Frequently asked questions – Hendra Virus Vaccination

At the Council meeting held on Tuesday 26th November 2013 a motion was passed by Council in regard to Hendra Virus vaccinations please see below:

"That all horses attending State Championships and events must be vaccinated against Hendra virus and applications must include a copy of their current vaccination certificate from the 1st of January 2014."
Please circulate this to all members who intend participating at State Championships and events so that they can follow up with their Veterinarian. All members, clubs and zones should also be aware of the correct biosecurity procedures if they do no vaccinate their horses against the Hendra virus. For further information please see the Department of Primary Industries - http://www.dpi.nsw.gov.au/biosecurity/animal *and the Australian Veterinary Association* - http://www.ava.com.au/suit-up

Rationale: *PCANSW have a responsibility to our members and children, horses, event organisers and venues to implement a policy to protect equine and human health for the entire community by all available means. Widespread vaccination would effectively prevent future human and equine fatalities.*

1. **Why has the Council put forward this recommendation?** The Council feels that PCANSW need to be taking a proactive approach in protecting their members against a Hendra outbreak occurring. DPI, WH&S and ACA have all said 'vaccination is the single most effective way to prevent Hendra virus infection in people and horses'. Our duty of care to members most at risk and the voice we are least likely to hear from – our children. To create awareness, draw attention to the virus and to provoke serious consideration by members.

2. **Why only state events and not other PCANSW activities?** State events are our biggest risk event due to the fact that they;
   - have horses attend from all over the state,
   - are long duration events, the opportunity a clinically well horse may bring Hendra to the event and subsequently get sick while at the event is much greater,
   - often force horses and people to live in cramped camping facilities,
   - due to the numbers involved and the distance from home the economic effect on members of a lockdown would be catastrophic, without even considering health impacts.

3. **Why does the Council recommend that PCANSW mandate state events when no other organisations are mandating vaccination?** To protect those most at risk. Pony Club is unique in that we are primarily a youth organisation and we have so many young children who we will find hard to get to practice good biosecurity.

4. **Will this mean that children's horses/ponies at the grass roots level and only attending rally days need to be vaccinated?** No, only if they intend on competing at

a State Championship event. Clubs, zones and regions are to conduct their own risk assessments.

5. **Does the Council envisage mandatory vaccination state wide?** The Council feels the onus should go back on clubs, zones and regions to mandate in their own areas according to their own risk assessment. Already some clubs and zones have mandated and/or are looking to mandate in the near future.

6. **Why do the costs differ and why is it so expensive is some areas to vaccinate – how do members get the best possible deal on vaccination cost?** Businesses are not allowed to by law to price fix, so each vet has to work out what it costs to deliver a certain service. Things that will ensure the cheapest price are taking the horse to the vet (no travel change), having the horse caught and waiting when the vet arrives, having an adult that can handle horses available to assist and having groups rather than individuals.

Zoetis has made an offer to provide a second dose free of charge to PCANSW members in early 2014 if PCANSW has mandated vaccination for State Events.

7. **Why can only vets administer the vaccine?** This is a condition of the special release permit and can't be changed in the near future and is stipulated because of the need to guarantee correct handling and vaccination protocols are followed.

Hendra virus facts and why it's different to Equine Influenza (EI)

The recent cases of Hendra virus in Queensland and NSW have generated concern for everyone associated with the horse industry. It's important for everyone to understand the basics, and how to protect themselves and their horses from Hendra virus, and also to understand how and why this disease is different to EI.

The basics

- Hendra virus can occasionally spread from flying foxes to horses. This is an unusual event, and the circumstances that allow the spread from flying fox to horse are not fully understood.
- Once a horse becomes affected with Hendra, the death rate is very high. Clinical signs are **VARIABLE** and can include high temperature, depression, nasal discharge, problems breathing and in-coordination. The horses rapidly deteriorate within a short period of time (few days).
- Hendra virus is not very contagious, and it requires very close contact between a Hendra affected horse and a healthy horse, or a Hendra affected horse and a human, for the virus to be transferred.
- If a human contracts Hendra virus, it is most likely that they will become very sick, and death is a real possibility, even with treatment.

Horse movements

- Because Hendra is not highly contagious, it does not spread from farm to farm. Although it is extremely concerning that there has been a cluster of Hendra positive horses in the last 2 weeks, there is no evidence to suggest Hendra is spreading from farm to farm; all of these cases are isolated events.
- This is completely different from Equine Influenza (EI), which is a highly contagious disease. EI spreads rapidly from horse to horse and farm to farm. This is why it was necessary in 2007 to halt horse movement across NSW and Queensland to try to contain the spread of EI. EI has been eradicated from Australia and is a completely different virus to Hendra.
- Because Hendra is not very contagious, there is no need to halt horse movement in NSW or Queensland. EVA understands that there are no plans to restrict horse movement, other than on quarantined farms.
- There is a Hendra horse vaccine being developed but it will not be ready for release until 2012 or 2013. Contact your veterinarian quickly if your horse appears ill, and limit contact with sick horses until a veterinarian can assess the horse.

