



Biosecurity Toolkit for Equine Events

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Purpose

The purpose of this toolkit is to assist equine event management and industry stakeholders in identifying potential disease risks at an event venue and in developing a biosecurity and infectious disease control plan to protect the health of the competition/exhibition horses and the equine population. Each event and venue is unique; therefore, the toolkit provides guidance for the assessment and development of event-specific plans that address the specific identified disease risks of the event and venue.

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Part 1: Basic Biosecurity for Equine Event

Biosecurity is a set of preventive measures designed to reduce the risks for introduction and transmission of an infectious disease agent. Infectious disease pathogens may be brought to and spread at an event premises by horses, people, domestic animals other than horses, vehicles, equipment, insects, ticks, birds, wildlife including rodents, feed, waste and water. Implementation of an equine event biosecurity plan will minimize or prevent the movement of diseases and pests on and off the event premises.

Development and implementation of an equine event biosecurity plan is an essential responsibility of the equine event manager that is critical to protecting the equine industry.

The objective of this biosecurity toolkit is to provide equine event managers with resources to recognize potential disease risks at the event venue and develop a biosecurity and infectious disease control plan to protect the health of the competition/exhibition horses and the equine population. Each event and venue is unique; therefore, the toolkit provides guidance for the assessment and development of event-specific plans that address the specific identified disease risks of the event and venue.

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Potential for the “Perfect Storm” at Equine Events

A disease “perfect storm” occurs when numerous disease risk factors and a viable disease pathogen successfully interact resulting in the introduction and successful spread of the infectious disease agent to a susceptible population. The threat of a “perfect storm” concerns many equine event organizers. In the world of equine events, a “perfect storm” situation could occur if susceptible, stressed horses at an event venue are exposed to a viable infectious disease agent, the conditions and environment at the event support disease transmission and the disease agent rapidly spreads throughout the population of animals on the premises. In May 2011, horses that attended the National Cutting Horse Association event in Ogden, UT were exposed to the neurologic form of Equine Herpesvirus-1. The resulting outbreak, which garnered national attention, serves as an example of a disease “perfect storm” situation that had a significant impact on the equine industry.

1. Entry and Movement of the Disease Agent: Some equine infectious disease agents are ubiquitous in the environment and may naturally be present on the event grounds. Other infectious disease agents may be brought onsite by apparently healthy “carrier” animals. A multitude of factors, including stress, may result in a carrier animal becoming sick while at an event. This diseased horse may shed the pathogen exposing susceptible horses. Depending on the infectious disease agent, some exposed horses may shed the infectious disease agent during an incubation period before showing clinical signs of disease. So a sick shedding horse and a clinically healthy horse incubating a disease may shed disease agent into the environment, potentially infecting other horses at the same event. At an event lasting several days, an infectious disease agent can potentially disseminate throughout the entire venue exposing a large population of horses. Exposed horses that are subsequently moved from the venue can potentially spread the disease to horses at the next site of destination.

2. Exposure of Stressed Susceptible Horse Population: Horses participating at events away from their home premises experience stress associated with travel, an unfamiliar environment and competition/exhibition. Stress affects the immune system lowering defenses against invading pathogens. If an invading infectious pathogen is one to which the stressed horse has not been previously exposed, the potential for infection with exposure increases.

3. Environmental Spread of Disease: Many environmental factors contribute to the spread of disease. Air temperature, wind and humidity can promote the survival and transmission of infectious disease agents. The stable environment at an equine event may significantly influence the spread of the infectious disease agent and the quality of the ventilation in the stabling area may directly facilitate pathogen spread. Many multi-day equine events have space limitations for stabling, so horses are often kept in close

confinement. Such close confinement may promote the ability of a disease agent to spread.

4. Lack of Biosecurity: Properly implemented biosecurity measures may significantly decrease the risks for disease introduction and spread. Failure to implement, or to comply with, biosecurity measures may lead to an increased likelihood of on-site disease agent introduction and transmission.

Biosecurity Challenges at Equine Events

Equine events pose unique risks for disease introduction and spread. The frequency and number of animals and humans moving around a show grounds, the commingling of horses of unknown health status, the often close stabling of animals and the sometimes inadequate or non-existent isolation areas for sick animals, all increase challenges for disease control.

1. **Commingling Horses of Unknown Health Status:**

Horses, often with an unknown health status, are moved from their home premises and travel to an equine event, where they commingle on one premises. Some owners may have vaccinated their horses to protect them against common infectious disease agents, while others have not. The horses may all appear healthy as they unload from the trailer on the event grounds, however, some may be incubating or shedding a disease agent. Unfortunately, without a requirement for complete health exams and diagnostic testing, the health status of all the horses arriving on the event grounds will remain a mystery.



During equine events, horses commingle in confined spaces for the purpose of competition, exercise or stabling. Without a complete physical examination and diagnostic testing, the health status of these horses remains unknown. There is potential for an apparently healthy horse to be incubating and possibly shedding a disease agent.

2. Stabling of Animals in Close Proximity: Horses participating in multi-day equine events are often housed in close quarters in barns and stables for extended periods of time with limited access to paddocks or pastures. Some events, such as fairs and exhibitions, may house multiple types of animals under one roof. Close stabling increases the risk of circulating pathogens and disease transmission.

3. Animal and Human Movement: Typically, event officials, exhibitors, spectators and vendors move freely around the venue grounds, interacting with numerous other people, animals and objects. These unrestricted movements and interactions may inadvertently increase the risks for infectious pathogen introduction and spread during an event.

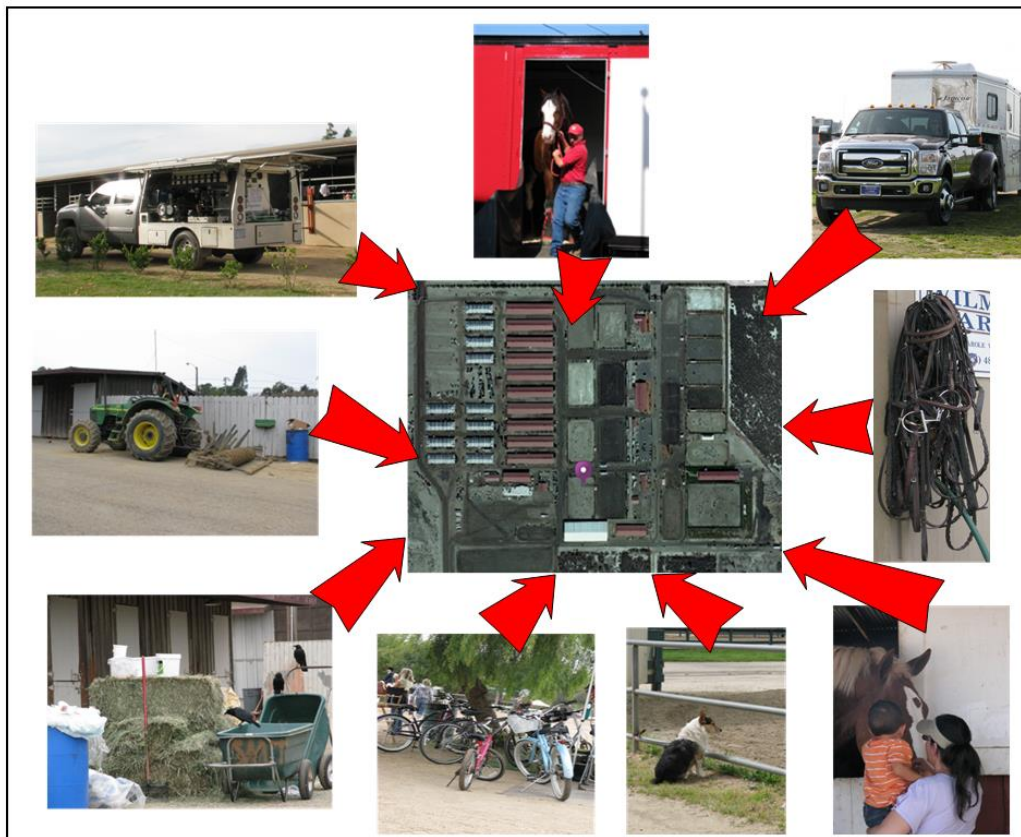


Horses and humans can quickly disseminate a disease pathogen around the event grounds when movements and interactions are unrestricted.

4. Inadequate or Non-existent Isolation Areas: Most equine event grounds and facility designs allow exhibitors easy, direct access to competition/exhibition areas. Stabling areas away from the main traffic routes of the event are limited and an area for adequate isolation of sick horses may not be immediately available when needed.

A Biosecurity Plan for Equine Events

Development of an equine event biosecurity plan is an important step in protecting the health of all horses on the event premises. An assessment of biosecurity risks for each venue is necessary and an event-specific biosecurity plan should be developed to address each of the disease risks identified. An event-specific biosecurity plan should address the specific disease risks for the particular venue site and horse population. Successful implementation of the biosecurity plan relies on event staff, participants and spectators understanding and complying with the policies and procedures of the plan. Ideally, the event biosecurity plan should be incorporated in the rules and regulations of the event, communicated to all individuals before the event and prominently displayed with signage at the event. The plan should include monitoring during the event to ensure compliance with biosecurity policies and procedures. The American Association of Equine Practitioners (AAEP) provides guidelines to equine veterinarians on biosecurity and infectious disease control at equine events. Event managers are encouraged to consult a veterinarian to assist in the biosecurity assessment process and plan development. **The below photos illustrate various ways an infectious disease agent can be introduced and spread at an equine event venue. When evaluating the event venue, consider the horse, trailers, tack and equipment, visitors, pets, bicycles and golf carts, feed and bedding delivery systems, tractors and farrier or other vendor vehicles as biosecurity risks and determine what steps can be taken to control the risks.**

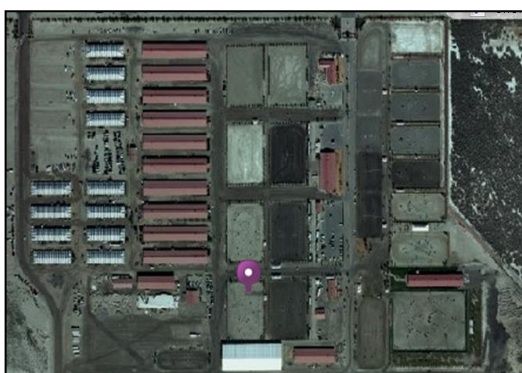


Equine Event Biosecurity Assessment

Initially, conduct a biosecurity assessment of the equine event venue and evaluate current management practices and identify potential disease risks. Assess the facility layout and construction, animal entry requirements, horse stabling, manure disposal, feed and hay storage, equipment handling, cleaning and disinfection procedures, potentials for horse-to-horse contact and horse-to-other species contact, isolation facilities for sick horses, vector and wildlife control, visitor access, traffic control and record keeping. Address the risks identified in the assessment in the biosecurity plan for the event. In the event of an animal disease outbreak, more stringent practices will be required to control disease spread.

HINT

The best way to assess biosecurity risks is to follow a horse around the premises.

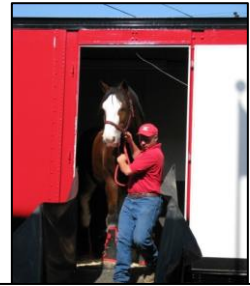


Use an aerial view of the event venue to visualize and identify potential risk areas for disease pathogen entry and spread.

1. **Facility Layout:** The biosecurity assessment of an equine event venue involves determining the risk of potential introduction and spread of disease for the particular venue layout and construct. The facility design may significantly influence the ability for disease pathogens to be brought to the premises and spread throughout the facilities and the animal populations. Complete elimination of disease risk is impossible; however, understanding and evaluating the risk factors for the venue site enables the event manager to implement appropriate management practices to reduce the risk of a potential infectious disease outbreak at their equine event. A complete facility

biosecurity assessment should include assessment of the stalls (number, size, construction and location), the availability of an isolation area (location, access and suitability), the feed and water areas (storage, sources, handling), the communal wash stalls (number, construction and location), exercise areas (size, location, level of possible horse-to-horse contact, equipment, sanitation) and the parking areas (location, separation and signage). An assessment template and pictorial assessment document are available in the Appendix A and C to assist in the assessment of the facility. (See Appendix A - Event Facility Biosecurity Risk Assessment Text Version and Appendix B for Equine Event Biosecurity Risk Assessment Pictorial Version and Appendix C for Equine Event Biosecurity Policy Risk Assessment)

2. **Animal Entry Requirements:** Animals entering the event venue are a potential source of infectious disease agents. Assess the event entry policies and procedures to determine the risk of disease agent introduction. Permit only healthy horses to enter the venue grounds and have enforceable rules for refusing entry of unhealthy horses to the event. Ideally, event staff should observe horses upon arrival to confirm animal identification, check health documents and observe horses for general signs of good health. Apply similar animal health standards for other species of animals entering the venue as well. As an added precaution, equine entry to the premises should be restricted to only those equines participating in the event.



Are healthy horses entering the grounds?

3. **Horse Stabling:** Horses participating in multi-day equine events are often housed for extended periods of the day in barns or stables. Some events, such as fairs and exhibitions, may house multiple types of animals under one roof. Horse-to-horse contact, horse-to-human contact and horse-to-other animal contact are all potential routes for disease spread within the stables. When evaluating the biosecurity risk of the stabling area, assess the ability for horses to contact other horses, humans and other animals. Disease transmission risks increase with ability for direct or indirect contact. Additionally, evaluate the ventilation and air flow to ensure adequate air circulation, which aids in reducing potential exposure to respiratory disease pathogens or ammonia. For exposure to a respiratory pathogen, such as influenza, 100 horses stabled under one roof would all be considered exposed, however, with an exposure to *Streptococcus equi* (strangles) more direct contact would be required to be considered exposed.



Horses in stables with stall doors facing outward have lower disease risk due to better air circulation. However, there is an increase disease risk associated with potential contacts with other animals or humans passing by the stables.

4. **Stall Sanitation:** Bacteria, viruses and parasites may remain viable in the manure, bedding and stall material. Therefore, evaluate stall cleaning protocols to ensure frequent and proper cleaning and disinfecting of stalls before and after each horse use to reduce potential exposure to disease agents. Direct observation of stall cleaning procedures will help determine the potential disease agent transmission risks associated with equipment handling, manure movement and disposal, and stall cleaning and disinfection protocols. (See Appendix D - Cleaning and Disinfection of a Vacated Stall)

5. Manure, Soiled Bedding and Hay Disposal: Infectious disease organisms may be



Designate position of manure piles away from foot and vehicle traffic area. This will reduce exposure risk to pathogens.

shed and remain viable in horse manure. Handle manure as a risk material, especially when there is an infectious disease outbreak. Manure and soiled bedding present in foot or vehicle traffic routes, or in areas where fluids accumulate, pose a potential risk for the spread of infectious disease agents. Evaluate manure and waste disposal protocols to determine the location of manure piles in relation to vehicle and foot traffic, horse stabling areas, pastures and surface water. A wheelbarrow used for multiple barns can potentially spread disease to a larger geographic area compared to use of a designated wheelbarrow for a single barn or a single barn aisle.

Never use a manure wheelbarrow to move feed or clean bedding. Evaluate the frequency and scheduling of manure removal from the collection point to ensure that procedures for prompt removal are in place. Frequent manure removal aids in eliminating parasites and insect breeding sites. Evaluate the manure disposal method to ensure that fresh manure is not spread on horse pastures. Thorough cleaning to remove organic material and disinfecting of stables and stabling areas reduce the level of pathogens.

6. Water Source and Disposal: A shared water source can result in risks for pathogen spread. Event venues which have a communal water trough or water from a shared water source have a higher risk of potential disease transmission. Events which require individuals to bring their own water buckets to fill from a water faucet have a lower disease transmission risk. Water hoses, although helpful to exhibitors, have the potential to spread disease if inserted into multiple buckets or left lying on the ground between uses. Natural water sources, such as streams or ponds, also pose a significant disease risk due to an inability to control water quality or prevent contamination with disease agents. Contamination of natural water sources can be due to wildlife, fecal material, urine and environmental toxins, so use of natural water sources at events should be avoided. Proper water disposal is important for disease control since used water or water remaining in the buckets have the potential to carry respiratory pathogens and also serve as a breeding ground for mosquitoes. Evaluate water disposal methods to ensure that water buckets are emptied directly into a drain or onto manure piles to eliminate disease agent transmission risk.



Pathogen-sharing is effective with use of communal water troughs.



Feed and manure handling supplies should be securely stored separately to prevent contamination.

7. Feed and Hay Storage: Evaluate the location, security and sanitation of feed and hay storage areas. Store feed in sealed containers to eliminate access by vermin, birds or other animals that have the potential to transmit disease. Hay should be free of dirt and mold, stored off of the ground and be kept covered. Feed storage bins, equipment and feed/water buckets should be routinely cleaned and disinfected. Feeding equipment should be stored separately from manure handling equipment.

