

SAMFORD VALLEY VETERINARY HOSPITAL

21 April 2016

The Agriculture and Environment Committee Hendra Vaccine Inquiry
Parliament House
Brisbane
Queensland 4000
By email: aec@parliament.qld.gov.au

Dear AEC Committee Members,

RE: Submission to the Qld Parliament's Hendra virus Vaccine Inquiry

My name is Dr Judith Law VSB: 2532. I am a Director/Part Owner of the Samford Valley Veterinary Hospital – a “mixed” Practice (large animal and small animal pets) which was established by Dr Brian Sheahan in 1974. I am an equine veterinarian of 25 years experience operating in Samford Valley - a semi-rural area north west of Brisbane. Of the 11 veterinarians employed by the Samford Valley Veterinary Hospital, there are three full time equine veterinarians and one casual equine veterinarian. Equine medicine and surgery accounts for 45% of the total Practice. On average each of the full time equine veterinarians would attend between ten and twenty horses per day. This equates to 30 to 60 horses per day or over 10000 horses per year. The majority of the consultations performed by our equine veterinarians are routine health examinations – e.g. dental examinations, vaccinations, lameness etc. The remainder consist of emergency call outs to sick or injured horses.

Samford Valley not only has three large resident flying fox colonies but, due to the attractive rural area, supports each night large numbers of transiting flying foxes feeding on the abundant vegetation. The majority of horses in Samford Valley are extensively housed – this means that the horses graze and are managed in paddocks containing native trees 24 hours per day. Only a very tiny number of horses are stabled or confined at night. Therefore the risk of exposure to Hendra Virus is high. This risk is a constant and major source of concern to the equine veterinarians within the Practice. The development, registration and supply of the Hendra Virus vaccine has done much to alleviate this anxiety.

I write to the below terms of reference on behalf of my employees – my esteemed colleagues at the coal face of equine ambulatory field medicine

Terms of Reference

1. ***The development, trials and approval processes;*** this term of reference is best answered by Zoetis and the scientists who defined, researched and developed this highly effective vaccine against Hendra Virus.

2. The incidence and impact of adverse reactions by horses following vaccination and the reporting of adverse reactions and economic impacts of the HeV EquiVacc® vaccine;

- (a) HeV Reactions: The Samford Valley Veterinary Hospital has undertaken vaccination of horses with *Equivac HeV* vaccine since it was made available under the limited use permit in November 2012. This Practice has administered over 8000 vaccines to horses that range in age from 4 months to 30years plus. A number of these horses have been pregnant mares and breeding stallions. The incidence of reaction to HeV has been low, between 20 – 30 horses total. This equates to an adverse reaction rate of 0.37%. Of these the most common reaction has been pain at the site of injection (similar to humans who receive Flu or Tetanus vaccinations). All of these have quickly resolved with the administration of a common anti-inflammatory drug, phenylbutazone or “Bute”. We have experienced 3- 5 horses that have had either an elevated temperature or lethargy for one to three days. Any horse that has demonstrated any reaction to the HeV vaccine is premedicated when next vaccinated with anti-inflammatories and sometimes anti-histamine. This protocol has proved to be very successful at preventing further vaccine reactions.
- (b) Economic Impacts of HeV Equivac vaccine. Despite public perception, the administration of the HeV vaccine does not generate significant profit. A single horse receiving the HeV vaccine is charged by our Practice \$135. The cost of the vaccine is \$60 resulting in \$75 returned to the Practice as revenue earned. In contrast our standard consultation fee for a property visit is \$137.60 of which 100% is returned to the Practice as revenue. Administering the HeV vaccine during another procedure, e.g. routine health check or dental examination, is heavily discounted at \$88. HeV vaccination is performed at this reduced price by this Practice and many other Practices in order to improve uptake and compliance. It is fair to say that this Practice has seen no significant improvement in revenue with the introduction of the HeV vaccine. In contrast, attendance to Hendra vaccinated horses has removed stress and fear for our veterinarians when treating a sick horse in the Samford Valley area.

3. Who bears the risks of HeV infection and who incurs the costs and receives the benefits from each risk mitigation option;

(a) Who incurs the risk of Hendra Virus Infection?

- Any person exposed to unvaccinated horse(s) in coastal Qld and NSW bears the risk of Hendra Virus infection.
- Persons most at risk are those who are in contact with sick, unvaccinated horses (veterinarians, owners, stable staff, owners that house their horse(s) in the same paddock as a sick horse).

(b) Who Bears the Cost of HeV Vaccination?