12 SIMPLE STEPS TO MINIMISE THE RISK OF HENDRA FOR YOURSELF AND YOUR HORSE

(Reproduced with the permission of Dr David Lovell, B.V.Sc., M.A.C.V.SC., Q.D.A.H., G.C.M. Redlands Vet Clinic, Qld)

1. WEAR DISPOSABLE GLOVES. Always have a box of disposable gloves on hand. Wear them if doing anything with a horse that involves contact with horse body fluids. THIS IS IMPORTANT.

2. WEAR Personal Protective Equipment (PPE) IF IN ANY DOUBT. Do not, in any circumstances, approach or attempt to do anything potentially invasive with any suspect horse without adequate PPE. Leave it to the Experts.

3. WASH YOUR HANDS AND EQUIPMENT. A most important factor. Strict personal hygiene is the key component in avoiding infection. Wash hands and equipment and use disinfectant.

4. TPR YOUR HORSE DAILY. Any deviation in the horse's temperature, heart rate, or respiration is something all owners' should know and is a primary indicator of the horse's health.

5. CLINICALLY ASSESS YOUR HORSE. Owners know their horse and intuitively will pick when the horse is not himself. Investigate thoroughly any changes in signs, symptoms or behaviour.

6. RISK ANALYSIS. Always assess the situation and circumstances surrounding yourself and your horse and make a judgement as to the possible risk of a problem.

7. MAINTAIN A "PERIMETER" AROUND YOUR PROPERTY. Maintain a perimeter so that horses across the fence cannot contact each other.

8. "QUARANTINE" ANY NEW HORSES. A critical issue. Remember the incubation period (5-16 days) where an infected horse can appear normal. Isolate any new horses that arrive at your property.

9. STABLE HORSES or HOLD in "SAFE" YARDS at NIGHT if possible when flying foxes are most active.

10. IDENTIFY ALL PLANTS AND TREES. Know whether the trees on your property are food sources for flying foxes.

11. ELIMINATE FLYING FOX FOOD SOURCES. If you cannot remove dangerous plants or trees, at least fence them off or prevent your horse having any access. Make sure that food sources attractive to flying foxes such as fruit and vegetables are not left around horses.

12. FEED & WATER HORSES IN OPEN SPACES or INDOORS. Do not feed or water horses near any possible site where Flying Foxes may feed, roost, or perch

More information at Australian Veterinary Association website: www.ava.com.au
Qld Dept Primary Industry website: www.dpi.qld.gov.au/4790_2900.htm
Queensland Health website: www.health.qld.gov.au

YOUR HENDRA VIRUS VACCINE QUESTIONS ANSWERED

Dr Nathan Anthony BVSc (Hons) MANZCVS

Nathan is a member of the Australian Veterinary Association HeV Task Force, sits on the Pfizer Animal Health *Infectious Disease Advisory Board*, and is the Principal of WestVETS Equine Hospital & Reproduction Centre.

Equivac® HeV is a new vaccine recommended for use in horses that is effective against the deadly Hendra Virus (HeV). The vaccine was launched at the beginning of November 2012 and it is now available nationwide through accredited Veterinarians. Equivac® HeV interrupts the cycle of HeV transmission from the flying fox to the horse and also from the horse to human. Equivac® HeV has great benefits for horse welfare and for human health.

The risk of HeV in horses has to date been managed through increased hygiene and cleaning practices and various recommendations around paddock management. Horse feed and water troughs that are beneath trees should be moved under shelter to avoid possible contamination by flying fox fluids. Restricting horse access under trees where flying foxes are known to roost, stabling at night, and quarantining sick horses is also recommended. Unfortunately, HeV has still claimed the lives of horses despite these sound management practices being adopted. To date there have been about 80 known HeV horse fatalities with more than 30 of these deaths recorded in 2011 and 2012. Equivac® HeV vaccination is now recommended in conjunction with hygiene and paddock management to provide a more robust barrier to the fatal consequences of HeV infection.

Human HeV disease risk is currently managed through increased hand hygiene and minimising contact with horses' blood, nasal discharge and other body fluids at all times. There have been seven confirmed cases of HeV infections in humans, with fatality in four of these people.