8. Horse-to-Horse Contact: Infectious disease pathogens can spread easily from an infected horse to a susceptible horse by direct or indirect horse contact. Horses may shed infectious disease agents, such as bacteria, viruses or parasites, in body fluids, such as saliva, sweat, nasal discharge and feces. Evaluation of all potential for contacts is important for the development and implementation of biosecurity practices to minimize risk of disease spread. At equine events, horses may have direct contact with other horses in the stabling area, exercise area or in the exhibition arena. Horses may have indirect contact with other horses through contact with a surface, such as a fence or stall wall, contaminated with secretions from an infected horse. Horses tied closely along fences outside competition arenas may have direct contact with other horses or indirect contact with surfaces potentially contaminated by an infectious disease agent.



Congregating horses creates the potential for exposure to disease agents by direct contact with another horse or indirect contact with a surface potentially contaminated with an infectious disease agent.

9. Horse-to-Other Species Contact: Horses may harbor infectious disease pathogens that may infect other livestock species. Some of these pathogens may be merely carried by the horse but not cause disease in the horse. Dogs, which are often brought to equine events, may also be a potential mechanism of disease spread at the equine event. Evaluation of all potential horse-to-other species contacts is important for development and implementation of biosecurity practices that can minimize risk of disease spread by this route. If protocols are put in place to restrict other animal contact with horses, evaluate them for compliance and enforcement.

10. Traffic Control: Vehicles entering the equine event venue may carry infectious disease pathogens on their tires or undercarriage. Evaluate vehicle traffic flow to determine if vehicles should be prohibited from the horse traffic areas. Also evaluate the adequacy of signage for designated vehicle traffic routes and parking areas for exhibitors, haulers, and visitors.



Designated vehicle parking limits disease transmission risk.

11. Record Keeping: Accurate records of event participants and horse arrivals and departures are necessary when evaluating disease exposure risk of the population. Current and accurate records of horses at the event and valid exhibitor contact information are essential to an investigation and response to a disease outbreak at an equine event. A map of the event venue, indicating locations of event activities, stables, fence lines, traffic flow, water sources and parking areas, should be part of all disease prevention plans and are needed in disease incident investigations. Evaluate event records, tracking documents (ability to track animal movement while on the premises and once they have left the premises) and maps of the event facility to ensure that they will contain pertinent information to compliment the biosecurity and infectious disease control plans. (See Appendix E - Record of Attendance at Equine Events)

Biosecurity assessment of these important areas will reveal potential risk factors for the introduction or spread of an infectious disease agent. The biosecurity and infectious disease control plans for the event should then be tailored to address the identified risk factors for the venue to the best extent possible.

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 or 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)

PART 2: Enhanced Biosecurity and Infectious Disease Control For Equine Events

Overview

Before any equine event, event organizers, in consultation with the event veterinarian, should develop a biosecurity and infectious disease control plan for an infectious disease outbreak. A veterinarian, in the geographic area of the event facility, is most qualified to assist in the development of this plan and to assist in plan implementation if and when necessary. The American Association of Equine Practitioners (AAEP) provides equine veterinarians with biosecurity and infectious disease control information. Each event is unique so the event veterinarian will refine the control plan based on the specific venue and disease situation.

An equine event biosecurity and infectious disease control plan is a set of measures aimed at controlling the spread of an infectious disease. A plan for response upon detection of an infectious disease is the most effective tool for successfully minimizing the impact of an outbreak. Implementation of an equine event infectious disease control plan at the first suspicion of an infectious disease is pivotal to maintaining the health of the other competition horses at the event and the general equine population.

The objective of this section of the toolkit is to provide equine event managers with resources to address the event biosecurity risks and develop an infectious disease control plan for use in responding to an infectious disease outbreak at the venue. Each event and venue is unique; therefore, the toolkit provides guidance for the assessment and development of event-specific plans to address the identified disease risks of the event and venue.

PART 2: ENHANCED BIOSECURITY AND INFECTIOUS DISEASE CONTROL FOR EQUINE EVENTS

- 1. Overview**
- 2. Infectious Diseases**
 - a. Potential Agents**
 - b. Potential Modes of Transmission**
- 3. Enhanced Biosecurity in the Face of the Outbreak**
 - a. Stop Movement Orders**
 - b. Control and Track Horse Movement**
 - c. Monitor Horse Health**
 - d. Temperature Monitoring of Horses**
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- 4. Recommendations for an Equine Event Infectious Disease Control Plan**
 - a. Sick Horse Trigger Point**
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 - k. Exposure Assessment of All Event Horses**
 - l. Release of Horses from Event**
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 - n. Locating Horses Moved from the Venue**
 - o. Monitoring Onsite Exposed Horses**
 - p. Arrangements for Feed**
 - q. Cleaning and Disinfection**
 - r. Delegation of Responsibility**
 - s. Disciplinary Policies**
 - t. Communication Plan**

Infectious Diseases

Well before an event, event organizers should consult with the event veterinarian to discuss the infectious disease agents that could potentially be introduced to the equine event and the potential modes of disease agent transmission. A veterinarian in the geographic area of the event facility is most qualified to provide insight to diseases of concern. All disease agents are unique, so basic knowledge of the disease of concern and methods of disease agent transmission are beneficial to the event manager in developing the biosecurity and infectious disease control plan.

1. **Potential Agents:** Consulting a veterinarian in the area where the event is to be held can provide valuable insight to specific infectious diseases of concern in the geographic area of the event. The biosecurity and infectious disease control plan should target the likely pathogens and their mechanisms of transmission. In general, infectious disease control plan should consider the following five categories for clinical presentations of infectious diseases:

- a. Respiratory Diseases: Equine Herpesvirus (EHV) -1 & 4 (Rhinopneumonitis), Influenza Virus, *Streptococcus equi* (strangles) and Equine Viral Arteritis (EVA)
- b. Neurologic Diseases: Equine Herpesvirus-1, Rabies, Botulism, Western Equine Encephalitis (WEE), Eastern Equine Encephalitis (EEE) and West Nile Virus (WNV)
- c. Diarrheal Diseases: Salmonellosis, Potomac Horse Fever, Clostridiosis
- d. Vesicular Diseases: Vesicular Stomatitis (VS)
- e. Skin Diseases: Ringworm, Lice, Ticks
- f. Bloodborne Diseases: Equine Infectious Anemia (EIA), Equine Piroplasmiasis (EP)
- g. Abscess Diseases: *Corynebacterium pseudotuberculosis* (Pigeon Fever), *Streptococcus equi* (strangles)

2. **Potential Modes of Transmission:** Infectious disease agents have various modes of transmission from one horse to another, such as aerosol, oral, direct contact, fomite and/or vector transmission.

- a. **Aerosol Transmission:** Droplets containing a disease agent are passed through the air from one infected animal to another susceptible animal. The ability of a pathogen to survive and be effectively transmitted by aerosol depends upon stocking density, temperature, ventilation, humidity and dust. Respiratory diseases, such as Influenza Virus, Equine Herpesvirus 1&4 and other common respiratory viruses, can quickly spread through an event facility; often horses are exposed before it becomes apparent that an index horse is sick. Airborne diseases are the most difficult to contain and complete control is often not feasible, especially in barns holding frequent events with horses continually being moved in and out. Early detection and response can reduce the number of cases.
- b. **Oral Transmission:** Oral passage of pathogens to the horse occurs through the direct ingestion of contaminated feed and/or water or through oral contact by

licking of objects, which have been exposed to infected organisms, or use of shared tack and wipe rags.

- c. Direct Transmission:** A susceptible animal may have direct exposure when the disease agent directly touches an open wound, mucus membrane or skin. The infectious disease agent can be passed from an infected animal to a susceptible animal through contact with saliva, nose-to-nose contact, rubbing and biting.
- d. Fomite Transmission:** A fomite is an inanimate object that may be contaminated by an infectious organism and serve in disease transmission. Virtually any object can serve as a fomite including equipment (reuse of needles, uncleaned dental / tattoo equipment), water buckets, tack, hoses, clothing, bedding, etc.
- e. Vector Transmission:** Vector borne diseases are those which involve the transmission of an infectious disease agent by biological vectors such as mosquitoes, ticks and flies.

It is important to understand and recognize potential routes of disease agent transmission to develop disease control measures that target potential transmission routes. (See Appendix L - Routes of Disease Transmission and Control Measures for Equine Events.)

Enhanced Biosecurity in the Face of an Outbreak

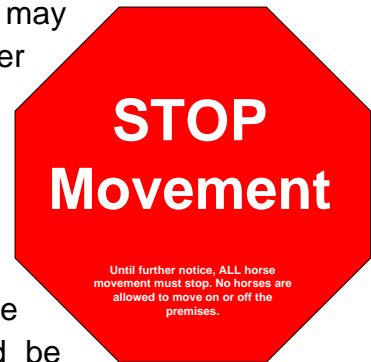
Disease risks are inherent when animals of varying health status come together. Complete elimination of all disease risks at a horse event is not feasible, so event managers must determine the acceptable level of disease risk for their event and develop an event biosecurity plan with policies and procedures to attain the needed level of biosecurity suitable for their risk tolerance.

Before the event, assessment of the facility layout and construction, animal entry requirements, horse stabling, manure disposal, hay and feed storage, equipment handling, cleaning and disinfection procedures, horse-to-horse contact, horse-to-other species contact, isolation of sick horses, vector and wildlife control, visitor access, traffic control and record keeping is essential. (See Appendix A - Equine Facility Biosecurity Risk Assessment Text Version and Appendix B - Equine Event Biosecurity Risk Assessment Pictorial Version.) The risk assessment of the event grounds and horse handling practices will reveal potential areas for direct or indirect transmission of infectious disease agents between horses. Working with veterinarians and stakeholders, event managers should determine which identified risks warrant implementation of mitigation measures in the basic event biosecurity plan. The implementation of basic biosecurity at an event will maximize the effectiveness of the Infectious Disease Control Plan should an infectious disease outbreak occur.

The initial venue biosecurity risk assessment may identify disease transmission risk areas that cannot be eliminated by a practical day-to-day or routine biosecurity mitigation program. Addressing these risks with biosecurity measures may require significant expenditure of financial and human resources. An enhanced biosecurity plan, which would be implemented simultaneously with the infectious disease control plan during an infectious disease outbreak, should address any biosecurity gaps.

When facing a disease outbreak during an event, enhanced biosecurity measures are necessary to control the disease outbreak. At the time of a disease outbreak, event managers should review the basic biosecurity plan implemented for the specific event and determine which assessed disease risks were not addressed through the basic biosecurity mitigation measures. With suspicion of an infectious disease at the event, it is advisable for event management to work closely with an equine veterinarian to determine the likelihood of the worst-case scenario – an infectious disease has been introduced to the venue. Implementing stricter enhanced measures will assist in the timely control of the most highly contagious diseases. At the time of an outbreak enhanced biosecurity measures may include:

1. **Stop Movement Orders:** Event management, in consultation with the onsite veterinarian, must determine what level of “stop movement” is warranted for the specific disease outbreak situation. Temporary movement restrictions may be necessary until assessment of the situation is complete, after which permission for allowing certain movements on the premises may occur. Under some circumstances it may be appropriate to allow the event to continue with minimal movement restrictions being placed only on sick and directly-exposed horses. Higher disease risk situations will require more stringent movement controls, such as securing the venue and restricting all animal movement. Firm policies should be delivered, preferably face to face, to those impacted. Enforcement of policies should be consistent and fair. An enhanced biosecurity plan, developed before the event for a disease outbreak situation, should outline procedures to promptly secure the event venue, to redirect personnel resources to close and lock venue gates and to block roadways to and from the venue with barriers. When stop movement orders are issued, monitoring of the premises by event staff will heighten compliance of movement restrictions by participants, owners and trainers. (See Appendix Q - *Stop Movement Sign*)



2. Control and Track Horse Movement:

During an infectious disease outbreak, it is essential for event management to know what horses are on the event premises and where they are stabled. For events without a check-in gate or admittance protocols, locating horses may require barn to barn inspection and documentation. If a disease outbreak warrants movement controls, a check-out protocol is necessary for all horses being moved from the premises. In some cases, event staff may require owner/agents to obtain approval before horses are moved from the event premises. A basic check-out



During a disease outbreak, it may be necessary to set up check points at barn entry and exit points to stop horse and riders before proceeding.

process includes follow-up owner/agent contact information (cell phone number and email address), documentation of horse identification and the intended destination for the horse(s) being moved from the event premises. Additionally, owner/agents should receive a handout with recommendations for biosecurity measures to be taken at destination premises. (Appendix R - Sample Exhibitor Handout *Biosecurity Measures for Exposed Horses*)



Temperature monitoring is an easy, efficient, early detection tool for disease. By requiring recording of temperatures twice daily on a log displayed on stall, event management can easily monitor health of the horses on the event grounds.

3. Monitoring of Horse Health: During an infectious disease outbreak, continuous health monitoring of all horses on the premises is a priority. Designated, knowledgeable, experienced event staff should perform a periodic walk-through of stables and event grounds directly observing horses for any sign of clinical disease. Notify participants of the requirement to monitor their horses for signs of disease and to report any signs of disease to a designated event official. The designated event official will evaluate the reports to determine if the situation requires immediate disease control measures, such as horse isolation and examination by a veterinarian.

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. Ideally, temperature logs should be displayed on the stall door to provide a quick status of individual horse health. Temperatures taken immediately after transport or exercise may be temporarily elevated, so initial temperature monitoring should be obtained after the horse is settled in the stable. A horse

body temperature over 102°F should be immediately reported to a designated event official. Horses with temperatures between 101°F and 102°F should be monitored for other signs of disease and have the temperature retaken in one (1) hour. To ensure compliance with a horse temperature monitoring requirement, event staff should perform random audits of the temperature monitoring logs. (See Appendix G – Stall Temperature Monitoring Log)



Tack is difficult to clean and disinfect. Therefore, after tack is cleaned, it should be left in the sun, as sunlight can inactivate/kill some pathogens.

5. Equipment Handling: At the onset of an infectious disease outbreak, instruct all exhibitors who share equipment to stop doing so. Immediately clean equipment of organic matter, thoroughly scrub with detergent and water, rinse, dry and disinfect all previously shared equipment (lead ropes, chains, bits, twitches, thermometers, grooming supplies, etc.). Items, such as tack, to which disinfectants cannot be applied, should be cleaned and allowed to dry in the sun, since sunlight inactivates/kills many pathogens. Any equipment which must be shared during the event should be cleaned and disinfected between uses.



During a disease outbreak, direct horse-to-horse contact and indirect contact with potentially contaminated surfaces in common areas should be avoided. Ideally, shared communal areas, such as wash racks, should be cleaned and disinfected between horses to reduce contamination.

6. Restrict Direct and Indirect Horse Contact: To reduce the spread of disease during an outbreak, steps to limit direct and indirect horse contact are necessary. All areas which are touched by human hands or by horses, such as fences, wash racks, bathroom sinks, faucets and door handles, should be cleaned and disinfected at least daily. Common use items, such as wash stall cross ties and washing equipment, should be removed and exhibitors should be required to use their own equipment. Monitor exercise and exhibition areas to ensure that minimal direct or indirect horse-to-horse contact occurs. Restrict participants from tying horses to fencing outside the arenas or stabling areas, since fencing can be contaminated by secretions of an infected horse. When an aerosol transmitted disease is high on the differential disease list for a sick horse, evaluate the event venue to determine additional methods to minimize risk of aerosol spread of the pathogen. Indoor arenas and indoor stabling can potentially increase the risk of aerosol spread. Indoor events may need to move to an outdoor facility or be cancelled if aerosol pathogen spread is suspected.

7. Control Dog Entry to the Premises: Since dogs may carry infectious disease agents from one location to another on the premises, no dogs should be on the event grounds during an infectious disease outbreak. Require owners with dogs onsite to immediately remove dogs from the event grounds. Dogs should not be placed in trailers or vehicles due to the possibility of escape, barking and temperature stress.



8. Restrict Human-to-Horse Contact: During an infectious disease outbreak, only the owner or designated personnel should handle horses on the event grounds. Limit the sharing of personnel between barns or trainers. Supply additional hand washing stations and signage during the outbreak to enable horse handlers to perform proper hand sanitation after handling each horse. Where bit inspection is mandatory, the event official conducting the inspection should use and change disposable gloves between handling each horse.



During a disease outbreak, horse contact should be restricted to owners and designated personnel. Visitors should not be in horse stabling areas.

9. Restrict Visitor Access: If a disease outbreak occurs during an event, it is essential to communicate disease biosecurity measures to visitors. Keep visitors out of the horse areas and inform them of proper biosecurity measures if they are returning to horse premises.

10. Post Adequate Biosecurity Signage: The key to successful disease control is implementation of enhanced biosecurity measures. Communication of the plan and measures being implemented are critical; therefore clear and concise signage and messaging to all on the event grounds is essential. During an infectious disease outbreak, there is limited time to develop adequate signage, so developing critical messaging before the event and having clear attention-getting signs available for use in an outbreak will aid in prompt effective communication and successful implementation of enhanced biosecurity and infectious disease control plan measures. Decide in advance where signage will be posted.

11. Strict Cleaning and Disinfection Protocols: Thorough cleaning and disinfection at the beginning of an infectious disease outbreak can significantly reduce the potential for disease agent spread. Inform exhibitors of the *Four (4) Step Cleaning and Disinfection Protocol* and request them to clean and disinfect their equipment, trailer and vehicle before leaving the grounds. Before the event, develop a contact list of local disinfectant suppliers which you can provide to exhibitors during an outbreak. To limit vehicle traffic on and off the premises, consider ordering bulk disinfectant supplies for delivery to a designated bio-secure area on the event grounds.

