



Top, Great Britain experienced an equine influenza outbreak in 2019 that led to the cancellation of race meets and lost revenue for the industry

Bottom, earlier this year, the Equine Veterinary Journal reported its findings on Great Britain's EI outbreak and concluded there was insufficient vaccine coverage among the horse population

Keeping Equines Safe From Pathogens

BEST PRACTICES FOR BIOSECURITY PROTOCOLS

By **AMANDA DUCKWORTH**
Photos by
**EDWARD WHITAKER/
RACING POST**

IF A SINGULAR horse falls ill, it is an unfortunate event. If that disease spreads to the entire herd or worse, a region, it can become catastrophic for all of those involved. From lives lost to extreme economic impact, contagious diseases can claim it all. Understanding the risks of an outbreak and how best to prevent one in the first place are cornerstones of good management practices.



The world at large has a better understanding of biosecurity protocols following the COVID-19 pandemic, and researchers are hopeful that the horse industry will use that as an opportunity to further educate on equestrian contagion concerns as well. As it is with most equine-related topics, however, there is no magic bullet when it comes to biosecurity.

As the Equine Disease Communication Center explains it: "Biosecurity isn't a one size fits all, and plans should be customized for each facility to consider all aspects that can affect horse health. Best practices in infectious disease prevention include a combination of following a veterinarian-directed vaccination plan and targeted parasite prevention plan. Taking simple, but important, biosecurity measures not only when caring for your horse at its home premises, but also while traveling and when participating in equine events is important in protecting your horse. Suggested biosecurity protocols differ depending on the situation and location."

For those looking to enhance their understanding of preventative measures, The Veterinary Journal published "Implementation of biosecurity on equestrian premises: A narrative overview" in February 2023.

"Biosecurity measures are designed to prevent the introduction and spread of pathogens, and play a vital role in the equine industry, controlling endemic diseases and reducing the threat of exotic disease incursion," researchers explained. "The majority of biosecurity measures are directed toward non-specific disease threats rather than focused toward a particular pathogen, and biosecurity is considered good everyday practice to avoid significant impacts when disease incursions occur.

"Equine infectious diseases, including globally endemic diseases caused by pathogens such as *Streptococcus equi* subspecies *equi* (*S. equi*; strangles), equine influenza (EI), and equine

herpes virus (EHV), represent a major welfare concern and result in considerable financial losses, both for owners and the wider industry.”

Because each equestrian setup can differ in terms of disease risk, biosecurity requirements, and available facilities, the narrative overview aims to summarize reported frequency of implementation for selected biosecurity measures as well as review evidence relating to potential barriers to implementation of biosecurity on equestrian premises.

“Although the frequency with which individual biosecurity measures are implemented is variable, this review highlights that overall biosecurity on equestrian premises is suboptimal,” researchers concluded. “While some measures such as vaccination are reportedly performed by

a majority of horse owners, overall relatively few equestrian premises routinely undertake other measures that would be effective for disease prevention or control. Understanding barriers and motivators for horse owner biosecurity implementation is essential to developing effective strategies to increase the uptake of equine biosecurity recommendations.

“While available evidence provides some insight into these potential factors, there is a clear need for further research and development within this area to improve understanding of factors affecting biosecurity implementation on equestrian premises. The 2019 EI outbreak in Europe and the COVID-19 pandemic will undoubtedly have shaped horse owner risk perceptions and biosecurity behaviors. This heightened awareness

of disease control provides a foundation for enhancing veterinary client communication around equine biosecurity.”

The recency of those events, as unfortunate as they were, does help to make the idea of biosecurity easier to understand and appreciate. In January 2023, the Equine Veterinary Journal published “An epidemiological overview of the equine influenza epidemic in Great Britain during 2019.”

“During 2019, EI-infected premises generally had low levels of population vaccine coverage and implemented limited preventive biosecurity measures, particularly linked to horse movements,” researchers found. “Without substantial improvements in infectious disease prevention and control, the Great Britain equine population remains at risk of

FROM THE MAKERS OF BODY BUILDER

EPMX

MAKE SURE YOUR HORSE'S IMMUNE SYSTEM IS IN WINNING CONDITION

Made from Oregano Oil, Rice Bran Oil and an Herb Extract Blend, EPMX supports immune system function.

EPMX ALSO SUPPORTS THE NATURAL RESPONSE TO EPM AND OTHER PARASITIC INFESTATIONS.



WWW.EQUIADE.COM | 727-562-2832 | INFO@EQUIADE.COM



A horse undergoes testing for EI, which is just one of many contagious diseases that can spread among the horse population

future EI epidemics.”