Although Veterinarians treating sick horses are at the greatest risk of being exposed to the virus, infection risk also exists for horse owners, their families, and staff that may be in contact with a HeV infected horse. Equivac® HeV vaccination affords humans greater protection against the risk of HeV infection by blocking transmission of HeV from the horse to human.

Equivac® HeV vaccination is the most effective tool that the horse industry has been provided with in the fight against the deadly HeV. The decision to vaccinate requires careful consideration of the risk that HeV poses to your horses and to the people who own and care for them. In order to make an informed decision you also should consider the available information known about Equivac® HeV vaccination. Your Veterinarian is the best person to guide you through the decision making process. Below are some of the most frequently asked questions and answers about Equivac® HeV vaccination of horses.

What is the Equivac® HeV Vaccine?

Equivac® HeV vaccine is a 1ml vaccine that aids in the protection of HeV disease in healthy horses from 4 months of age. Horses will initially be vaccinated with 2 doses, 21 days apart, with the onset of immunity occurring 21 days after the second dose. The vaccine contains a non-infectious protein component of the virus.

How does the vaccine work?

The vaccine stimulates the production of protective antibodies. If the horse is subsequently exposed to HeV, the antibodies will bind the viral particles preventing them from establishing active infection in the horse. The viral particles bound to the antibody are then further eliminated by the immune system.

How effective is the vaccine?

Initial trials have shown complete protection when vaccinated horses were exposed to a lethal dose of HeV. All vaccinated horses were protected from disease and there was no evidence that infection had been established or that virus was shed from these horses. The trials show that the vaccine will be extremely effective in the prevention of HeV disease in horses and in the prevention of HeV transmission from horse to horse and from horse to human.

How does HeV vaccination of horses protect human life?

The only recognised pathway of transmission of HeV to people is from contact with infected horses. Vaccination of horses will therefore provide protection to people by interrupting HeV transmission from flying foxes to horses, and then to humans. However, widespread uptake of vaccine would be necessary for Equivac® HeV to have a significant impact on human health.

Is the vaccine safe to use?

Yes. Safety studies have been conducted in horses greater than 4 months of age, and these studies showed no significant adverse reactions associated with the use of Equivac® HeV. Minor side effects that have been reported include small injection site reactions (lumps) that are not painful and that persist for only a few days. Field data from the first 8000 horses vaccinated indicates that only 0.2% of doses resulted in minor side effects following administration.

Can the vaccine cause HeV infection?

No. Equivac® HeV is not a live vaccine and it cannot cause clinical disease. Live virus is not used at any stage in the production of the vaccine. Equivac® HeV is known as a "subunit" vaccine, other "subunit" vaccines used in horses include Equivac® Strangles vaccines.

Can other vaccines be given at the same time?

There has been no safety work done looking at concurrent use of Equivac® HeV and Equivac® Tetanus/Stangles. This will be looked at in the future. It is however not expected that concurrent use of different vaccines would reduce the effectiveness of each vaccine component. The concurrent use of different vaccines may increase the chance of vaccine reactions such as minor swelling, pain and fever.

Can I vaccinate my foal?

Yes. Foals can be vaccinated from 4 months of age with 2 doses 21 days apart. Thoroughbred foals to be registered with the ASB must only be microchipped with an ASB assigned microchip.

Is the vaccine safe to use in pregnant broodmares?

There is no safety data available supporting the use of Equivac® HeV in pregnant mares, and consequently there are no associated label recommendations. The safety trials will take some time to complete and the data is not expected until 2014. For this reason, owners and veterinarians may choose to not vaccinate breeding stock.

Many Veterinarians and scientists do not expect that this vaccine will be problematic for use in breeding animals, as other subunit vaccines such as Equivac® Strangles vaccines are safely used in pregnant mares. However, the safety study data will be necessary to verify this prior to a label recommendation in breeding animals.

The decision to vaccinate pregnant mares at this early stage should be made on the balance of risk of HeV infection against the risk of possible vaccine related side effects on a pregnancy. Pregnant mares are currently being vaccinated in high-risk areas of Qld and any adverse reactions on pregnancy will be notified. This anecdotal information will be provided to Veterinarians. Some owners and Veterinarians may choose to vaccinate brood mares immediately after foaling.

Can vaccination adversely affect a horse's suitability for export?

Yes it can, but only for export to certain regions such as Hong Kong, China, Singapore, Malaysia, Indonesia and the UAE. Currently export to Great Britain, Europe and America would not be compromised by vaccination. Each country of export will have their own specific import quarantine requirements. If a horse is a candidate for export in the short to medium term then the exact requirements should be ascertained through communication with Commonwealth DAFF and through international horse shipping companies prior to administering Equivac® HeV.