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

Four (4) Steps to Cleaning and Disinfecting

Step 1: *Remove all organic matter.*

Step 2: *Wash with soap and rinse with water.*

Step 3: *Allow drying time.*

Step 4: *Apply disinfectant according to label directions.*

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

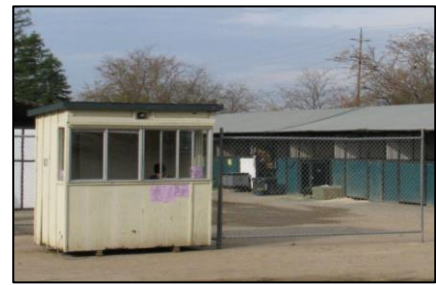
These clinical signs may or may not be cause for alarm; however, they may be the clinical signs of an infectious disease. In consultation with an equine veterinarian before the event, event management should determine the definition of a sick horse and specific trigger points warranting a response. General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

Part 3: APPENDIX

- A. Equine Facility Biosecurity Risk Assessment- Text Version
- B. Equine Event Biosecurity Risk Assessment- Pictorial Version
- C. Equine Event Biosecurity Policy Risk Assessment
- D. Cleaning and Disinfection of a Vacated Stall
- E. Record of Attendance at Equine Event
- F. Equine Event Participation Declaration
- G. Stall Temperature Monitoring Log
- H. *Stop Don't Share Equipment* Sign
- I. *Top Tips to Keeping Your Horse Healthy at Shows* Poster and *Biosecurity at Equine Events* Handout
- J. *CDC Wash Hands When Leaving Animal Exhibit* Poster
- K. *CDC Be Safe Around Animals* Poster
- L. Routes of Disease Transmission and Control Measures for Equine Events
- M. Wildlife, Bird and Rodent Control Measures
- N. Equine Event Cleaning and Disinfection Recommendations
- O. Characteristics of Selected Disinfectants
- P. Sample Letter to Mail to Registered Exhibitor
- Q. *Stop Movement* Sign
- R. Exhibitor Handout *Biosecurity Measures for Exposed Horse*
- S. UC Davis Center for Equine Health- *How to Set Up a Disease Isolation Unit at a Farm or Show*
- T. Equine Event Isolation Protocol Guidance
- U. California *List of Reportable Conditions for Animals and Animal Products*
- V. State Animal Health Official Contact List
- W. Contact List of California Local County Public Health Officer
- X. Exposed Horse Release Assessment
- Y. Cleaning and Disinfecting a Horse Trailer
- Z. Checklist of Responsibilities for Infectious Disease Control Plan
- AA. Communications Contact List Template
- BB. References

Event Facility Biosecurity Risk Assessment

Disease risk cannot be completely eliminated from an equine event. Well before an event, event organizers, in consultation with a veterinarian hired by the event, should conduct a biosecurity risk assessment of the event facilities and horse handling practices. An evaluation of current management practices will help identify potential biosecurity risks. It is important to evaluate the level of risk, and then determine what measures to take in the Event Biosecurity and Infectious Disease Control Plan to address the risk areas of concern.

**Minimal
Biosecurity Risk**

**Medium
Biosecurity Risk**

**High
Biosecurity Risk**

Stalls

Number of Stalls	Twice the number of stalls needed	Some Extra Stalls	Exact Number of Stalls
Walls	Solid	Half Walls	Bars
Material	Metal	Treated Wood (non-porous)	Untreated Wood (porous)
Assignment of Stalls	Grouped by Owner/Trainers with separation between Owner/Trainers	Grouped By Owner/Trainer - No Separation Between Owners/Trainers.	Random Assignments with No Attention to Geographic Origin.

Isolation Area

Isolation Location	Available designated empty barn isolated away from all other exhibitor stalls.	One empty barn at the end of the competitor barns.	A few stalls available at one end of show barn housing competition horses.
Exhibitor and Visitor Access	No Exhibitor or Visitor Access.	Limited Exhibitor and Visitor Access.	No Ability to Restrict Exhibitor and Visitor Access.
Vehicle Access	Restricted Vehicle Access with Monitoring at Entrance	Restricted Vehicle Access with No Monitoring of Entrance.	No Restrictions or Monitoring of Vehicle Access

Feed and Water

Feed storage	Covered hay and sealed containers for feed kept in a separate secure stall.	Secure storage stall with open feed bags and uncovered hay.	Hay and open feed bags in uncovered barn aisle way.
Water sources	Only Individual Water Buckets in Use	Stream or Large Water Source	Communal Water Area
Separation of Feed and Manure Handling Equipment	Complete separation of feed and manure handling equipment.	Limited separation of feed and manure handling equipment	Feed, hay and manure handling equipment stored together.

Event Facility Biosecurity Risk Assessment

**Minimal
Biosecurity Risk**

**Medium
Biosecurity Risk**

**High
Biosecurity Risk**

Wash Stall Area

Horse-to-Horse Contact	No nose-to-nose contact possible	Limited nose-to-nose contact possible	Nose-to-nose contact likely
Equipment	No Sharing of Equipment	Restricted sharing of equipment (i.e., horses in same barn)	No restrictions - equipment is freely shared
Hose Contact with Horse	Horse never makes direct contact with hose	Horse makes limited direct contact with hose	Horse has direct contact with hose
Hose Placement	Hose is hung on wall after each use	Hose is sometimes hung after each use	Hose is left lying on the ground
Fecal Material	Removed Immediately	Routinely removed throughout the day	Removed at the end of the event

Horse Commingling Areas

Exercise/Warm Up Area	No shared exercise areas: all horses exercise independently	Shared exercise area with minimal possible direct horse-to-horse contact	Shared exercise area with direct horse-to-horse contact
Competition Area	No shared competition areas - all horses compete independently	Shared competition area with minimal direct horse-to-horse contact	Shared competition area with direct horse-to-horse contact

Parking

Trailer	Restricted trailer parking, monitored and separate from barn area and not accessible by visitors	Shared parking, but separate from visitor access	Unrestricted parking next to horse barns and accessible by visitors
Exhibitor	Restricted exhibitor parking, monitored and separate from barn and visitor parking	Shared parking but separate from visitor parking	Unrestricted Parking
Visitor	Restricted visitor parking, monitored and separate from barn and exhibitor and trailer parking	Shared parking, but separate from trailer parking	Unrestricted Parking
TOTALS			

Equine Event Biosecurity Risk Assessment Pictorial

Horse Stabling Area



HIGH RISK

Disadvantages: Although the treated wood surface is easier to disinfect, the spacing between boards and the half door permit horse-to-horse contact. The horses stabled in an enclosed barn have a potentially increased respiratory disease risk due to challenges in air circulation.

Advantages: The smoother wood surface is easier to disinfect.



MODERATE RISK

Advantages: Top of stall door can be closed to restrict contact with other horses, animals and humans. Stables with stall doors facing outward have improved air circulation.

Disadvantages: Non-treated wood surface and dirt flooring cannot be thoroughly cleaned and disinfected.



MODERATE RISK

Advantages: Top of stall door can be closed to restrict contact with other horses, animals and humans. Stables with stall door facing outward have improved air circulation.

Disadvantages: Although the wood surface is treated, unless treated with materials that make it non-porous, the surface could still potentially harbor disease agents after disinfection.

Equine Event Biosecurity Risk Assessment Pictorial

Horse Stabling Area



LOWER RISK

Advantages: The solid metal walls can be effectively cleaned and disinfected. The bars do prevent the horse from extending their head in the aisle way; however, it does not eliminate horse contact with other horses and humans.

Disadvantages: Horses stabled in an enclosed barn potentially have an increased respiratory disease risk due to air circulation challenges. However, with adequate air space above the stalls and the open end of the barn, the risk is lower.



LOWER RISK

Advantages: The solid canvas wall stalls can be effectively cleaned and disinfected. The front bars on the stall do prevent a horse from extending their head in the aisle way; however, they do not eliminate possible contact with other horses and humans.

Disadvantages: There is a potential for increased aerosol pathogen spread in an enclosed barn due to challenges in air circulation. However, the risk is lowered with adequate air space above the stalls and the stall doors facing outward.



LOWER RISK

Advantages: Horse is restricted to contact with its own trailer, likely with horses from similar geographic areas and disease status.

Disadvantages: Potential exists for contact with other horses, humans and animals.

Equine Event Biosecurity Risk Assessment Pictorial

Horse Commingling Areas



Congregating horses creates the potential for exposure to disease agents by direct contact with another horse or indirect contact with a surface potentially contaminated with an infectious disease agent.

Wash Stalls



Hoses, although helpful to exhibitors, have the potential to spread disease if inserted into multiple buckets or left lying on the ground between use. Standing water can act as breeding ground for West Nile Virus carrying mosquitoes. Recommend daily periodic cleaning and disinfection of wash stalls with no known disease at the facility and more often if a disease outbreak occurs.

Dog on Event Grounds



If dogs are allowed on the event grounds, an effective dog leash policy should be enforced to ensure dogs remain on a leash under control of an individual.

Equine Event Biosecurity Risk Assessment Pictorial

Parking Areas



Vehicles entering the equine event venue may carry infectious disease pathogens on their tires or undercarriage. Therefore, restricting vehicle parking limits disease transmission risk. Once horses are unloaded, trailers should be parked in a designated horse trailer parking area.

Water Sources



Pathogens can be spread through the use of communal water troughs. Events which require individuals to bring their own water buckets to fill from a water faucet have a lower disease transmission risk.

Feed Storage



Feed and hay supplies should be protected from the elements and stored in a secure location. Feed and manure handling equipment should be stored separately from hay and feed supplies to prevent contamination.

Event Policy Biosecurity Risk Assessment

Disease risk cannot be completely eliminated from an equine event. Well before an event, event organizers, in consultation with a veterinarian hired by the event, should conduct a risk assessment of the event policies to identify potential biosecurity risks. It is important to evaluate the level of risk to determine what measures can be taken to address the risk areas of concern in the event biosecurity and infectious disease control plan.

	Minimal Biosecurity Risk	Medium Biosecurity Risk	High Biosecurity Risk
Horse Health Entry Requirement	Horse health declaration, Certificate of Veterinary Inspection and temperature documentation required for all horses	Participants are required to sign horse health declaration upon arrival, but no Certificate of Veterinary Inspection or temperature record are required	No horse health entry requirements
Stall Assignment Records	Stall is assigned to a designated horse and information recorded	Stalls are assigned to owners/trainers in groups and recorded	Stalls are not assigned and no stall records are maintained
Exhibitor Contact Information	Owner/agent current phone number and, email address and horse origin and destination addresses are recorded for all exhibitors upon arrival	Owner/agent phone number and address available but horse location unknown	No contact information obtained/maintained
Reporting of Suspicion of Illness in Horses	All participants are notified in writing, before and upon arrival, of the requirement to immediately report any suspicion of an infectious disease in horses to event staff	Signage alone notifies participants of the requirement to report any suspicion of infectious disease in horses to event staff	No requirement to report suspicion of an infectious disease in horses

Event Policy Biosecurity Risk Assessment

	Minimal Biosecurity Risk	Medium Biosecurity Risk	High Biosecurity Risk
Monitoring of Horse Health	Qualified, knowledgeable event staff are designated to inspect every horse upon arrival and periodically monitor horses for duration of the event	Event staff conduct random walk through of the barns to monitor health status of horses	No designated staff or individual is responsible for monitoring health status of horses
Temperature Monitoring	Temperature monitoring of horses required two times/day with record posted on stall door.	Temperature monitoring of horses by participants is recommended.	No policy for monitoring horse temperatures during the equine event.
Equipment Sharing on Event Premises	Communication to participants done before the event to discourage equipment sharing. Signs posted on event grounds to discourage equipment sharing.	Only signs to discourage equipment sharing are posted.	No signs discouraging equipment sharing are posted and no equipment sharing policy exists for the event.
Event Staff Horse Handling Policy	Event staff are provided strict instructions on handling event horses, which includes use and change of disposable gloves and use of hand sanitizer between contacts with horses.	Event staff are asked to use hand sanitizer between contacts with horses.	There are no policies regarding handling of horses by event staff.
Visitors	Visitors are restricted from horse stabling area; no direct visitor contact with horses is permitted.	There is restricted access of visitors to horse stabling areas.	There are no restrictions on visitor access to horse stabling areas.

Event Policy Biosecurity Risk Assessment

	Minimal Biosecurity Risk		Medium Biosecurity Risk		High Biosecurity Risk	
Dogs	Dogs are not permitted on the event grounds.		Dogs are required to be on a leash at the event.		There are no restrictions for dogs on the event grounds.	
Event Biosecurity Signage	Adequate signage for parking, restricted access areas and biosecurity measures.		Limited signage for parking, restricted area access and biosecurity measures.		No signage for parking, restricted access areas or biosecurity measures.	
Biosecurity and Infectious Disease Control Plan	Event management consulted with veterinarian and wrote a specific, detailed biosecurity and infectious disease control plan for the specific event and venue.		Event management developed a general biosecurity outline and biosecurity and infectious disease control plan.		No biosecurity plan or biosecurity and infectious disease control plans developed by event management.	
TOTALS						

Cleaning and Disinfection of a Vacated Stall

1. Mucking out, cleaning and disinfecting a stall is ideally done within four (4) hours of a horse vacating the stall. If the vacated horse was sick, personnel should wear protective clothing, disposable boot covers and gloves while cleaning the stall.
2. Completely remove all feed, bedding and manure. Use a broom to sweep small-particle materials into a pile and remove.
3. Gently rinse the inside of the stall door and the walls with low pressure water (no nozzle). Manually wash all visible loose organic matter down the walls. The use of high-pressure water (i.e., pressure washer) is not recommended for cleaning stalls since it distributes dirt and infectious agents into the air and onto adjacent surfaces.
4. Use a foaming soap agent and a stiff-bristle brush to scrub the inside of the stall door and all four walls. The brush should be one that can fit into the corners of the stall.
5. Always scrub from the TOP DOWN in the following order:
 - a. Scrub each wall, starting with the top left-hand corner of the back wall.
 - b. Scrub an area 18 to 24 inches wide, using horizontal strokes from top of the wall to the bottom, then rescrub the same area using vertical strokes.
 - c. Move 18 to 24 inches to the right on the wall and scrub another 18 to 24-inch wide section, slightly overlapping the previously scrubbed area in the same manner from the top of the wall to the bottom.
 - d. Continue this process until you have scrubbed all four walls and the inside of the door.
 - e. Use the same scrubbing pattern on cement floors.
6. Use a designated brush to clean specific stall areas such as gate hinges, between pipes, waterers, hay racks, feed buckets, pipes, latches and ledges.
7. Gently rinse off the foaming soap agent. Rescrub areas found with manure, blood or dirt "caked on" them with foaming agent until clean, since organic matter interferes with the effectiveness of disinfectants. Remove any particulate matter left in the stall after scrubbing.
8. Finally, disinfect all stall surfaces:
 - a. Spray the inside of the stall door, all four walls and any concrete floor with a disinfectant and use the same stiff-bristle brush and double-scrubbing pattern on all surfaces. Also spray the disinfectant solution on waterers, hayracks, feed buckets, pipes, latches, gate hinges and ledges.

In general, 1:10 dilution of bleach to water is an effective disinfectant. However, in most stall situations, organic material cannot be completely eliminated, therefore it is necessary to use a disinfectant that has activity in the presence of organic materials, such as a phenolic (1 Stoke Environ® or SynPhenol-3®) or an accelerated hydrogen peroxide product (Intervention®). All disinfectants should be used according to manufacturer recommendations and label instructions.
 - b. Allow an appropriate contact time for the disinfectant. For a 1:10 bleach to water solution **a minimum contact time is ten minutes**. Then gently rinse the inside of the door, the walls, the floor and all other stall surfaces and equipment with water.
 - c. The disinfectant application/scrubbing process may be repeated three times.
9. After use, remove all particulate matter from stall cleaning equipment, such as shovels, rakes, brooms and brushes; wash then soak the equipment in a barrel with disinfectant solution. Always disinfect stall cleaning equipment before cleaning another stall.
10. A designated event official should visually inspect cleaned/disinfected stalls to ensure that the stall is ready for a new occupant before assigning the stall to an owner/agent for another horse.
11. Once the stall has been cleaned, disinfected and inspected, the outer stall door should be kept closed until a new horse is assigned to the stall.

Sample Letter to Mail to Registered Exhibitors

Dear Exhibitor,

We have received your registration for EVENT X on EVENT DATE X. Protecting the health of your horse and other horses at this event is of the utmost importance to event management. This event is implementing biosecurity measures to decrease the risk of infectious disease agent introduction and spread at this event.

Regardless of whether they are participating in the event or not, all horses and livestock that enter the grounds will be subject to examination by event officials/designated representatives and/or State Animal Health Officials. Such examinations are to determine if the animal(s) is/are, has/have been infected/exposed, or are likely to be infected with an infectious or contagious disease. If after such examination, an official believes the health condition of an animal will place other animals at risk, the officials may quarantine the animal(s) and others that may have been infected/exposed, or if necessary, require movement of the animal(s) from the show grounds. All participants must agree to fully cooperate with examining officials and abide by their decisions/instructions. Failure to comply with officials shall be grounds for immediate expulsion of the participant from the grounds and potential disciplinary action(s) by the sponsoring organization and local/state or federal officials.