No matter what the outbreak or where it happens, being prepared and being honest about an ongoing situation are steps everyone involved should be prepared to take. That lesson was learned on a global level when Australia—which was equine influenza-free—experienced an outbreak of the disease in 2007. In all, around 50,000 horses on about 10,000 properties were infected during the outbreak.

Strict rules restricting equine movement were put in place, and within four months, the spread of the disease had stopped. A few months later, the World Organisation for Animal Health officially declared Australia free of equine influenza once more. The only other countries to carry such a label are Iceland and New Zealand.

It was a lesson for equine operations the world over, but it did not come cheaply. According to research, the estimated average cost of veterinary treatment was calculated at AU\$9,691 per horse and total household and business losses were estimated at AU\$100.3 million. In the horse racing sphere alone,

millions upon millions of dollars were lost because race meets were abandoned and the breeding season, which depends heavily on shuttle stallions, was severely disrupted. As horse racing becomes ever more global, an outbreak in one location can have a far-reaching impact.

It should come as no surprise that Australian researchers are heavily invested in furthering understanding and education surrounding biosecurity risks. In December 2022, *Frontiers in Veterinary Science* published “Willingness to adopt personal biosecurity strategies on thoroughbred breeding farms: Findings from a multi-site pilot study in Australia’s Hunter Valley.”

“In Australia, research into horse-related biosecurity practices has mostly been in response to two sentinel events: HeV, first identified in 1994, and equine influenza (EI), of which there was an outbreak in 2007,” explained researchers. “There are almost 9,500 full-time employees in Australia’s Thoroughbred horse breeding industry. During foaling, they can be exposed to bodily fluids and mucous membranes which may present risks for zoonotic disease. These risks

can be mitigated through personal biosecurity strategies. The aim of this study was to identify which personal biosecurity strategies were more or less likely to be adopted by workers.”

In all, 17 participants representing 14 Thoroughbred breeding farms and three equine veterinary clinics agreed to trial up to 16 stakeholder-nominated personal biosecurity strategies over the 2021 foaling season. As such, data was collected between September 2021 and April 2022, concurrent with the Southern Hemisphere foaling season. This does mean the foaling season coincided with the ongoing COVID-19 pandemic.

The strategies used included personal protective equipment, zoonotic disease awareness, policies and protocols, supportive environments, and leadership. Additionally, strategy adoption was monitored through three repeated self-audit surveys.

Researchers found that 13 strategies were practiced by at least 50% of participants. According to the findings, staff were most likely to use a ready-made foaling box (98%), communicate the message that PPE usage is a personal responsibility (94.1%), and use ready-made PPE kits (88.2%). However, they also concluded that 31.4% of participants had no intention of doing practice sessions and/or dummy runs for PPE use and 27.5% had no intention of using a buddy system on farm/practice to check use of PPE.

“This multi-site study of 16 personal biosecurity strategies in the Hunter Valley Thoroughbred breeding region suggests that there is a willingness for workers to adopt and maintain practices designed to reduce the risk of zoonotic disease infection and transmission,” said researchers. “However, there is capacity for more strategies to be implemented more often. Findings suggested that future interventions designed to increase the uptake of personal biosecurity strategies will need to be sensitive to the time of the year, the size of the operation, and

EQUIBASE

FREE WAGERING TOOLS



ENTRIES PLUS






SMART PICK



STATLINES

LOOK FOR THESE ICONS
IN THE RIGHT-MOST COLUMN
OF RACE ENTRIES

Race #	Purse	Race Type	Distance	Surface	Starters	Est. Post	Free Products
Race 1	\$75,000	Maiden Special Weight	5 Furlongs	Turf	8	1:05 PM ET	  

Equibase.com/WageringTools

the skills of workers.

“Specifically, they should be designed to assist stakeholders in the Thoroughbred breeding industry to (a) identify which kinds of strategies require what kind of support to be adopted and normalized in their specific workplace, and (b) determine optimal timing for messaging to raise awareness, encourage uptake of personal biosecurity strategies, and support their maintenance to reduce the risk of zoonotic disease.”

In October 2020, Preventive Veterinary Medicine published “Prevention is the biggest success: Barriers and enablers to personal biosecurity in the Thoroughbred breeding industry.”

“Despite what is known about drivers of personal biosecurity in the veterinary/agricultural field, gaps remain in the literature,” explained researchers. “There remains a relative dearth of studies on PB in veterinary settings when compared to infection prevention and control practices in healthcare workers.

“The majority of relevant literature has examined attitudes in veterinarians, rather than veterinary nurses or stud farm workers. These occupational groups are likely to be at equivalent, or higher risk of contact with zoonotic pathogens.”