Vaccination will result in antibodies that can be detected in a blood test precluding export to certain regions. A blood test that can distinguish vaccinated from natural HeV antibodies (DIVA), could be used in the future to enable vaccinated horses to be exported. Alternatively, it is likely that some regions will implement policy that requires vaccination as a condition of quarantine prior to export.

Can vaccination have an adverse effect on performance?

This is very unlikely given how safe the vaccine is and the reporting of only minor vaccine reactions to date. However, in line with other vaccination recommendations, it is wise to avoid administering Equivac® HeV within 3 days of competition in case transient minor pain develops at the injection site.

How do I know if my horse should be vaccinated?

You should discuss the suitability of vaccination of your horse with your Veterinarian. From a public and equine health point of view, it is strongly recommended that horses are vaccinated against HeV in Qld and NSW where there have

been a previous outbreaks. Horse owners in other areas need to take into account the movement of their horse, bat population density, and the interaction of the two species when making an assessment as to whether they should vaccinate.

How is the vaccine administered?

The vaccine may only be administered by an accredited Veterinarian via intramuscular injection into the side of the neck. Two 1ml doses are given at an interval of three weeks.

How many doses are required in the initial course?

A primary then a secondary dose exactly 21 days later are required to complete a course. It is condition of the APVMA permit that the second dose is given exactly 21 days later, without exception. Periodic boosters will then be required.

Why the strict requirement around 21 intervals between the primary and secondary dose?

This is a requirement of permit, and it is based on the clinical trials to date. As more data comes to hand this precise requirement may become softened. Currently there is no flexibility around the 21-day interval between first and second doses. It is essential that when making an appointment for your primary vaccination that you ensure your availability for the second dose, and make this appointment at the same time.

What is the duration of immunity and when do booster doses need to be given?

Booster vaccine doses will need to be administered either 6 monthly or yearly depending on the clinical trial work that is being conducted now. This information will come to hand in late February – early March 2013.

Does a vaccinated horse need to be microchipped?

Yes. It is a requirement that all vaccinated horses are microchipped. If your horse is already microchipped it will not require a second chip.

How do I get my horse vaccinated?

Equivac® HeV is only available from accredited Veterinarians. There are over 1000 accredited Veterinarians in Australia who have completed training. Contact your local Veterinarian if you are interested in vaccination.

Why is this vaccine available from Vets only?

This is a condition of the Government's regulatory body that registers Veterinary medications (APVMA) that has allowed the vaccine to come to market under a special permit. Only accredited Veterinarians can administer the vaccine. This is to ensure that the vaccine is handled and stored correctly, that only healthy horses are vaccinated, and to ensure that the requirements of the central data registry are upheld.

Is the vaccine likely to become an 'Open Seller' in the future?

No. Due to the public health benefit of this vaccination and the importance of a national registry it is not likely to become a non-Veterinary vaccine in the future.

What is the cost of the vaccine?

Pricing will vary between Veterinarians and will depend on the number of horses and the location. On average the cost of the vaccine is not more than the cost of a shoeing.

Is the vaccine compulsory?

No. At this stage there is no mandatory requirement to vaccinate your horse. It may become compulsory in the future at certain industry levels to ensure the safety of people and the welfare of horses.

How can I prove that my horse is vaccinated?

There are two ways that HeV vaccination status can be verified; firstly following completion of the vaccination course a certificate will be emailed to you. Your horses will also be recorded on a central database with the microchip used to identify the horse. Accredited veterinarians and Government authorities have access to this database can check your horse's microchip number against the database to check vaccination status.

Who can access the vaccination data on the registry?

At the moment only accredited veterinarians and government have access to the registry. It is very likely that read only access would become available to horse industry groups in the future.

Is there a way to differentiate infected animals from those that have been vaccinated?

Vaccinated horses must be microchipped and their details will be entered into a national register system. A vaccination certificate will be provided to the owner. If there is any confusion about the vaccination status of a horse involved in an outbreak of HeV, blood samples can be taken to differentiate naturally infected from vaccinated horses.

Is my horse guaranteed to be protected against HeV infection after vaccination?

As with all vaccinations, protection against HeV cannot be guaranteed by vaccination, however the clinical trial work to date has shown complete protection in vaccinated horses. As with all vaccines the animal's ability to respond can vary and it is often reduced when the animal is stressed or unwell.

Do I still need to be vigilant?

Yes. Vaccination is not a replacement for hand hygiene, minimisation of contact with horse's body fluids and extreme caution when handling sick horses.

Will a human vaccine be produced in the future?

This is unlikely. Fortunately, the vaccination of horses provides human protection. However, widespread uptake of Equivac® HeV would be necessary for protection of human life.

EQUINE VETERINARIANS AUSTRALIA ®