The equine health entry requirements for this event include: (*EVENT MANAGER TO CHOOSE ONE or MORE and DELETE OTHERS*)

- a. Horses displaying obvious signs of clinical disease, such as fever, abnormal nasal discharge, consistent frequent coughing, neurologic signs of ataxia or significant hind limb weakness are not permitted to enter the event grounds.
- b. Event *No Fever* Policy:
 - i. Each horse entering the premises must have documentation demonstrating a record of body temperature readings with none above 102°F for a designated time period before arrival at the event premises. (*For example, 72 hours*)
 - ii. Show officials will obtain a body temperature of all horses at the time of arrival to the event premises and all horses will be subject to periodic inspection by event officials during the event.
 - iii. Owner/agents will monitor and document on a log the body temperature of their horse(s) X times a day during the event. (*For example, two times a day*)
- c. Health Certification Policy
 - i. Owner/agents must present to event officials at the time of arrival to the event premises, a Certificate of Veterinary Inspection (health certificate), written within X hours (*For example, seventy-two (72) hours*) of arrival to the event premises.
- d. Event Participation Declaration: (See Appendix F for Sample Event Participation Declaration)

Sample Letter to Mail to Registered Exhibitors

- i. Owners/agents must sign a health certification statement verifying that the horse(s) has/have been healthy with no sign of infectious disease for the preceding three (3) days and a body temperature below 102°F during the __X__ hours (*For example, 72 hours*) before arrival at the event premises.
- ii. Owner/agents must provide event officials with the address of the premises where each horse was located immediately before arrival at the event and the address of the intended premises of destination for each horse following departure from the event premises.

In addition to the above entry requirement, the following biosecurity measures are recommended:

- Dogs are not permitted on the event premises *or* All dogs on the event premises must be kept on a leash
- Limit horse-to-horse contact
- Limit horse-to-human-to-horse contact
- Avoid sharing of equipment, to include tack, water buckets, brushes, wipe rags, etc.
- Avoid use of communal water troughs
- Avoid submerging end of water hoses in water buckets
- Do not allow horses to drink directly from a water hose
- Avoid tying horses to fences or gates on the event grounds
- Cover all feed and hay to prevent access by vermin, birds or other animals
- Monitor your horse frequently for signs of disease during the event
- Immediately report any sick horse(s) to designated event official or veterinarian
- Thoroughly clean and disinfect all equipment before use at the home premises
- Isolate and monitor all animals upon return to the home premises.

In the event of an emergency or infectious disease incident at the event, all participants and horses will remain at the venue until event management provides clearance for departure from the event premises. In the case of an infectious disease event, event officials will evaluate individual horse disease exposure risk and provide owner/agents with follow up disease monitoring instructions. In the event movement restrictions are put in place, each owner/agent is responsible for the care and maintenance of their horse(s) on the premises.

We appreciate your compliance with event management efforts to maintain biosecurity at the upcoming event.

Sincerely,

XXXXXXXXXX
Event Manager

Horse Event Participation Declaration

Event Name: _____

Event Location: _____

Event Date(s): _____

Contact Person:

Name of Person in Charge of Horse(s) at the Event: _____

Address: _____

Home Phone Number: _____

Cell Phone Number: _____

Email Address: _____

Truck License Plate #: _____

Horses in Shipment

Name of Horse	Breed	Age	Sex	Identification (Color, Markings, Brand)	Stall Location

Address of property from which the horse was moved to the event:

Address of property to which the horse will move after the event: *(If different from above.)*

Alternate Contact Information (For other individuals affiliated with named horses)

Name _____ Cell Phone # _____

Name _____ Cell Phone # _____

Horse Health Declaration

I, _____ declare that the horse(s) named above has/have been in good health, with body temperature(s) below 102°F, eating normally and has/have not shown signs of infectious disease for the three (3) days preceding arrival at this event.

Signature _____ **Date** _____

(Complete a separate form for different owners.)

For office Use only:

Date and Time of Arrival _____

Date and Time of Departure _____

Event Official Initials _____

Event Official Initials _____ Page 1

Temperature Monitoring Log

Horse Name: _____

Owner Name: _____

Contact Person Name: _____

Cell Phone Number: _____

Medication(s) horse is given daily (Check all applicable boxes):

Bute AM PM

Ketofen AM PM

Banamine AM PM

Dipyron AM PM

Equioxx/Previcox AM PM

Instructions: Record the rectal body temperature of horse two times/day, every morning and evening.

Date	Temperature	
	AM	PM
	°F	°F
	°F	°F
	°F	°F
	°F	°F
	°F	°F
	°F	°F
	°F	°F
	°F	°F
	°F	°F
	°F	°F
	°F	°F
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	°F	°F
	°F	°F
	°F	°F
	°F	°F
	°F	°F
	°F	°F
	°F	°F

Date	Temperature	
	AM	PM
	°F	°F
	°F	°F
	°F	°F
	°F	°F
	°F	°F
	°F	°F
	°F	°F
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	°F	°F

Note: A body temperature recording above 101.5° F (or 101.0° F if horse is on medication listed above) must be reported to a veterinarian and/or barn/ event management.

A red octagonal sign with white text. The text is arranged in three sections: a top section, a large central section, and a bottom section.

**Don't Share
Equipment**

STOP

**Biosecurity Protocols
In Effect**

Biosecurity- Keeping your Horse Healthy at Equine Events

Exhibiting at Horse Events

Horse shows, competitions and sales are an important component of California's horse industry. Many hours of training and hard work are invested to prepare healthy, high quality horses for competition and exhibition. Participation in equine events may pose a potential risk to horse health. The stresses of travel, close confinement and a new environment may compromise a horse's resistance to disease. The commingling of horses of different breeds, ages and from multiple premises and disease management backgrounds, creates an environment for potential disease exposure. People attending horse events may also contribute to potential disease spread. Horses returning to their home stables may pose a risk of disease introduction and spread to their stable mates.



Event Biosecurity

Biosecurity refers to measures taken to prevent the introduction and spread of new disease agents into a herd. Commingling of horses, multiple human contacts and contaminated equipment represent the greatest threats for disease exposure and spread at horse events. Consistent biosecurity practices play an important role in reducing the risk of exposure to infectious diseases when attending an equine event. Even the best biosecurity does not eliminate all risk of disease exposure. However, each measure taken will reduce the potential of disease exposure and help keep your horse healthy.

Transport Healthy Horses

Horses which travel frequently and commingle with various horses at events have the highest risk for disease exposure. Only healthy horses should participate in equine events. Before horses leave their home stable, a veterinarian should examine each horse to ensure the health of the animal. Consult your veterinarian for vaccination recommendations before travel to the event. Record each horse's normal resting vital signs, which include temperature, heart rate and respiratory rate. Check with event management for health entry requirements, some events may require health certification statements signed by a veterinarian and some may require owner health declarations.

A clean and disinfected trailer should be used each time a horse is shipped to a new premises. At the time of loading the horse onto the trailer, observe each horse for any obvious signs of disease, such as abnormal nasal discharge, persistent frequent coughing, and neurologic signs of ataxia or hind limb weakness. Horses displaying signs of disease should not be shipped to an event.

Monitor Horse Health at Event

A horse appearing healthy entering an event grounds may be infected with an infectious disease agent or incubating the disease. The stress of travel and the stress of competition may result in that horse becoming sick. Continual monitoring of horse health throughout the event is essential. Any horse displaying clinical signs of disease poses a risk of disease spread to the population of horses on the event grounds. Any horse displaying clinical signs and/or a temperature above 102°F should be reported to a designated event official or a veterinarian. Immediate isolation of the sick horse is essential to prevent disease spread.

Limit Exposure to Disease

Infectious disease pathogens may be brought to and spread at an event premises by horses, people, domestic animals other than horses, vehicles, equipment, insects, ticks, birds, wildlife including rodents, feed, waste and

Biosecurity- Keeping your Horse Healthy at Equine Events

water. The following simple biosecurity steps significantly reduce exposure risk to disease pathogens:

- Limit horse-to-horse contact, especially nose to nose contact.



- Avoid sharing of equipment unless thoroughly cleaned and disinfected between uses.
- Limit horse-to-human-to-horse contact



- Wash hands between handling horses, particularly other people's horses.
- Avoid use of communal water sources.



Protect the Home Stable

The possibility of a horse's exposure to disease agents can occur with even the best biosecurity practices at the horse event. To avoid introduction of disease to the home stables from the event facility, implement the following protocols:

- **Clean and Disinfect Equipment:** Before leaving the event grounds, clean and disinfect all equipment including feed

buckets, feeders, hay racks, shovels, pitch forks, muck buckets, wheelbarrows, grooming equipment, vehicle and trailer (inside and outside.)

- **Isolate Returning Horses:** If possible, isolate returning horses for a minimum of 2 weeks. Isolated horses should have no direct contact with other horses and should be handled, fed, and stalls cleaned last.
- **Shower and Change Clothes:** Participants should shower, blow their nose and change clothes and footwear before entering the home stables. Clothing and footwear worn at an equine event should be thoroughly cleaned and disinfected prior to use on the home premises.

Cleaning and Disinfection

Most disease agents are susceptible to the various disinfectants. However, some disinfectants, specifically alcohol and bleach, are inactivated by organic matter, such as soil and manure. Consult a veterinarian for disinfectant recommendations.

Follow the four step process of cleaning and disinfection:

- **Step 1:** Remove organic matter.
- **Step 2:** Wash with soap and rinse with water.
- **Step 3:** Allow time to dry.
- **Step 4:** Apply a disinfectant.

Use disinfectants according to label directions following safety precautions. Comply with all product label application instructions and ensure adequate disinfectant contact time with surfaces for maximum efficacy.

In general, 1:10 dilution of bleach to water is effective. However, in most stall situations, organic material cannot be completely eliminated, therefore it is necessary to use a disinfectant that has activity in the presence of organic materials, such as phenolics (1 Stoke Environ® or SynPhenol-3®) or an accelerated hydrogen peroxide product (Intervention®). All products should be used in accordance with manufacturer's recommendations and label instructions.






Wash Hands When Leaving Animal Exhibits

WHO

 Everyone, especially young children, older individuals, and people with weakened immune systems







WHEN

Always Wash Hands:

-  After touching animals or their living area
-  After leaving the animal area
-  After taking off dirty clothes or shoes
-  After going to the bathroom
-  Before preparing foods, eating, or drinking



HOW

-  Wet your hands with clean, running water
-  Apply soap
-  Rub hands together to make a lather and scrub well, including backs of hands, between fingers, and under fingernails
-  Rub hands at least 20 seconds. Need a timer? Hum the “Happy Birthday” song from beginning to end twice
-  Rinse hands
-  Dry hands using a clean paper towel or air dry them. Do not dry hands on clothing



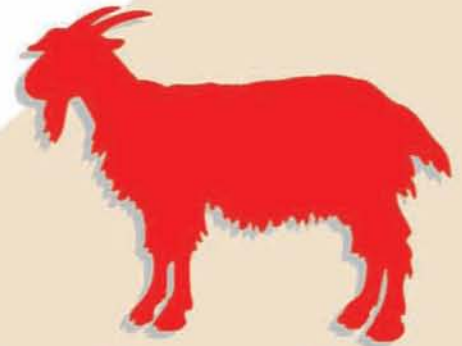
For more information, visit CDC's Healthy Pets, Healthy People website (www.cdc.gov/healthypets) and CDC's Handwashing website (www.cdc.gov/handwashing).

Know that animals carry germs that can make people sick

Never eat, drink, or put things into your mouth in animal areas

Older adults, pregnant women, and young children should be extra careful around animals

Wash your hands with soap and water right after visiting the animal area



How to be Safe Around Animals!



Routes of Disease Transmission and Control Measures for Equine Events

Aerosol Transmission: Droplets containing a disease agent are passed through the air from one infected animal to another susceptible animal. The ability of a pathogen to survive and be effectively transmitted by aerosol depends on many variables, including stocking density, temperature, ventilation, humidity and dust. Respiratory diseases, such as Influenza Virus, Rhinopneumonitis and other common respiratory viruses, can quickly spread through an event facility; often horses are exposed before it becomes apparent that an index horse is sick. Airborne diseases are the most difficult to contain and complete control is often not feasible, especially on premises holding frequent events with horses continually being moved in and out of barns. Suggested control measures include:

1. **Decreased Stocking Density:** Greater distance between horses and fewer horses in a confined air space decrease risk of disease transmission.
2. **Dust Reduction:** Dust and other airborne irritants can reduce an animal's ability to clear respiratory pathogens, therefore resulting in respiratory disease. Ensure that ventilation systems and water sprinklers are working efficiently to decrease dust and airborne irritants.



Direct Contact Transmission: Direct exposure of a susceptible animal may occur when the disease agent directly touches an open wound, skin or mucus membranes of the nostrils, mouth or eyes. An infectious disease agent can be passed from an infected animal to a susceptible animal through contact with saliva, nose-to-nose

contact, rubbing and biting. To prevent direct contact transmission:

1. **Restrict Horse-to-Horse Contact:** Solid stall walls and full door stalls limit direct contact with horses in adjacent stalls and horses passing in the barn aisle ways. Do not permit tying of horses next to each other on exhibit area fences or in communal areas, such as in wash racks.

Oral transmission: Oral transmissions of pathogens to the horse occur through the direct ingestion of contaminated feed or water and through oral contact by licking of objects contaminated with infectious disease agents. To avoid oral transmission of infectious disease agents:

1. **Secure Feed Storage:** Restrict access to feed by wildlife, birds, vermin, scavengers, dogs and cats, which may urinate, defecate or otherwise introduce disease. To prevent spoilage and mold growth, take appropriate measures to protect and store feed and hay from the effects of weather.



2. **Evaluate Risk of Water Sources:** Due to the inability to control water quality and prevent contamination with disease agents, surface water sources, such as streams, ponds and irrigation ditches, pose a significant disease risk. Contamination can be due to wildlife, fecal material, urine and environmental toxins. Due to the disease risks, use of surface water sources at events must be restricted. If communal water troughs must be

Routes of Disease Transmission and Control Measures for Equine Events

used during the event, routinely clean and disinfect the troughs.

Fomite Transmission (Indirect Contact): A fomite is an inanimate object that may be contaminated by an infectious organism and serve in their transmission. Virtually any object can serve as a fomite, including equipment, water buckets, tack, hoses, clothing, bedding, etc. Measures to limit fomite transmission include:

1. **Avoid Shared Equipment:** Ideally, each horse will have its own equipment, water bucket, tack and wipe rags. Clean and disinfect any shared equipment between uses. Dedicated supplies and equipment must remain in isolation areas for the treatment of sick horses.
2. **Traffic:** Vehicles and trailers can spread disease agents on contaminated tires, wheel wells and undercarriage; people can spread the disease agent on their clothing and shoes/boots. Restrict traffic flow patterns and designate parking areas to limit contamination and animal exposure.

Vector Transmission: An insect or tick acquires a disease agent from one animal and transmits it to another animal. Vector-borne diseases are those which involve the transmission of infectious disease agents by biological vectors, such as mosquitoes, ticks, fleas and flies. An effective vector control program includes:

1. **Treatment of Horses:** Direct treatment of horses with insecticide pour-ons or sprays is effective, but their effectiveness is of short duration and there are concerns about insect and tick resistance to the chemicals in these products. Some horses have skin sensitivities and have adverse reactions to the chemicals in insecticides. Based on these concerns, it may be difficult to enforce

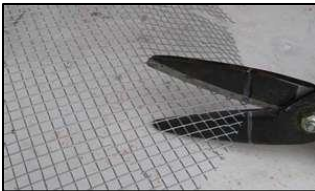
an insecticide treatment policy during the event, but insecticide application should be recommended.

2. **Treatment of Premises:** Application of insecticides on a premises is effective on small event grounds, but becomes inefficient on larger areas. Effectiveness of most products is dependent upon weather conditions; sunlight can break down some of the chemicals contained in the treatments and the ideal target air temperature for applications is 65-90°F. Strictly follow the product manufacturer guidelines on the label since inappropriate use can greatly reduce efficacy, can present a hazard to the animals/environment/humans and can lead to insect resistance. Consult a professional when developing a control plan.
3. **Separate Host and Vectors:** If insects and ticks cannot be eliminated through treatments, consider methods of separating the horses from the vectors. Where possible, eliminate horse access to areas where mosquitoes, flies and ticks reside. Fencing off areas of high insect and tick populations, such as wooded areas for ticks, or confining animals to buildings during peak periods of mosquito activity, such as dusk to dawn, may be effective vector control measures.
4. **Eliminate Insect Breeding Areas:** Elimination of standing water, especially wet, muddy areas, is an effective mosquito control measure. Regular removal of decaying organic matter aids in controlling the fly population on the premises. Decaying organic material includes spoiled feed, soiled bedding, and open manure piles.