- The cost of HeV vaccination is borne by the owner of the horse receiving this vaccine. The benefit of the HeV vaccination is that all persons in contact with that horse are protected against Hendra Virus infection. This compliance means that equine health professionals (Vets, farriers, physiotherapists, chiropractors, instructors and trainers) will prioritise attendance to this horse, resulting in successful competitive outcomes. In addition Hendra vaccinated horses can compete anywhere without restriction; will be admitted immediately to equine hospitals for emergency treatments; and, in the face of a Hendra outbreak, will be permitted by Biosecurity authorities to leave the premises. The cost of Hendra Virus vaccination in our Practice is \$135 for a single horse. Therefore, in the first year the maximum cost to the owner of Hendra vaccination will be \$540. In subsequent years the horse will only receive 2 vaccinations per year for an ongoing cost of \$270.

(c) Who bears the cost of Hendra Virus Exclusion Testing?

The cost of Hendra Virus exclusion testing is borne by the owner of the horse being tested. These include:

- Veterinary costs: approx. \$388. Additional costs to the Practice not passed to the owner are the time spent by staff in packaging the samples; the time spent by the attending veterinarian in counselling the owners of the horse undergoing testing; and the loss of revenue from the attending veterinarian who cannot attend other horses for 24 hours.
- Cost of personal protective equipment: approx. \$100
- Courier cost for transport to Biosecurity Laboratory: approx. \$70
- Cost of time lost before appropriate veterinary treatment can be instituted. Veterinary treatment cannot be commenced until a negative Hendra exclusion result is returned. This can be delayed by weekends and public holidays
- Cost of loss of performance that may result from the delay in institution of appropriate treatment
- Cost of possible death of the horse
- Cost of replacement of the deceased horse
- Cost of training the replacement horse to the previous animal's level
- Loss of income from sponsorship and prize money
- Loss of reputation.

(d) Who receives the benefits of Risk Management Options?

Under Occupational Work Place Health and Safety guidelines the first level of risk management is the elimination of the risk. With respect to Hendra Virus there is a fully researched, rigorously tested, highly effective, readily available vaccine that eliminates the risk of Hendra virus infection in horses. Those who receive the benefit are all persons in contact with the vaccinated horse and the horse itself.

The second level of risk management is substitution. This cannot be achieved with the Hendra Virus. There is no work practice when dealing with an unvaccinated horse that will substitute the risk of contracting Hendra virus infection.

The third tier of risk management is engineering. This requires modification of the workplace and environmental conditions. Hendra virus is a biological organism spread by an essential and protected native species that is highly mobile. Modification of the environment would require removal of all native vegetation and housing the horses under cover. History has proven that this does not protect against Hendra virus infection. The first Hendra infection occurred in racing stables in an inner city suburb. There have been multiple cases of horses in completely cleared paddocks becoming infected with Hendra Virus. There have been cases of horses housed under cover with their food and water that have contracted Hendra Virus infection.

The fourth tier of risk management is administrative. Development of work place procedures that control the interaction between people and the hazard. Extensive research by CSIRO scientists has proven that unvaccinated horses infected with Hendra virus shed Hendra virus from oral and nasal cavities for up to two days prior to showing any clinical signs of illness. Therefore, whenever a person is in contact with an unvaccinated horse, it is impossible to develop any work practice that will control the risk of Hendra infection. For equine veterinarians this can be achieved by only attending Hendra vaccinated horses.

However, this would disadvantage the Practice economically. Also, my veterinarians have very high ethical standards and not attending a horse just because it is not Hendra vaccinated will cause mental stress.

The final tier of risk management is Personal Protective Equipment (PPE). Hendra Virus is a Level 4 Biosecurity risk, similar to Ebola Virus. Therefore, PPE must consist of impervious rubber boots, impervious overalls, disposable impermeable gloves, face shield or safety eyewear and a particulate respirator. There are many shortcomings with the routine use of PPE when attending unvaccinated horses. These include:

- Hot, humid conditions cause heat stress, dehydration and fogging of face shields and glasses
- The PPE is bulky, noisy and impossible to use around nervous and unhandled horses
- Emergency rescue situations – e.g., horse in a dam, fence or creek
- Failure of the PPE – e.g. torn gloves, soaking in blood and other body fluids
- Teaching an owner how to correctly apply and wear the PPE. The cost of using PPE in routine examinations – this must be passed onto the owner.

4. *Whether the guidelines/procedures required for veterinarians attending horses that are not vaccinated against HeV are proportionate to the consequences;*

There are a number of different sources that detail the above guidelines and procedures for veterinarians. These include Biosecurity QLD; Australian Veterinary Assoc./Equine Veterinarians Assoc; Qld Health; Workplace Occupational Health and Safety. These documents are very extensive, complicated and, in many field situations, untenable. There is also a lot of overlap in these different guidelines and procedures but there are also areas unique to each. For example, the DPI Business website does not include colic as a potential clinical sign whereas the Guidelines for Veterinarians issued in 2013 does include colic as a potential clinical sign of Hendra virus infection.

