**17. Cleaning and Disinfection Protocols:** Event premises sanitation before, during and after an event is an important risk reduction element for disease transmission.

- Step 1:** Organic matter, such as manure and soiled bedding, should be thoroughly removed.
- Step 2:** Wash walls and floors with soap and rinse with water.
- Step 3:** Allow time to dry.
- Step 4:** Apply a disinfectant. Use disinfectants according to label directions following all safety precautions. Comply with all product label application instructions and or maximum efficacy to ensure adequate disinfectant contact time with surfaces.

Sunlight can act as a natural disinfectant for many pathogens, so allow buckets, equipment and tack to dry in the sun after cleaning and disinfecting. All buckets, tack, equipment and vehicles should be appropriately cleaned and disinfected between animals and before being taken to the home premises.

Reference: Stall Cleaning Disinfection Videos, by Dr. Roberta Dwyer – Provide step by step instructions which are accessible online at <http://www.thehorse.com/Video.aspx?n=stall-cleaning--disinfection-series-part-1-cleaning&vID=488>

(See Appendix N - Equine Event Cleaning and Disinfecting Recommendations)

(See Appendix O - Characteristics of Selected Disinfectants - Center for Food Security and Public Health)

**18. Communicate Biosecurity Plan:** For successful implementation, the event biosecurity plan must be adequately communicated to event participants, the general public and the event staff. Provide event participants with a written copy of the event biosecurity requirements before the event. Consider including the biosecurity measures in published event documents, such as premium booklets, bylaws and/or rules and regulations. Consider incorporating several communication modalities to ensure adequate dissemination of the event biosecurity information. Social media websites, blogs, listservs, Facebook and Twitter are a rapid and efficient means to communicate important information to participants. Also consider having event participants sign a form agreeing to comply with the event biosecurity measures while at the event. (See Appendix P - Sample Letter Mailed to Registered Exhibitors)