Wildlife, Bird and Rodent Control Measures

Eliminate Openings for Rodents or Birds

- Seal any openings greater than ¼-½ inch in stalls, storage areas and food bins with a durable material.
- Use sealing material that wildlife, birds and rodents cannot easily penetrate by gnawing or pecking, such as concrete, brick, sheet metal, aluminum or wire mesh. Avoid use of plastic sheeting, wood or rubber sealing materials, which rodents can penetrate.



- Equip all drain pipes and floor drains with metal grates to prevent rodent entry into buildings.
- Place gravel around the stabling area to discourage rodents from burrowing into buildings.

Removal of Hiding, Nesting and Resting Sites

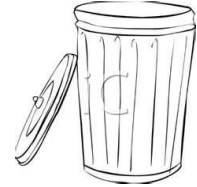
- Store all equipment in stabling area off the ground or on easily moveable racks to allow routine cleaning around and under equipment.
- Stack unopened grain sacks on raised pallets positioned with adequate spacing around them to allow inspection for signs of rodent activity.



- Maintain water level in troughs deep enough to prevent birds from standing in the water.

Eliminate Potential Food Sources

- Store open feed in sealed containers, preferably made of metal with tight fitting lids



- Clean up spilled feed immediately.
- Empty trash cans daily.

Use of Rodents Traps and Bait

- Before the event, place rodent traps and baits around the premises to reduce the number of rodents. Set traps close to walls, in dark corners and behind objects, such as machinery, in any areas where there is evidence of rodent activity. Place rodent baits in areas not accessible to children or other animals.
- Use rodent baits according to the label instructions. Place rodent baits in areas protected from exposure to weather elements.
- Inspect rodent traps regularly and dispose of dead rodents promptly. Refresh rodent bait as necessary.

For additional guidance, contact a wildlife and pest control professional to assist with plan development.

Cleaning and Disinfecting Recommendations for Equine Events

Overview

Disease prevention at an equine event is typically easier and more cost-effective than addressing an outbreak situation; therefore, development and implementation of a biosecurity plan, which includes cleaning and disinfection (C&D) protocols, is essential for all equine events. Routine C&D protocols for a facility will differ from those necessary to control an infectious disease outbreak. C&D protocols will vary depending on the situation and the specific event.

Complex interactions influence the effectiveness of C&D protocols. Success of a C&D protocol depends upon the infectious disease agent, the various surfaces to be disinfected, the disinfectant, disinfectant concentration and surface contact time and environmental conditions.

Implementing a Cleaning and Disinfection Plan

There are four steps for an effective cleaning and disinfection plan: assessment, cleaning, washing and disinfecting. Train all employees on the proper implementation of the C&D protocols emphasizing thorough cleaning and safety. Clearly explain the C&D protocols in the training and post signs around the event venue to reinforce the training.

Assessment

An initial facility assessment will help determine the areas of disease risk that require cleaning and disinfection biosecurity measures. At an equine event, horses contact numerous surfaces, such as water buckets/troughs, equipment, fences and stall; therefore, consider all areas contacted by horses as contaminated and address in a C&D protocol.

Cleaning

The presence of organic material on surfaces can harbor infectious disease agents for extended periods of time and protect them from the action of chemical disinfectants. Research demonstrates that cleaning contaminated surfaces eliminates 90% of the bacteria on a surface. The goal of cleaning is to remove all organic material, such as manure, soiled

bedding and dirt, since the presence of organic matter inactivates many disinfectants, making them ineffective.

Washing

After removal of organic matter, clean the surface completely with a detergent and rinse with a low pressure hose. Use of high pressure water (pressure washer) is not recommended for cleaning stalls since this distributes dirt and infectious agents into the air and onto adjacent surfaces. Manual scrubbing further reduces the number of microorganisms adhering to surfaces. Thorough rinsing is important because soaps and detergents can also inactivate many disinfectants. Allow surfaces to dry before application of the disinfectant.

Disinfectant Selection

A basis for disinfectant selection is finding the most useful, efficacious and cost-effective product. An ideal disinfectant is one that is broad spectrum, non-toxic, non-irritating, non-corrosive, relatively inexpensive and works in variable weather conditions. No available disinfectant is suitable for all situations. Selection of the proper disinfectant depends on the potential infectious disease agent(s), the type of surface to disinfect, weather conditions and product safety. Consult a veterinarian to determine the infectious disease agent(s) of concern.

For routine disinfection, a disinfectant with broad spectrum anti-microbial activity is appropriate. Disinfectants are classified by their chemical nature; each class of disinfectant has unique characteristics, toxicities, safety concerns and level of efficacy. Commercially available disinfectants are classified as alcohols, aldehydes, biguanides, halogens/hypochlorites, halogens/iodine compounds, oxidizing agents, phenols, and quaternary ammonium compounds. Carefully read and follow label instructions when using any chemical disinfectant.

The US Environmental Protection Agency (EPA) and the California Environmental Protection Agency (CalEPA) define disinfectants (antimicrobials) as pesticides. Be certain to use all EPA-registered antimicrobials in accordance with California worker safety regulations.

Cleaning and Disinfecting Recommendations for Equine Events

Disinfectant Concentration

Disinfectant concentration is critical for effectiveness against an organism; over dilution may render the product ineffective against the disease agent. Some disinfectants may be more efficacious at higher concentrations; however, higher disinfectant concentrations may pose a safety risk to personnel, animals, surfaces and/or the environment.

Disinfectant Application

Wipe, brush, spray or mist disinfectant solution on surfaces of objects or walls according to product label instructions. In general, 1:10 dilution of bleach to water is effective. However, in most stall situations, organic material cannot be completely eliminated, therefore it is necessary to use a disinfectant that has activity in the presence of organic materials, such as a phenolic (1 Stoke Environ® or SynPhenol-3®) or an accelerated hydrogen peroxide product (Intervention®). All products should be used in accordance with manufacturer's recommendations and label instructions. Soak brushes and other equipment in containers with disinfectant solution after use.

Disinfectant Contact Time

A critical step in the disinfection protocol is appropriate disinfectant contact time on the surfaces. Disinfectants vary in the contact time necessary to destroy or inactivate disease organisms. Carefully read and follow the product label for the minimum contact time for efficacy. To avoid surfaces drying out before the end of the optimal contact time, saturate the surfaces with the disinfectant.

Disinfectant Stability and Storage

Disinfectant storage influences the effectiveness of the product. Outdated or inactivated products are ineffective. Some disinfectants quickly lose stability after prepared for use or after storage for long periods of time. Heat and light may also inactivate certain disinfectants. To maximize stability and shelf life, store the stock concentration of the disinfectant in a cool, dark location and mix for use as necessary.

Disinfectant Safety Precautions

In general, most disinfectants cause irritation to the eyes, skin and or respiratory tract, so safety is a priority for all personnel using a product. Always review the product Material Safety Data Sheets (MSDS) to learn specific hazards and first aid information. Training on proper storage, mixing and application of disinfectants is essential; for some products this training is required by law. During the mixing and application processes, require use of personal protective equipment, such as gloves, masks and eye protection, by personnel.

Environmental Considerations

Environmental factors may impact the effectiveness of the C&D protocol. Factors to address in the plan include organic load, surface characteristics, temperature, weather, water quality and presence of other chemicals. In situations where removal of all organic matter is not possible, consider use of a product with some efficacy or residual activity in the presence of organic material. Porous, uneven, cracked or pitted surfaces (i.e., wooden stables and dirt floors) harbor microorganisms and require an increase in contact time and concentration of disinfectant. Air temperatures above 68°F are ideal for most disinfectants; however, elevated environmental temperatures may accelerate drying out of the surface decreasing the disinfectant efficacy.

C&D protocols should include evaluation of the drainage, runoff and biodegradability of the disinfectant. When selecting a disinfectant for use, consider the potential for runoff into creeks or ponds, since some agents, such as sodium carbonate, hypochlorites, and phenolics, are ecological hazards for plants and aquatic life.

Characteristics of Selected Disinfectants

FOR MORE INFORMATION, SEE THE 'DISINFECTION 101' DOCUMENT AT www.cfsph.iastate.edu

Disinfectant Category	Alcohols	Aldehydes	Biguanides	Halogens: Hypochlorites	Halogens: Iodine Compounds	Oxidizing Agents	Phenols	Quaternary Ammonium Compounds (QAC)
Sample Trade Names	Ethyl alcohol Isopropyl alcohol	Formaldehyde Glutaraldehyde	Chlorhexidine Nolvasan® Virosan®	Bleach	Betadyne® Providone®	Hydrogen peroxide Peracetic acid Virkon S® Oxy-Sept 333®	One-Stroke Environ® Pheno-Tek II® Tek-Trol®	Roccal® DiQuat® D-256®
Mechanism of Action	<ul style="list-style-type: none"> Precipitates proteins Denatures lipids 	<ul style="list-style-type: none"> Denatures proteins Alkylates nucleic acids 	<ul style="list-style-type: none"> Alters membrane permeability 	<ul style="list-style-type: none"> Denatures proteins 	<ul style="list-style-type: none"> Denatures proteins 	<ul style="list-style-type: none"> Denature proteins and lipids 	<ul style="list-style-type: none"> Denatures proteins Alters cell wall permeability 	<ul style="list-style-type: none"> Denatures proteins Binds phospholipids of cell membrane
Advantages	<ul style="list-style-type: none"> Fast acting Leaves no residue 	<ul style="list-style-type: none"> Broad spectrum 	<ul style="list-style-type: none"> Broad spectrum 	<ul style="list-style-type: none"> Broad spectrum Short contact time Inexpensive 	<ul style="list-style-type: none"> Stable in storage Relatively safe 	<ul style="list-style-type: none"> Broad spectrum 	<ul style="list-style-type: none"> Good efficacy with organic material Non-corrosive Stable in storage 	<ul style="list-style-type: none"> Stable in storage Non-irritating to skin Effective at high temperatures and high pH (9-10)
Disadvantages	<ul style="list-style-type: none"> Rapid evaporation Flammable 	<ul style="list-style-type: none"> Carcinogenic Mucous membranes and tissue irritation Only use in well ventilated areas 	<ul style="list-style-type: none"> Only functions in limited pH range (5-7) Toxic to fish (environmental concern) 	<ul style="list-style-type: none"> Inactivated by sunlight Requires frequent application Corrodes metals Mucous membrane and tissue irritation 	<ul style="list-style-type: none"> Inactivated by QACs Requires frequent application Corrosive Stains clothes and treated surfaces 	<ul style="list-style-type: none"> Damaging to some metals 	<ul style="list-style-type: none"> Can cause skin and eye irritation 	
Precautions	Flammable	Carcinogenic		Never mix with acids; toxic chlorine gas will be released			May be toxic to animals, especially cats and pigs	
Vegetative Bacteria	Effective	Effective	Effective	Effective	Effective	Effective	Effective	YES—Gram Positive Limited—Gram Negative
Mycobacteria	Effective	Effective	Variable	Effective	Limited	Effective	Variable	Variable
Enveloped Viruses	Effective	Effective	Limited	Effective	Effective	Effective	Effective	Variable
Non-enveloped Viruses	Variable	Effective	Limited	Effective	Limited	Effective	Variable	Not Effective
Spores	Not Effective	Effective	Not Effective	Variable	Limited	Variable	Not Effective	Not Effective
Fungi	Effective	Effective	Limited	Effective	Effective	Variable	Variable	Variable
Efficacy with Organic Matter	Reduced	Reduced	?	Rapidly reduced	Rapidly reduced	Variable	Effective	Inactivated
Efficacy with Hard Water	?	Reduced	?	Effective	?	?	Effective	Inactivated
Efficacy with Soap/Detergents	?	Reduced	Inactivated	Inactivated	Effective	?	Effective	Inactivated

? Information not found

DISCLAIMER: The use of trade names does not in any way signify endorsement of a particular product.

For additional product names, please consult the most recent Compendium of Veterinary Products.

REFERENCES: Linton AH, Hugo WB, Russel AD. Disinfection in Veterinary and Farm Practice. 1987. Blackwell Scientific Publications; Oxford, England; Quinn PJ, Markey BK. Disinfection and Disease Prevention in Veterinary Medicine, In: Block SS, ed., Disinfection, Sterilization and Preservation. 5th edition. 2001. Lippincott, Williams and Wilkins: Philadelphia.

Sample Letter to Mail to Registered Exhibitors

Dear Exhibitor,

We have received your registration for EVENT X on EVENT DATE X. Protecting the health of your horse and other horses at this event is of the utmost importance to event management. This event is implementing biosecurity measures to ensure infectious disease agents are not introduced or spread at this event.

Regardless of whether they are participating in the event or not, all horses and livestock that enter the grounds will be subject to examination by event officials/designated representatives and/or State Animal Health official. Such examinations are to determine if the animal(s) is/are, has/have been infected/exposed, or are likely to be infected with, an infectious or contagious disease. If after such examination, an official believes the health condition of an animal will place other animals at risk, the officials may quarantine the animal(s) and others that may have been infected/exposed, or, if necessary, require movement of the animal(s) from the show grounds. All participants must agree to fully cooperate with examining officials and abide by their decisions/instructions. Failure to comply with officials shall be grounds for immediate expulsion of the participant from the grounds and potential disciplinary action(s) by the sponsoring organization and local/state or federal officials.

The equine health entry requirements for this event include: (*EVENT MANAGER TO CHOOSE ONE or MORE and DELETE OTHERS*)

- a. Horses displaying obvious signs of clinical disease, such as fever, abnormal nasal discharge, consistent frequent coughing, neurologic signs of ataxia or significant hind limb weakness are not permitted to enter the event grounds.
- b. Event *No Fever* Policy:
 - i. Each horse entering the premises must have documentation demonstrating a record of body temperature readings with none above 102°F for a designated time period before arrival at the event premises. (*For example, 72 hours*)
 - ii. Show officials will obtain a body temperature of all horses at the time of arrival to the event premises and all horses will be subject to periodic inspection by event officials during the event.
 - iii. Owner/agents will monitor and document on a log the body temperature of their horse(s) X times a day during the event.
- c. Health Certification Policy
 - i. Owner/agents must present to event officials at the time of arrival to the event premises, a Certificate of Veterinary Inspection (health certificate), written within X hours (i.e., seventy-two (72) hours) of arrival to the event premises.
- d. Event Participation Declaration: (See Appendix F for Sample Event Participation Declaration)

Sample Letter to Mail to Registered Exhibitors

- i. Owners/agents must sign a health certification statement verifying that the horse(s) has/have been healthy with no sign of infectious disease for the preceding five (5) days and a body temperature below 102°F during the __X__ hours (i.e., 72 hours) before arrival at the event premises.
- ii. Owner/agents must provide event officials with the address of the premises where each horse was located immediately before arrival at the event and the address of the intended premises of destination for each horse following departure from the event premises.

In addition to the above entry requirement, the following biosecurity measures are recommended:

- Dogs are not permitted on the event premises *or* All dogs on the event premises must be kept on a leash
- Limit horse-to-horse contact
- Limit horse-to-human-to-horse contact
- Avoid sharing of equipment, to include tack, water buckets, brushes, etc.
- Avoid use of communal water troughs
- Avoid submerging end of water hoses in water buckets
- Do not allow horses to drink directly from a water hose
- Avoid tying horses to fences or gates near the competition area
- Cover all feed and hay to prevent access by vermin, birds or other animals
- Monitor your horse frequently for signs of disease during the event
- Immediately report any sick horse(s) to show management
- Thoroughly clean and disinfect all equipment before use at the home premises
- Isolate and monitor all animals upon return to the home premises.

In the event of an emergency or infectious disease incident at the event, all participants and horses will remain at the venue until event management provides clearance for departure from the event premises. In the case of infectious disease event, event officials will evaluate individual horse disease exposure risk and provide owner/agents with follow up disease monitoring instructions. In the event movement restrictions are put in place, each owner/agent is responsible for the care and maintenance of their horse(s) on the premises.

We appreciate your compliance with event management efforts to maintain biosecurity at the upcoming event.

Sincerely,

XXXXXXXXXX
Event Manager

A red octagonal sign with a white border. The word "STOP" is written in large, bold, white, sans-serif capital letters across the center. Below it, the text "Movement Restrictions In Effect" is written in smaller, bold, white, sans-serif capital letters, arranged in two lines.