The consequences of failing to follow these guidelines and procedures is a potential Hendra virus infection in humans leading to death or permanent disability. In addition, there is potential for prosecution that could result in criminal conviction, fines, loss of licence and therefore inability to provide income for the affected veterinarian and family.

This leads back to risk management in that the only way to eliminate the risk of Hendra Virus infection is to vaccinate all horses in risk areas with the Equivac HeV vaccine. If this was achieved these complicated guidelines and procedures would become mostly redundant, the risk of death from Hendra virus would be removed and there would be no risk of criminal prosecution of equine veterinarians for failing to provide a safe working environment with respect to potential exposure to Hendra Virus.

5. *Impacts on the equine industry and the economy arising from veterinarians applying a policy not to treat unvaccinated horses;*

The impacts include:

- Decreased veterinary attendance to horses. This carries a significant welfare implication for the horse. Also, this would result in a significant decline in income to the Practice due to decreased numbers of consultations performed.
- Decreased number of equine veterinarians entering the industry resulting in a decline in expertise, succession planning and choice for horse owners.

- Decrease in the number of equine related events if unvaccinated horses are prevented from competing. This would have far reaching consequences that would radiate beyond the equine industry – e.g. fall in motel/hotel bookings in areas where such events take place.

6. *The impact of Workplace Health and Safety actions on the decision by veterinarians not to attend unvaccinated horses and results of previous Workplace Health and Safety HeV investigations where there have been human infections.*

- (a) The impact on OH&S actions if veterinarians decide not to attend unvaccinated horses would be beneficial. This administrative decision would effectively remove the hazard of Hendra Virus infection for equine veterinarians. However, other health professionals regularly attend horses. The owner of the horse should accept responsibility of informing professionals such as farriers, physiotherapists, chiropractors, and trainers that the horse is not vaccinated and also inform responsible adults of children and dogs in contact with their horse that the animal is not Hendra vaccinated. When considering the impacts of the Hendra Vaccine, I think it is important that all aspects of the equine industry be considered. This decision by equine veterinarians not to attend unvaccinated horses is mostly the result of the aggressive actions and prosecutions of equine veterinarians by OH&S.
- (b) The results of previous Workplace Health and Safety HeV investigations has had a heavy impact on the equine veterinarians within my Practice. Not only do we feel the effects of the death of our colleagues but are also distressed by the impact these Hendra infections have had not only on their families but also on their Practices. It is quite evident that the horse owning public are very unforgiving of a Veterinary Practice that has experienced a Hendra Virus infection on its premises and the economic impact is very deleterious.

Conclusions

The industry has available an elegant vaccine that has been heavily researched, rigorously tested and proven to eliminate Hendra Virus infection in horses. In my Practice this vaccine has produced mild and controllable side effects in only 20 – 30 horses out of the over 8000 that have received the vaccination – a complication rate of 0.37%.

When my veterinarians attend any horse, but especially a sick horse, it is a great relief to find that horse has been Hendra vaccinated. Immediately we know that the risk of Hendra Infection has been reduced to a negligible level and can immediately institute invasive treatments that could well save the life of the horse.

From our point of view compulsory Hendra vaccination would be ideal. However, it is highly unlikely that such a circumstance could occur. Therefore, subsidising the Hendra vaccine to improve uptake would have numerous ongoing benefits. These would include:

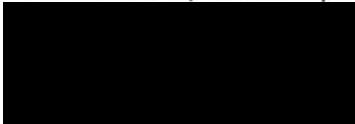
- Reduction in vaccination costs to owners
- Improved treatments and attendance by equine veterinarians
- Increase in the numbers of equine veterinarians prepared to work in high risk areas
- Significant reduction in the mental stress equine veterinarians operating in high risk areas would experience
- Savings to Government by reduction of investigations and quarantine costs as the incidence of Hendra Virus infection reduces
- Significant reduction in numbers of deaths, permanent disabilities and the use of the experimental monoclonal antibody treatment for persons exposed to a Hendra infected horse

Everyday my equine veterinarians attend horses that are not vaccinated against the Hendra Virus. Multiple times a day we make educated but subjective assessments about the level of risk such horses pose to ourselves and those in attendance. To date we have not got these assessments wrong. However, statistical probability is against us – over 10,000 horses per year in a high risk area. It is inevitable that at some point we will make the wrong assessment. If the spectre of death is not bad enough we will also face, in such a circumstance, criminal prosecution with the loss of income and destruction of a career so many years in the making.

Yours sincerely,



Dr Judith Law BVSc BSc
Samford Valley Veterinary Hospital



Samford QLD 4520 *

Dr Leigh Hanlon BSc BVSc MACVSc * Dr Judy Law BVSc BSc