This exploratory qualitative study was conducted pre-pandemic in 2018 in New South Wales. It consisted of nine interviews and seven small group discussions. In all 29 people took part, with roles ranging from veterinarians, veterinary nurses, foaling staff, stud managers, and laboratory personnel working in a range of equine medicine settings.

According to researchers five main themes emerged: a greater awareness of current and emerging infectious risks promotes use of PPE; currently available PPE is not comfortable, practical, or well-suited to equine reproductive work in Australia’s hot climate; creating supportive environments for PB reduces risk of exposure to infectious materials; strong leadership is required to implement sustainable change in workplace

culture and practices; and policy and economic factors play an important role in adopting biosecurity and personal biosecurity measures in the workplace.

“Personnel working in the Australian Thoroughbred breeding industry face unique zoonotic risks in a challenging physical environment,” concluded researchers. “A qualitative approach provided rich insights into social and physical factors motivating biosecurity

NO MATTER WHAT THE OUTBREAK OR WHERE IT HAPPENS, BEING PREPARED AND BEING HONEST ABOUT AN ONGOING SITUATION ARE STEPS EVERYONE INVOLVED SHOULD BE PREPARED TO TAKE. THAT LESSON WAS LEARNED ON A GLOBAL LEVEL WHEN AUSTRALIA—WHICH WAS EQUINE INFLUENZA-FREE—EXPERIENCED AN OUTBREAK OF THE DISEASE IN 2007. IN ALL, AROUND 50,000 HORSES ON ABOUT 10,000 PROPERTIES WERE INFECTED DURING THE OUTBREAK.

and personal biosecurity in this occupational group. There is an opportunity for collaboration between Public Health services and industry partners to develop and implement strategies most likely to be effective in ensuring consistent uptake of personal biosecurity measures in the workplace.”

Of course, Australia is far from the only country with a focus on how to better educate about the risks of contagious

diseases in equines. In October 2019, BMC Veterinary Research published “Preliminary insight into horse owners’ perceptions of, and attitudes toward, exotic diseases in the United Kingdom.”

“The potential for an exotic disease incursion is a significant concern for the United Kingdom equine industry,” explained researchers. “Horse owners’ perceptions of, and attitudes toward, exotic diseases can influence decisions to adopt disease preparedness strategies. The objectives of this study were to describe horse owners’ perceptions of the term ‘exotic disease’ and attitudes toward their risk of being affected by an exotic disease.”

For the study, researchers collected data using two open-ended survey questions. A total of 423 horse owners took part, and researchers found that they both perceived exotic diseases as belonging somewhere else and a dangerous threat to their horses. Overall, there were four categories when it came to attitudes about exotic disease risk: responsible horse owners prevent disease; horse owners need support to stop disease spread; risk depends on proximity to the ‘risky’ horse; and some risk is inevitable.

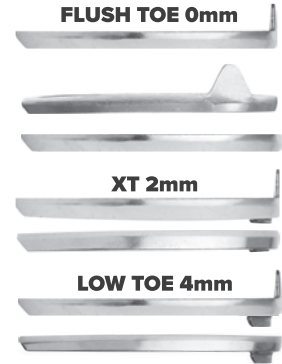
“Without accounting for horse owners’ perceptions of, and attitudes toward, exotic diseases, recommendations to increase preparedness may be ineffective,” concluded researchers. “Improved communication among stakeholders in the industry may assist in clarifying expectations for exotic disease-specific prevention measures. A collaborative approach among horse owners and stakeholders is recommended to improve disease preparedness within the industry.”

Dealing with a widespread outbreak of any disease is a major stressor on the welfare of the horses and humans involved. Additionally, it often carries with it a devastating price tag. Appreciating that biosecurity protocols can help mitigate the spread of disease is step one in dealing with contagion concerns. **BH**



KERCKHAERT HAS THE HISA COMPLIANT RACE PLATES YOU NEED

View compliant shoes for dirt, synthetic and turf tracks at farrierproducts.com/hisa



@farrierproductdistribution
@farrierproducts
@fpdinc

FIND AN FPD™ DEALER NEAR YOU
Visit www.farrierproducts.com/locations or call FPD at 1-800-468-2879. View product photos, videos and specifications at farrierproducts.com.



WHAT'S NEW IN FROG AND HOOF HEALTH

Austin Edens Plexus Caudal Support Pads, FootPro DIM and FootPro Cast.



TOBA

THOROUGHBRED OWNERS AND BREEDERS ASSOCIATION

You look after your horses.
We look after you.

Join TOBA today!

visit toba.org