STOP

**Movement Restrictions
In Effect**

Exposed Horse Release Assessment

Part 1: Owner/Agent

Horse Name	Stall # at Event
Owner/Agent Name	Contact Number
Horse Hauler	Date of Arrival
List Other Horse(s) in Trailer	

List of Classes or Events Horse Participated in

Date	Event Name	Ring /Event Location	Comments

Communal Area Use	Yes/No	If Yes, Date of Use	If Yes, Specify Location
Wash Rack	_____	_____	_____
Exercise Area	_____	_____	_____
Trails	_____	_____	_____
Water Sources	_____	_____	_____

Destination Address: _____

Destination Contact Person: _____ **Contact Number:** _____

Destination Assessment: Answers of "No" signify increased risk for disease spread

	YES/NO
Can you isolate the horse for 2 weeks with no direct contact with other horses?	_____
Can the horse be separated from other horses by a distance of more than 30 feet?	_____
Can you take and record the horse's temperature twice a day?	_____
Can you monitor the horse daily for clinical signs of disease?	_____
Can you provide and require disposable gloves and foot coverings for stall entry?	_____
Can you designate a separate person to handle this horse and no other horse(s)?	_____
Can you arrange for the feeding of this horse and cleaning of the stall to be last?	_____

Exposed Horse Release Assessment

FOR OFFICIAL USE ONLY

Part 2: Event Official Assessment

Exposure Risk: Answers of "Yes" signify increased risk of disease spread

YES/NO

Is this horse showing clinical sign(s) of disease? _____

Did this horse have direct contact with an infected/sick horse in the stabling area? _____

Did this horse have direct contact with infected/sick horse in any common area? _____

Did this horse have direct contact with infected/sick horse being trailered to this event? _____

Did this horse compete in the same events/classes/competitions as an infected/sick horse? _____

General Guidelines

Low-Risk Horse	No known exposure at event	Release: minimal risk; recommend monitoring at destination
Medium-Risk Horse	Potential exposure during stabling and/or competition	Release if adequate biosecurity measures are available at destination; recommend monitoring body temperature of horse at destination location for fourteen (14) days
High-Risk Horse	Known direct contact	Isolate on site with possible testing before release and assessment before allowing movement from the event premises

Release Decision (Date and Initial Final Decision)

_____ Release Low-Risk: Recommend Monitoring

_____ Release Medium-Risk: Recommend monitoring temperature for 14 days

_____ High-Risk: Deny release; remain on event premises for re-evaluation

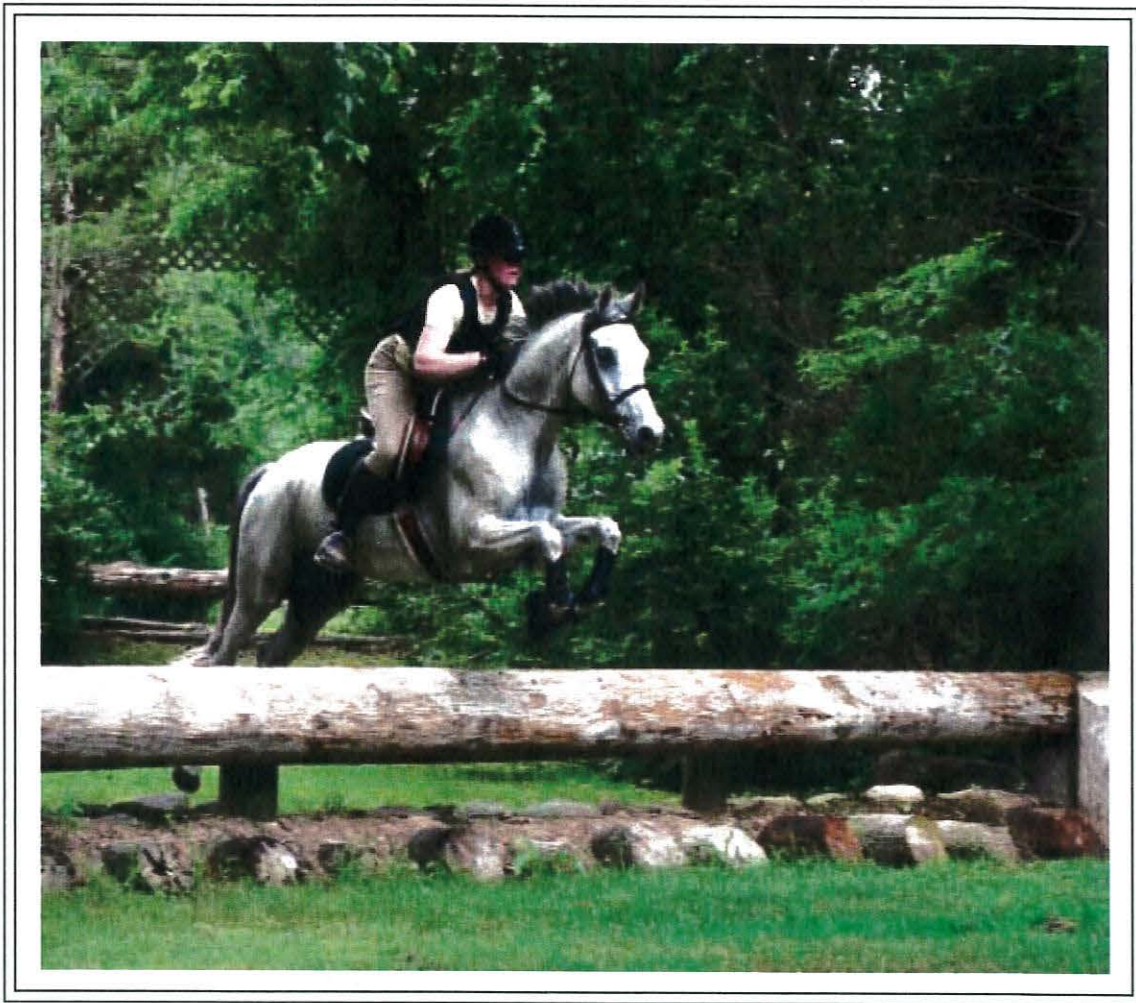
Departure Date

Departure Time

Release Instructions

Initials

How to Set Up a Disease Isolation Unit at a Farm or Horse Show



June 2011

How to Set Up a Disease Isolation Unit at a Farm or Horse Show

A horse with an infectious disease should be isolated from other horses to prevent the spread of infection. It is also important to prevent exposure by indirect contact from those handling an infected horse and spreading the infection to other horses via touching, equipment and so forth. Isolation can occur by stall confinement if the stall is secure and the horse is not in contact with others that walk by or are housed next to the horse. Often housing at shows is in tight quarters and contact can occur, so extreme care and vigilance in control of these isolation units are required.

If a horse has a fever and neurological signs that would suggest EHV-1 infection, it may be carrying high levels of the virus and become a primary source of spread. The horse should immediately be moved to an isolation area, preferably off site.

Any horses that were adjacent to the infected patient that has been moved out should be restricted in their movements and have their temperatures taken twice daily until the nature of the infection is determined. A perimeter and quarantine of that focal area of the barn should be instituted and access to and from the area limited. Horses in that area should be exercised at times when other horses are not in the arena or area. The length of the movement-restriction period will depend on whether other horses develop a fever during the next 7 to 10 days. The end of the quarantine period will be determined by the last horse to develop fever or clinical signs of disease, supplemented by PCR testing as appropriate.

An isolation barn that is effective has these characteristics:

- It is well separated from other barns and main horse traffic contact.
- It can be contained. Movement by people in and out can be regulated and controlled.
- Each stall is isolated and prevents direct contact with horses adjacent to each other.
- It has cleanable surfaces, including walls and flooring (mats). Use of liquid laundry detergent is useful in stalls and trailers with large volumes of water. A 10% bleach

solution is a good general disinfectant if it is changed and replenished once or twice a day. Remember, bleach is inactivated by organic material and direct sunlight. Other commercial disinfectants can be obtained through your veterinarian.

- It is reserved ONLY for use by infectious disease suspects and is not used by other horses at any time.
- It has water buckets and separate equipment (wheelbarrows, pitchforks, bedding, etc.) used ONLY by the isolation unit.
- It has a sink for handwashing and treatment area. Space must be supplied for storage of things needed for biosecurity such as gloves, disposable coveralls, boots, disinfectant, footbath stations (rubber tubs), and garbage collection and holding for disposables used on the horses. This can be another stall converted into a storage area.
- A person to oversee the isolation stall is designated. This individual should have prior training in biosecurity. Their responsibility is to ensure that all activities meet with the biosecurity plan outlined for the facility.
- In an ideal situation, an isolation facility would be equipped with an overhead beam or other means for lifting or supporting a down horse, similar to the UC Davis Large Animal Lift (www.vmeth.ucdavis.edu/home/VERT/LART/lal.html).
- The designated biosecurity supervisor ensures that people allowed to enter the facility follow appropriate sanitation measures: Rubber boots are dipped in a prescribed foot bath; disposable or dedicated coveralls are used only for one horse stall; disposable gloves are worn; and a treatment coat is worn over the reusable coveralls. If during treatment of the horse facial or other contamination of the caregiver occurs, the caregiver must shower and change clothes before touching other horses.
- Hands are washed for 60 seconds (sing "Happy Birthday" twice at normal tempo) before entering or leaving the isolation area. Use disposable towels and leave in a covered waste container at the site of handwashing.
- A perimeter is set up around the stall area to limit vehicular traffic and entry. This perimeter could be designated with ropes, fencing used for construction sites, and so forth. Random access should be restricted, with only one entry and exit to the area.
- There is appropriate lighting.

Equipment Needed for Setting Up An Isolation Barn

- Treatment carts or smocks
- Painter's disposable coveralls
- Disposable gloves
- Rubber boots
- Foot bath containers
- Garbage bags
- Garbage cans with secure lids
- Disposable plastic shoe covers
- Thermometer for each horse
- Equipment for each horse (drugs in sealed plastic container for that horse, stomach tube, twitch, lip chain, etc.)



Example of a temporary isolation unit that can be set up at an equine facility or event.

Equine Event Isolation Protocol Guidance

General Recommendations

- Secure restricted isolation area; only allow entry and exit by designated trained personnel.
- If owners are to enter isolation area, train on appropriate biosecurity measures before allowing access and monitor their visits.
- Eliminate vehicle and animal traffic in the restricted isolation area.
- Minimize onsite pests, including vermin, birds and insects.
- Restrict pets and all other animals from access to the isolation and adjoining area.
- Deliver all feed, equipment and supplies to an area adjacent to the isolation area and hand deliver to the entry of the isolation area as needed.
- Horse(s) in isolation area should remain in the stall. If horse(s) must be taken out of stall, obtain permission from the onsite veterinarian and event management before moving horse(s). Clean the feet of the horse(s) before movement and monitor movements.

Hand Washing Protocol

1. Hold a clean, freshly-laundered drying towel or disposable paper towels under arm for use after washing hands.
2. Ideally, use warm or hot running water.
3. Apply antibacterial soap and thoroughly wash all hand surfaces, including the wrists, palms and backs of hands.
4. Vigorously rub all lathered surfaces together for twenty (20) seconds.
5. For complete cleaning, use a nailbrush to clean fingers and under fingernails.
6. Rinse well in a flowing stream of water.
7. Hands that are visibly soiled require additional time to clean properly.
8. When drying hands, begin at the fingertips and work toward elbows, patting, not rubbing, the skin with the towel.
9. Use the towel to cover the faucet when turning off.

Entry into Isolation Stall

1. Prepare supplies and equipment you need.
2. Wash hands before entering the area: frequent hand washing is the most important

component in prevention of disease agent spread.

3. Wear designated disposable footwear, coveralls and gloves. If not wearing disposable coveralls, launder worn clothing separate from other items after use.
4. Use disposable plastic boot covers or rubber footwear; if using rubber footwear, scrub thoroughly with a boot brush and submerge footwear in a disinfectant footbath when entering the area.
5. Place a bleach solution foot bath outside the stall and step in the footbath before entering the stall.
6. Each horse should have a thermometer for monitoring the body temperature; if sharing a thermometer for horses, clean and disinfect the thermometer between uses.

Exit from Isolation Stall

1. Step in bleach solution foot bath when exiting stall. Organic material will inactivate some disinfectants, so change footbath solution when contaminated with organic material and when disinfectant expires.
2. Remove designated protective wear (footwear, coveralls and gloves) just before exiting the isolation stall. Remove gloves last, pulling them off from the inside without touching the outside of the gloves.
3. Bag all disposable protective wear for appropriate disposal; Bag all reusable protective wear for immediate laundering.
4. Blow nose to remove any potential infectious disease organism.
5. Immediately wash hands or use an appropriate alcohol-based hand sanitizer.
6. Exit isolation area.
7. Clean organic material from all equipment before applying a disinfectant; follow manufacturer recommendations for product contact time.
8. Ideally, individuals departing the isolation area will shower and change clothes. At a minimum, change clothing and footwear.



LIST OF REPORTABLE CONDITIONS FOR ANIMALS AND ANIMAL PRODUCTS*

*Pursuant to Section 9101 of the California Food and Agricultural Code, Title 3 California Code of Regulations § 797 and Title 9 Code of Federal Regulations Section 161.4(f)

WHO MUST REPORT: Any licensed veterinarian, any person operating a diagnostic laboratory, or any person who has been informed, recognizes or should recognize by virtue of education, experience, or occupation, that any animal or animal product is or may be affected by, or has been exposed to, or may be transmitting or carrying any of the following conditions, must report that information.

WHAT TO REPORT: Immediately report any animal disease not known to exist in the United States, any event with increased mortality and/or morbidity of unknown cause or source and any toxicology condition likely to contaminate animals or animal products (meat, milk or eggs).

CALL IF YOU SEE: Vesicles, unusual or unexplained illness, CNS signs, mucosal diseases, hemorrhagic septicemias, unusual larvae in wounds, uncommon ticks, high morbidity or mortality.

Report any emergency, regulatory, or monitored condition within the provided time frame. Some diseases are listed under the major species of concern; if you see compatible signs for such conditions in another species, please report!

EMERGENCY CONDITIONS – Report within 24 Hours of Discovery

Redding 530-225-2140, Modesto 209-491-9350, Tulare 559-685-3500, Ontario 909-947-4462,
Headquarters 916-900-5002, or VS at 1-877-741-3690

MULTIPLE SPECIES

General, non-specific conditions: Unexplained high mortality or diseased animals; livestock exposed to toxic substances.

- Anthrax (*Bacillus anthracis*)¹
- Crimean Congo hemorrhagic fever¹
- Foot-and-mouth disease
- Heartwater (*Ehrlichia ruminantium*)
- Japanese encephalitis
- Melioidosis (*Burkholderia pseudomallei*)
- Rabies of livestock¹
- Rift Valley fever
- Screwworm myiasis (*Cochliomyia hominivorax* or *Chrysomya bezziana*)
- Surra (*Trypanosoma evansi*)
- Vesicular stomatitis

BOVINE

- African trypanosomiasis (Tsetse fly diseases)
- Bovine babesiosis (Cattle tick fever)
- Bovine spongiform encephalopathy
- Contagious bovine pleuropneumonia (*Mycoplasma mycoides mycoides* small colony)
- Foot-and-mouth disease
- Hemorrhagic septicemia (*Pasteurella multocida* B/Asian or E/African)
- Lumpy skin disease
- Malignant catarrhal fever (wildebeest-associated form)
- Rinderpest
- Schmallenberg virus/ Akabane
- Theileriosis (*Theileria parva parva* or *T. annulata*)

CAPRINE/OVINE

- Contagious agalactia (*Mycoplasma agalactiae*)
- Contagious caprine pleuropneumonia (*Mycoplasma capricolum capripneumoniae*)
- Foot-and-mouth disease
- Nairobi sheep disease
- Peste des petits ruminants (Goat plague)
- Schmallenberg virus/ Akabane
- Sheep pox and goat pox

PORCINE

- African swine fever
- Classical swine fever
- Foot-and-mouth disease
- Nipah virus
- Swine vesicular disease
- Vesicular exanthema of swine virus (VESV)

AVIAN SPECIES

- Avian influenza (HPAI and H5/H7 LPAI)
- Turkey rhinotracheitis (Avian metapneumovirus)
- Virulent Newcastle disease (Exotic Newcastle disease, velogenic viscerotropic Newcastle disease)

EQUINE

- African horse sickness
- Dourine (*Trypanosoma equiperdum*)
- Glanders (Farcy; *Burkholderia mallei*)
- Hendra virus (Equine morbillivirus)
- Venezuelan equine encephalomyelitis
- Vesicular stomatitis

CERVIDS/LAGOMORPHS/CAMELIDS

- Rabbit hemorrhagic disease (Calicivirus)

¹ Diseases in green, seen in any species, are also reportable to California Department of Public Health (CDPH); CDFA will report these designated zoonotic diseases to CDPH.

REGULATED CONDITIONS – Report within Two Days of Discovery

MULTIPLE SPECIES

- Brucellosis (*B. melitensis*, *B. abortus*, *B. suis*)¹
- Pseudorabies (Aujeszky's disease)
- Tuberculosis (*Mycobacterium bovis*)¹
- Tularemia ¹

BOVINE

- Bovine brucellosis (*Brucella abortus*)¹
- Bovine tuberculosis (*Mycobacterium bovis*)¹
- Trichomonosis (*Trichomonas foetus*)

CAPRINE/OVINE

- Caprine and ovine brucellosis¹ (excluding *Brucella ovis*)
- Scrapie
- Sheep scabies (Body mange; *Psoroptes ovis*)

PORCINE

- Porcine brucellosis (*Brucella suis*)¹
- Pseudorabies (Aujeszky's disease)

AVIAN SPECIES

- Fowl typhoid (*Salmonella gallinarum*)
- Ornithosis (Psittacosis, avian chlamydiosis; *Chlamydia psittaci*)
- Pullorum disease (*Salmonella pullorum*)

EQUINE

- Contagious equine metritis (*Taylorella equigenitalis*)
- Eastern equine encephalomyelitis
- Epizootic lymphangitis
- Equine herpesvirus myeloencephalopathy (EHM)
- Equine infectious anemia
- Equine piroplasmiasis (*Babesia caballi* or *Theileria equi*)
- Western equine encephalomyelitis
- West Nile virus

CERVIDS/LAGOMORPHS/CAMELIDS

- Chronic wasting disease in cervids

MONITORED CONDITIONS – Report within 30 Days of Discovery

MULTIPLE SPECIES

- Bluetongue
- Echinococcosis/hydatidosis (*Echinococcus* species)
- Epizootic hemorrhagic disease
- Johne's disease (Paratuberculosis; *Mycobacterium avium paratuberculosis*)
- Leishmaniasis
- Q Fever (*Coxiella burnetii*)

BOVINE

- Anaplasmosis (*Anaplasma marginale* or *A. centrale*)
- Bovine cysticercosis (*Taenia saginata*)
- Bovine genital campylobacteriosis (*Campylobacter fetus venerealis*)
- Bovine viral diarrhea
- Enzootic bovine leukosis (Bovine leukemia virus)
- Infectious bovine rhinotracheitis (Bovine herpesvirus-1)
- Malignant catarrhal fever (sheep-associated form)

CAPRINE/OVINE

- Ovine epididymitis (*Brucella ovis*)
- Caprine arthritis/encephalitis
- Enzootic abortion of ewes (Ovine chlamydiosis; *Chlamydia abortus*)
- Maedi-visna (Ovine progressive pneumonia)
- *Salmonella abortusovis*

PORCINE

- Porcine cysticercosis (*Taenia solium*)
- Porcine reproductive and respiratory syndrome
- Senecavirus A
- Swine enteric coronavirus diseases, including transmissible gastroenteritis
- Swine influenza
- Trichinellosis (*Trichinella spiralis*)

AVIAN SPECIES

- Avian infectious bronchitis
- Avian infectious laryngotracheitis
- Duck viral hepatitis
- Goose parvovirus
- Infectious bursal disease (Gumboro disease)
- Influenza A viruses (see Emergency Conditions for HPAI and H5/H7 LPAI)
- Mycoplasmosis (*Mycoplasma synoviae* and *Mycoplasma gallisepticum*)

EQUINE

- Equine herpesvirus-1 and 4 (excluding EHM)
- Equine influenza
- Equine viral arteritis

CERVIDS/LAGOMORPHS/CAMELIDS

- Camel pox in camels
- Myxomatosis in rabbits

FISH, AMPHIBIAN, CRUSTACEAN, BEE, AND MOLLUSK

- **Compatible with the OIE list:**
<http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2019/>

WHERE TO REPORT: Department of Food and Agriculture, Animal Health Branch (AHB) District Office: Redding 530-225-2140, Modesto 209-491-9350, Tulare 559-685-3500, Ontario 909-947-4462; AHB Headquarters at 1220 N Street, Sacramento, California 95814, telephone 916-900-5002, facsimile 916-900-5333; or the USDA, APHIS, Veterinary Services (VS) office at 1-877-741-3690.

¹ Diseases in green, seen in any species, are also reportable to California Department of Public Health (CDPH); CDFA will report these designated zoonotic diseases to CDPH.

STATE VETERINARIAN OFFICES

ALABAMA	334-240-7255	P.O. Box 3336 Montgomery AL 36109-0336
ALASKA	907-375-8215	5251 Hinkle Road Anchorage AK 99507
ARIZONA	602-542-4293	1688 West Adams Street, Third Floor Phoenix AZ 85007
ARKANSAS	501-907-2400	P.O. Box 8505, Little Rock, AR 72215
CALIFORNIA	916-900-5000	1220 N St, Sacramento CA 95814
COLORADO	303-239-4161	700 Kipling St., Suite 4000 Lakewood CO 80215-8000
CONNECTICUT	860-713-2505	165 Capitol Avenue, Room G-8A Hartford CT 06106
DELAWARE	302-739-4811	2320 S. DuPont Highway Dover DE 19901
FLORIDA	850-410-0900	335 Mayo Bldg., 407 South Calhoun Street, Tallahassee, FL 32399
GEORGIA	404-656-3671	19 MLK, Jr. Drive, Room 106 Atlanta GA 30334
GUAM	671-734-3942	163 Dairy Road, Mangilao, GU 96913
HAWAII	808-483-7151	99-941 Halawa Valley Street Aiea HI 96701-5602
IDAHO	208-332-8540	P.O. Box 7249 Boise ID 83707-9985
ILLINOIS	217-782-4944	P.O. Box 19281 Springfield IL 62794-9281
INDIANA	317-544-2400	4154 North Keystone Avenue, Indianapolis, IA 46205
IOWA	515-281-5305	502 East 9th Street, 2nd Floor, Des Moines, IA 50319
KANSAS	785-296-2326	708 SW Jackson Topeka KS 66603-3714
KENTUCKY	502-564-3956	100 Fair Oaks Lane, Suite 252 Frankfort KY 40601
LOUISIANA	225-925-3980	P. O. Box 1951 Baton Rouge LA 70821-1951
MAINE	207-287-3701	28 State House Station Deering Bldg Augusta ME 04333-0028
MARYLAND	410-841-5810	50 Harry S. Truman Parkway Annapolis MD 21401-7080
MASSACHUSETTS	617-626-1795	251 Causeway St, Suite 500 Boston MA 02114-2151
MICHIGAN	517-373-1077	PO Box 30017 Lansing MI 48909
MINNESOTA	651-296-2942	625 North Robert Street St. Paul MN 55101
MISSISSIPPI	601-359-1170	121 N Jefferson Street Jackson MS 39201
MISSOURI	573-751-3377	P.O. Box 630 Jefferson City MO 65102-0630
MONTANA	406-444-2043	P.O. Box 202001 Helena MT 59620-2001
NEBRASKA	402-741-2351	P.O. Box 94787 Lincoln NE 68509-4787
NEVADA	775-353-3755	405 South 21st. Street, Sparks, NV 89431
NEW HAMPSHIRE	603-271-2404	P.O. Box 2042 Concord NH 03302-2042
NEW JERSEY	609-292-3965	P.O. Box 330 Trenton NJ 08625-0330
NEW MEXICO	505-841-6161	300 San Mateo NE-Suite 1000 Albuquerque NM 87108-204
NEW YORK	518-457-3502	10B Airline Drive Albany NY 12235
NORTH CAROLINA	919-733-7601	1030 Mail Service Center Raleigh NC 27699-1030
NORTH DAKOTA	701-328-2657	600 East Boulevard Ave, Dept 602 Bismarck ND 58505-002
OHIO	614-728-6220	8995 E. Main Street Reynoldsburg OH 43068-3399
OKLAHOMA	405-522-6131	P.O. Box 528804
OREGON	503-986-4680	635 Capitol St. NE Salem OR 97301-2532
PENNSYLVANIA	717-772-2852	2301 North Cameron Street Harrisburg PA 17110-9408
PUERTO RICO	787-722-0871	P.O. Box 10163 Santurce PR 00908
RHODE ISLAND	401-222-2781	235 Promenade Street Providence RI 02908-5767
SOUTH CAROLINA	803-788-2260	PO Box 102406 Columbia SC 29224
SOUTH DAKOTA	605-773-3321	411 South Fort Street Pierre SD 57501-4503
TENNESSEE	615-837-5120	Melrose Station, P.O. Box 40627 Nashville TN 37204
TEXAS	512-719-0700	2105 Kramer Lane, Austin, TX 78758
UTAH	801-538-7162	350 N. Redwood Rd, Box 146500 Salt Lake City UT 84114-6500
VERMONT	802-828-2426	116 State Street, Drawer 20 Montpelier VT 05602-2901
VIRGIN ISLANDS	340-778-0997	State Lower Love Kingshill St Co VI 00850
VIRGINIA	804-692-0601	102 Governor Street, Room 145 Richmond VA 23219
WASHINGTON	360-902-1881	P.O. Box 42577 Olympia WA 98504-2577
WASHINGTON, DC	202-535-2321	51 N Street NE, Room 6005, Washington, DC 20002
WEST VIRGINIA	304-558-2214	1900 Kanawha Boulevard, East Charleston WV 25305-0172
WISCONSIN	608-224-4872	P.O. Box 8911 Madison WI 53708-8911
WYOMING	307-777-6443	2020 Carey Avenue, 4th Floor Cheyenne WY 82002-0051

California Local Health Department (LHD) Contact Information for Health Care Providers/Labs to Report Communicable Diseases and Submit Confidential Morbidity Report (CMR) forms

1/30/11

LHD	Fax Number(s)	Phone Number(s)	Address	Link to Disease Reporting Information Website
Alameda County	CD/STD: (510) 268-2111 TB: (510) 577-7024	510) 267-3250; After Hours: (925) 422-7595)	Division of Communicable Disease Control & Prevention 1000 Broadway, Suite 500 Oakland, CA 94607	http://www.acphd.org/user/services/AtoZ_PrgDtls.asp?PrgId=56
Alpine County	(530) 694-2770	(530) 694-2146	75-B Diamond Valley Road Markleeville, CA 95682	http://www.alpinecountyca.gov/departments/health_and_human_services
Amador County	(209) 223-1562	(209) 223-6407	10877 Conductor Blvd, Ste 400 Sutter Creek, CA 95682	http://www.co.amador.ca.us/depts/public_health/
Berkeley City of	(510)981-5345	510) 981-5300 After Hours: Call City of Berkeley Dispatch at 510-981-5911. Ask for Health Officer on call	City of Berkeley Public Health 1947 Center St, Second Floor Berkeley, CA 94704	http://www.cityofberkeley.info/ContentDisplay.aspx?id=13896
Butte County 2008 Info	Chico: (530) 879-3309; Oroville: (530) 538-5387	Chico: (530) 891-2732; Oroville: (530) 538-7553	Chico: 695 Oleander Ave Chico, CA 95926 Oroville: 202 Mira Loma Drive Oroville, CA 95965	http://www.buttecounty.net/publichealth/cder/communicable.html
Calaveras County	(209) 754-6459	(209) 754-6460; After Hours Emergency Sheriff: (209) 754-6500	891 Mountain Ranch Road San Andreas, CA 95249	http://www.co.calaveras.ca.us/departments/pub_health/PHD_CDR.html
Colusa County	(530) 458-4136	(530) 548-0380	251 E. Webster Street Colusa, CA 95932	http://www.colusadhhs.org
Contra Costa County	(925) 313-6465	(925) 313-6740; After Hours Emergency Sheriff: (925)646-2441	597 Center Ave, Ste 200-A Martinez, CA 94553	http://www.cchealth.org/groups/cd/regulations.php
Del Norte County 2008 Info	(707) 465-6701	(707) 464-3191	880 Northcrest Drive Crescent City, CA 95531	http://www.dnco.org/cf/topic/topic4cfm/Topic=Disease%20Prevention%20and%20Control&SiteLink=100030.html

El Dorado County; West Slope; Placerville	(530) 295-2589	(530) 621-6320	931 Spring Street Placerville, CA 95667	http://www.edcgov.us/Government/PublicHealth/Communicable_Disease/Communicable_Disease_Reporting.aspx
El Dorado County; South Lake Tahoe	(530) 541-8409	(530) 573-3155; (530) 573- 3156	1360 Johnson Blvd. Ste 103 South Lake Tahoe, CA 96150	http://www.edcgov.us/Government/PublicHealth/Communicable_Disease/Communicable_Disease_Reporting.aspx
Fresno County	(559) 445-3535; (559) 445-3255	(559) 445-3569; (559) 445-3324	1221 Fulton Mall Fresno, CA 93721	http://www.co.fresno.ca.us/DivisionPage.aspx?id=718
Glenn County	(530) 934-6463	(530) 934-6588	240 N. Villa Avenue Willows, CA 95988	http://www.countyofglenn.net/Public_Health_Department/home_page.asp
Humboldt County	(707) 445-7346	(707) 445-6200	529 I Street Eureka, CA 95501	http://humboldtthealthalert.org/medical-provider-info-reporting-communicable-and-infectious-diseases
Imperial County	(760) 482-4738	(760) 482-4723 ; Email: phepireport@co.imperial.ca.us	935 Broadway El Centro, CA 92243	http://www.icphd.org go to the Epidemiology section, for a copy of the CMR
Inyo County	(760) 873-7800	760-873-7868 or 1-866-398-7134 After Hours Sheriff Dept: 760-878-0383	207A West South St Bishop, CA 93514	http://www.inyocounty.us/publichealth
Kern County	(661) 868-0261	(661) 321-3000 After hours: (661) 324-6551	1800 Mount Vernon Ave, Bakersfield, CA 93306	http://www.kernpublichealth.com/departments/divisionofhealthassessment/pdfs/CMR200912.pdf
Kings County	(559) 589-0482	(559) 584-1401	330 Campus Drive Hanford, CA 93230	http://www.countyofkings.com/Health/phn.html
Lake County	(707) 262-4280	707-263-1090	922 Bevins Court Lakeport, CA 95453	http://health.co.lake.ca.us/Communicable_Disease.htm
Lassen County	(530) 251- 2668	(530) 251-8384; (530) 251-8183	1445 Paul Bunyan Road, Susanville, CA 96130	http://www.lassencounty.org/govt/dept/health_social/Public_Health.asp
Long Beach City of	CD/STD:(562) 570-4374; TB: (562) 570-439	CD/STD: (562) 570-4302; TB: (562) 570-4234 or (562) 570-4235	2525 Grand Avenue Long Beach, CA 90815	http://www.longbeach.gov/health/info_stats/communicable_disease_report.asp

Los Angeles County	CD: (888) 397-3778; TB: (213) 749-0926; STDs: (213) 749-9602	CD: (888) 397-3993; HIV/AIDS: (213) 351-8516; Ped-HIV: (213) 351-8153; TB: (213) 744-6160; STDs: (213) 744-3106	CD: Morbidity Unit , 313 N Figueroa St, #117, LA, CA 90012; HIV Epidemiology , 600 S Commonwealth Ave, Ste 1260, LA, CA 90005; TB Control , 2515 S Grand Ave, Rm 507, LA, CA 90007; STD Prgm , 2615 S Grand Ave, Rm 500, LA, CA 90007	CD: http://lapublichealth.org/acd/cdrs.htm HIV/AIDS: http://publichealth.lacounty.gov/hiv/hivreporting.htm TB: http://publichealth.lacounty.gov/tb/tbreporting.htm STDs: http://publichealth.lacounty.gov/std/providers.htm#reporting
Madera County	(559) 674-7262	Madera: (559) 675-7893 Oakhurst: (559) 658-7456	14215 Road 28 Madera, CA 93638	http://www.madera-county.com/publichealth/cdc.html
Marin County	CD: (415) 473-6002; TB/STD: (415) 499-6855	CD: (415) 473-7805; TB: (415) 499-6867; STDs: (415) 499-6944	899 Northgate Dr, Ste 100 San Rafael, CA 94903	http://www.co.marin.ca.us/depts/HH/main/HS/publichealth/PHAdmin.cfm
Mariposa County	(209) 966-4929	(209) 966-3689	P.O. Box 5 Mariposa, CA 95338	http://www.mariposacounty.org/
Mendocino County	(707) 472-2714	(707) 472-2713; After Hours: (707) 272-8035	CD Control 1120 S Dora St Ukiah, CA 95482	http://www.co.mendocino.ca.us/hhsa/chs/nursing
Merced County	(209) 381-1034	(209) 381-1020; After Hours: (209) 725-7011	260 E. 15 th Street Merced, CA 95341	http://www.co.merced.ca.us/index.aspx?NID=578
Modoc County	(530) 233-6332	(530) 233-6311; 1-800-762-3003	441 N. Main Alturas, CA 96101	http://www.modoccohealthservices.com/id35.html
Mono County	(760) 924-1831	(760) 924-1830	P.O. Box 3329 Mammoth Lakes, CA 93546	http://www.monohealth.com/publichealth/phcommunicablediseases.html
Monterey County	CD: (831) 754-6682; TB: (831) 796-1272	(831) 755-4521; TB: (831) 755-4593; After Hours: (831) 755-5100 Ask for the Health Officer on call.	1270 Natividad Road Salinas, CA 94559	http://bit.ly/fR1I2s

Napa County	(707) 299-4479	(707) 299-1499 After Hours: (707) 265-3131	2344 Old Sonoma Rd, Bldg G Napa, CA 94559	Can submit reports by email to: CDReports@co.napa.ca.us ; Website: http://www.countyofnapa.org/Pages/DepartmentContent.aspx?id=4294969143
Nevada County	(530) 271-0836; or (530) 271-0894	(530) 265-1450	500 Crown Point Circle, #110 Grass Valley, CA 95945	http://www.mynevadacounty.com/ph/index.cfm?ccs=1209&cs=4295 Can access page via www.mynevadacounty.com/ph ; click Communicable Disease Prevention link (left), then Reporting Communicable Disease link in center.
Orange County	(714) 834-8196	(714) 834-8180	P.O. Box 6128 Santa Ana, CA 92706-0128	http://www.ochealthinfo.com/epi/for-phys.htm
Pasadena City of	(626) 744-6115	(626) 744-6043	1845 North Fair Oaks Ave Pasadena, CA 91103	http://www.ci.pasadena.ca.us/publichealth/disease_prevention/cdc/cdc_prov_home.asp
Placer County	(530) 886-2945	(530) 889-7274; (888) 822-7274	11484 "B" Avenue Auburn, CA 95603	http://www.placer.ca.gov/Departments/hhs/community_health/comm_diseases.aspx
Plumas County	(530) 283-6110	(530) 283-6330	270 County Hospital Rd, Ste 111 Quincy, CA 95971	http://www.countyofplumas.com/index.aspx?nid=91
Riverside County; Riverside; West Co	(951)358-5102	(951) 385-5107	P.O. Box 7600 Riverside, CA 92513-7600	http://www.rivco-diseasecontrol.org/guidelin/contents.htm
Riverside County; Indio; Eastern Co.	(760) 863-8183	(760) 863-8182	Disease Control Branch 47-923 Oasis Indio, CA 92201	http://www.rivco-diseasecontrol.org/guidelin/contents.htm
Sacramento County	(916) 875-4069 or report on-line at https://saccmr.net	(916) 875-5881	7001 A East Parkway, Suite 600, Sacramento, CA 95823	http://www.sacdhhs.com/default.asp?woID=pub&mode=
San Benito County	(831) 637-9073	(831) 637-5367	439 Fourth Street Hollister, CA 95023	http://www.sanbenitoco.org/programs/cd.html
San Bernardino County	(909) 386-8325	(909) 383-3052; (800) 722-4794	799 E Rialto Avenue San Bernardino, CA 92415-0011	http://www.sbcounty.gov/pubhlth/programs_services/epidemiology/epidemiology.htm

San Diego County	Epi: (858) 715-6458; TB: (619) 692-5516; STD: (619) 692-8541	Epi: (619) 515-6620; TB: (619) 692-8610; STD: (619) 692 8501	1700 Pacific Highway San Diego, CA 92101	http://www.sdepi.org
San Francisco County	(415) 554-2848; TB: (415) 206-4565 or (415) 206-4567; STD: (415) 431-4628	CD: (415) 554-2830; AIDS/HIV: (415) 554-9050; TB: (415) 613-2878	101 Grove Street, Room 408 San Francisco, CA 94102	http://sfcdcp.org/diseasereporting.html
San Joaquin County	(209) 468-8222	(209) 468-3822; AIDS/HIV: (209) 468-3475	PO Box 2009 Stockton, CA 95201-2009	http://www.sicphs.org/disease/disease_control_reporting.htm
San Luis Obispo County	(805) 781-5543	(805) 781-5000 After Hours: (805) 781-4550	2191 Johnson Ave San Luis Obispo, CA 93401	http://www.slocounty.ca.gov/health/publichealth/commdisease.htm
San Mateo County	(650) 573-2919	(650) 573-2346	CD Control: 225 W. 37th Avenue San Mateo, CA 94403	http://www.co.sanmateo.ca.us/portal/site/health/menuitem.f44138fe5f6ec63d74452b31d17332a0/?vgnextoid=b41506f14c44a210VgnVCM1000001937230aRCRD&cpsextcurrchannel=1
Santa Barbara County	(805) 681-4069	(805) 681-5280	Admin: 300 N San Antonio Rd B-8, Santa Barbara, CA 93110; CD: 345 Camino Del Remedio, Santa Barbara, CA 93110	http://www.sbcphd.org/dcp/dc/cmr.html
Santa Clara County	(408) 885-3709	(408) 885-4214	976 Lenzen Avenue, Suite 1700 San Jose, CA 95126	http://www.sccgov.org/portal/site/phd/agencychp?path=%2Fv7%2FPublic%20Health%20Department%20%28DEP%29%2FCommunicable%20Disease%20%26%20Sexual%20Health%20Programs%2FDisease%20Reporting
Santa Cruz County	(831) 454-5049	(831) 454-4114; After Hours: (831) 471-1183	1060 Emeline Avenue Santa Cruz, CA 95060	http://www.santacruzhealth.org/phealth/cd/3reportingguidelines.htm
Shasta County	(408) 225-5074	(530) 225-5591 After Hours: (530) 225-3767	2650 Breslauer Way Redding, CA 96001	http://www.co.shasta.ca.us/index/hhsa_index/Community_partnerships/med_professionals/report_cd.aspx

Sierra County	(530) 993-6790	(530) 993-6700; (530) 993-6710	202 Front Street, PO Box 7 Loyalton, CA 96118	http://www.sierracounty.ws/index.php?module=pagemaster&PAGE_user_op=view_page&PAGE_id=3&MMN_position=28:28
Siskiyou County	Personal Health: (530) 841-4094; Env Health: (530) 841-4076	(530) 841-2100 - main (530) 841-2134 - Personal Health	Attn: CD Controller 806 S. Main St. Yreka, CA 96097	http://www.co.siskiyou.ca.us/PHS/phs.aspx
Solano County	(707) 553-5649	(707) 553-5555 (24 hr); (707) 784-8600 (PH main line)	355 Tuolumne St., MS 20-210, Ste 2500, Vallejo, CA 94590	http://www.solanocounty.com/depts/ph/health_providers/default.asp
Sonoma County	(707) 565-4565	(707) 565-4566	625 Fifth Street Santa Rosa, CA 95404-4428	http://www.sonoma-county.org/health/ph/diseasecontrol/reportable_diseases.htm
Stanislaus County	(209) 558-7531	(209) 558-5678	820 Scenic Drive Modesto, CA 95350	http://www.schsa.org/PublicHealth/mainpages/cd/index.html
Sutter County	(530) 822-7223	(530) 822-7215	1445 Veterans Memorial Circle Yuba City, CA 95993 Attn: CD Controller	http://www.co.sutter.ca.us/doc/government/depts/hs/ph/hs_public_health
Tehama County 2008 Info	(530) 527-0362	(530) 527-6824	1860 Walnut St Red Bluff, CA 96080	http://www.co.tehama.ca.us/
Trinity County	(530) 623-1297	(530) 623-8209	P>o. Box 1470 Weaverville, CA 96093	http://www.trinitycounty.org/Departments/HHS/health.htm
Tulare County	(559) 685-4835	(559) 685-6965	1150 S. K St Tulare, CA 93274 Attn: Jeremy Kempf	http://www.tularehhsa.org/index.cfm/public-health/communicable-disease-control-and-prevention/
Tuolumne County	(209) 533-7406	(209) 533-7401; After Hours: (209) 533-8055	20111 Cedar Road North Sonora, CA 95370	http://www.tuolumnecounty.ca.gov/
Ventura County	CD: (805) 981-5200; TB (805) 385-9145	(800) 781-4449 CD: (805) 981-5201; TB: (805) 385-9151; AIDS: (805) 652-3313	2240 E Gonzales Rd, Ste 220 Oxnard, CA 93036	http://www.vchca.org
Vernon City of	(323) 588-4320	(323) 583 8811; After Hours: (323) 587 5171	4305 Santa Fe Avenue Vernon, CA 90058	http://www.cityofvernon.org/city_services/environmental_health.htm

Yolo County 2008 Info	(530) 669-1549	(530) 666-8645 or (916) 375-6380; After Hours: (530) 666-8920	137 N Cottonwood St Woodland, CA 95695	http://www.yolocounty.org/Index.aspx?page=77
Yuba County	(530) 749-6397	(530) 749-6366	5730 Packard Ave, Ste 100 Marysville, CA 95901	http://www.yuba.org/Departments/HHSD/Public%20Health/
Washoe County, NV	(775) 328-3764	(775) 328-2447	P.O. Box 1130 Reno, NV 89520	http://www.co.washoe.nv.us/health/cdpp/reporting.html Confidential E-mail: epicenter@washoecounty.us

Exposed Horse Release Assessment

Part 1: Owner/Agent

Horse Name	Stall # at Event
Owner/Agent Name	Contact Number
Horse Hauler	Date of Arrival
List Other Horse(s) in Trailer	

List of Classes or Events Horse Participated in

Date	Event Name	Ring /Event Location	Comments

Communal Area Use	Yes/No	If Yes, Date of Use	If Yes, Specify Location
Wash Rack	_____	_____	_____
Exercise Area	_____	_____	_____
Trails	_____	_____	_____
Water Sources	_____	_____	_____

Destination Address: _____

Destination Contact Person: _____ **Contact Number:** _____

Destination Assessment: Answers of "No" signify increased risk for disease spread

	YES/NO
Can you isolate the horse for 2 weeks with no direct contact with other horses?	_____
Can the horse be separated from other horses by a distance of more than 30 feet?	_____
Can you take and record the horse's temperature twice a day?	_____
Can you monitor the horse daily for clinical signs of disease?	_____
Can you provide and require disposable gloves and foot coverings for stall entry?	_____
Can you designate a separate person to handle this horse and no other horse(s)?	_____
Can you arrange for the feeding of this horse and cleaning of the stall to be last?	_____

Exposed Horse Release Assessment

FOR OFFICIAL USE ONLY

Part 2: Event Official Assessment

Exposure Risk: Answers of "Yes" signify increased risk of disease spread

YES/NO

Is this horse showing clinical sign(s) of disease? _____

Did this horse have direct contact with an infected/sick horse in the stabling area? _____

Did this horse have direct contact with infected/sick horse in any common area? _____

Did this horse have direct contact with infected/sick horse being trailered to this event? _____

Did this horse compete in the same events/classes/competitions as an infected/sick horse? _____

General Guidelines

Low-Risk Horse	No known exposure at event	Release: minimal risk; recommend monitoring at destination
Medium-Risk Horse	Potential exposure during stabling and/or competition	Release if adequate biosecurity measures are available at destination; recommend monitoring body temperature of horse at destination location for fourteen (14) days
High-Risk Horse	Known direct contact	Isolate on site with possible testing before release and assessment before allowing movement from the event premises

Release Decision (Date and Initial Final Decision)

_____ Release Low-Risk: Recommend Monitoring

_____ Release Medium-Risk: Recommend monitoring temperature for 14 days

_____ High-Risk: Deny release; remain on event premises for re-evaluation

Departure Date

Departure Time

Release Instructions

Initials

Cleaning and Disinfection of a Horse Trailer

1. Cleaning and disinfecting a horse trailer is ideally done within twenty four (24) hours of shipping the horse. If the trailered horse was sick, personnel should wear protective clothing, footwear and gloves while cleaning the trailer.
2. Completely remove all feed, bedding and manure. Use a broom to sweep the small-particle materials into a pile and remove for disposal.
3. Remove all detachable fittings, such as leads and haynets. Wash these separately.
4. Remove floor mats to be cleaned and disinfected separately outside of the trailer.
5. Gently rinse the inside of the trailer floors and the walls with low pressure water (no nozzles). Manually wash all visible loose organic matter down the walls. Use of high pressure water (pressure washer) is not recommended for cleaning since it distributes dirt and infectious agents into the air and beyond to adjacent surfaces.
6. Use a foaming soap agent and a stiff-bristle brush that can fit into the corners to scrub the inside of the trailer, all walls, the ceiling, the floor and the loading ramp.
7. Scrub from the TOP DOWN in the following order:
 - a. Scrub each of the walls thoroughly with a brush.
 - b. Scrub an 18 to 24-inch wide area from top to bottom.
 - c. Move 18 to 24 inches to the right on the wall and scrub another 18 to 24-inch wide section, slightly overlapping the previously scrubbed area.
 - d. Continue this process until you have scrubbed all surfaces, including the inside of the doors, the floor and ramp.
8. Use an appropriate size brush to clean specific trailer areas, such as gate hinges, between pipes, chest and tail bars, latches and ledges.
9. Gently rinse off the foaming soap agent. Surfaces with manure, blood or dirt still "caked on" them should be rescrubbed with foaming agent until clean, since organic matter interferes with the effectiveness of disinfectants.
10. Rinse out any particulate matter left in the trailer after scrubbing.
11. Finally, disinfect all surfaces within the trailer:
 - a. Spray all interior surfaces with a disinfectant solution and use a stiff-bristle brush and scrubbing pattern on all surfaces. Also spray the bleach solution on hayracks, pipes, latches, gate hinges and ledges.

In general, 1:10 dilution of bleach to water is effective. However, in most stall situations, organic material cannot be completely eliminated, therefore it is necessary to use a disinfectant that has activity in the presence of organic materials, such as a phenolic (1 Stoke Environ® or SynPhenol-3®) or an accelerated hydrogen peroxide product (Intervention®). All products should be used in accordance with manufacturer's recommendations and label instructions.
 - b. Allow an appropriate contact time for the disinfectant. For a 1:10 bleach to water solution **a minimum contact time is ten minutes**. Then gently rinse the inside of the doors, the walls, the floor, the loading ramp and all other surfaces and equipment with water.
 - c. The bleach application / scrubbing process may be repeated three times.
12. The exterior of the trailer should be cleaned and disinfected following the same procedure as the interior. Ensure wheels, mudguards and wheel arches are cleaned and disinfected.
13. Removed floor mats should be rinsed with water on both sides to remove dirt and debris
 - a. Scrub one side of floor mat from top left to bottom right. Follow same scrub and disinfectant procedure as trailer.
 - b. Allow bleach to dry on the mat and once dry follow the same procedure to clean and disinfect the other side of the floor mat.
 - c. After trailer and mats have dried, return floor mats to trailer.
14. A visual inspection of the trailer should be done to ensure that the trailer is ready for a new occupant before shipping another horse.

Infection Disease Control at Equine Events Delegation of Responsibilities Table

Infection Disease Control Delegation of Responsibilities

Activity	Responsible Person	Date Assigned	Date Completed
Facility Assessment			
Animal Entry Policy Development			
Biosecurity Policy Development			
Biosecurity Risk Assessment			
Biosecurity Plan Documentation			
Development of Event Biosecurity Signage			
Notification of Exhibitors Before Event			
Oversight of Horse Entry and Exit from the Premises			
Disease Reporting Event Official			
Monitoring Biosecurity of Exhibitors			
Posting Biosecurity Signage			
Responding to Reported Sick Horse			
Set Up of Isolation Area			
Security of Isolation Area			
Ordering Personal Protective Equipment			
Evaluating and Sampling Sick Horses			
Oversight of Plan Implementation			
Communicating with State Animal Health Official			
Communicating with Participants			
Assessment of Disease Situation and Exposed Horse Release			
Release of Horses from Facility			

Communications Table

	Name	Cell Phone	Home Phone	Email
Event Office				
Event Manager				
Assistant Manager				
Sponsoring Organization Contact				
Sponsoring Organization President				
Judge (s)				
Ring Crew Supervisor				
Ambulance and Medical Staff				
Catering and Hospitality Staff				
Event Veterinarian				
Event Farrier				
Nearest Veterinary Hospital				
State Veterinarian				
County Public Health Veterinarian				
USDA Veterinary Services				
Diagnostic Laboratory				
Sample Shipment Company				
Biosecurity Supply Contact				
Infectious Disease Technical Expert				
Renderer or Dead Hauler				
Local Media Contact				
Event PR Person				

Biosecurity References

Online References

1. "Horse Venue Biosecurity Workbook", published by Animal Health Australia in June 2012. <http://www.farmbiosecurity.com.au/files/2011/04/Horse-Venue-Biosecurity-Workbook.pdf>
2. "Basic Equine Facility Biosecurity for Horse Owners and Horse Professionals", coauthored by Dr. John Madigan, Dr. Rick Arthur, and Shara Madigan and published by the University of California Davis, Veterinary Medical Teaching Hospital. http://www.chrb.ca.gov/misc_docs/biosecurity_2011.pdf
3. "Equine Infectious Disease Outbreak: AAEP Control Guidelines", published by American Association of Equine Practitioners. http://www.aaep.org/control_guidelines_intro.htm
4. "Equine 2005: Baseline References of Equine Health Management Strategies at Equine Events in Six States, 2005", published by the United States Department of Agriculture, National Animal Health Monitoring System, May 2007. http://www.aphis.usda.gov/animal_health/nahms/equine/downloads/equine05/Equine05_dr_Events.pdf
5. "Equine Biological Risk Management", co-authored by Dr. Carolyn Hammer and Dr. Stacy Holzbauer and published by the Center for Food Security and Public Health, March 2005. <http://www.cfsph.iastate.edu/BRM/resources/Equine/EquineBRMDocumentMar2005b.pdf>
6. "Equestrian Event Biosecurity and Contingency Planning" published by Government of South Australia, Primary Industries and Resources SA. http://www.pir.sa.gov.au/_data/assets/pdf_file/0005/57578/Equestrian_Event_Biosecurity_Contingency_Guidelines.pdf

Published Research

1. Traub-Dargatz JL, Dargatz DA, Morley PS et al. An overview of infection control strategies for equine facilities with an emphasis on veterinary hospitals. *Veterinary Clinics Equine Practice* 2004;20;507-520.
2. Smith B, Evolution of equine infection control programs. *Veterinary Clinics Equine Practice* 2004;20;521-530.
3. Dwyer RM, Environmental disinfection to control equine infectious diseases. *Veterinary Clinics Equine Practice* 2004;20; 531-542.
4. Stockton KA, Morley PS, Hyatt DR et al, Evaluation of the effects of footwear hygiene protocols on nonspecific bacterial contamination on floor surfaces in an equine hospital. *JAVMA*, 2006; 228; 1068-1073.
5. Schemann K, Taylor MR, Toribio JA. Horse owners' biosecurity practices following the first equine influenza outbreak in Australia. *Prev Vet Med* 2011, 15, 304-314.