

## **Submission to the Queensland Parliamentary Inquiry into Hendra virus (HeV) EquiVac® vaccine and its use by veterinary surgeons in Queensland.**

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### **Introduction to my practice – Tableland Veterinary Service**

The original veterinary practice which now forms part of Tableland Veterinary Service was established in 1952 and was for many years the only veterinary clinic north of Townsville. Tableland Veterinary Service (TVS) officially began operation in 1977. Since then, more than fifty (50) veterinarians have worked in the practice, supported over the years by many dedicated nurses, receptionists and office staff. In 2012 TVS started the North Queensland Equine Clinic (NQEC) in Gordonvale.

TVS now provides veterinary care for all animals, belonging to clients from the Atherton Tableland, west to the Gulf of Carpentaria, north to Weipa and east to the tropical coast, with veterinary clinics located in Atherton, Malanda, Charters Towers, Ravenshoe, Gordonvale and Weipa.

Our facilities include both small animal and large animal hospitals, with a world class cattle facility and registered equine hospital in Malanda. The NQEC is the sole equine-only practice operating in the greater Cairns region. The practice is also involved with veterinary student training through a collaborative arrangement with James Cook University.

### **Equine services offered by TVS**

TVS is a mixed practice which examines and treats horses from thoroughbreds, to polocrosse horses to miniature ponies. The registered equine hospital comprises an operating theatre and padded recovery room linked by a mechanical gantry system, an indoor examination area with examination stocks, intensive care stables, intensive care foal stables and isolation stables. TVS also has well designed and safe outdoor facilities for less intensive cases and for wet and dry mares for reproductive procedures.

The practice performs services including lameness evaluations (flexion tests and palpation, diagnostic nerve and joint blocks, ultrasounds and digital radiology), poor performance evaluations, video endoscopy, in-house blood testing, nutritional advice, dentistry,<sup>1</sup> intensive medical care for acutely sick or chronically unwell horses, surgery (emergency abdominal surgery for example colic surgery, through to ophthalmic, orthopaedic and soft tissue surgery, castrations, ovariectomies, and bladder surgeries), pre-purchase

<sup>1</sup> Only a veterinarian can legally sedate and remove teeth in Queensland and only a veterinarian can perform diagnostic dental radiology to confirm problems or identify teeth for removal.

examinations and reproductive services (artificial inseminations with both frozen and chilled semen and embryo transfer).

Currently the practice has 54 staff members, 20 of whom are veterinarians, 15 of whom are actively involved in the vaccination of horses with the Hendra Virus (HeV) vaccine (Equivac® Hev vaccine).

The following submission to the Parliamentary Inquiry is set out in numbered paragraphs that correlate with the specific terms of reference for consideration by the Inquiry.

## **1. The development, trials and approval processes**

### **1.1 Safety and efficacy data**

The Equivac® HeV vaccine developed by the CSIRO and manufactured by Zoetis Inc. has had more safety and efficacy data released by its developers than has been made publically available for any other widely used equine vaccine currently on the market.

### **1.2 Safety Monitory post market release**

A mandatory reporting period was required by the Australian Pesticides and Veterinary Medicines Authority (APVMA) when the vaccine was first released. During this time every reaction, regardless of how insignificant or unlikely the result of the vaccination, had to be reported to the APVMA within 48 hours. Subsequently, the APVMA released a summary of reactions and their likelihood (whether likely, probably or possibly related to the vaccination).

During the reporting period seven (7) horses were reported as having died, but each case was described as not being a probable, but merely possible consequence of the vaccine.<sup>2</sup> Whilst the loss of any animal is sad, this is a significantly smaller number of animals than has had to be euthanized because of HeV infection (number of horses died/euthanized between 1994-2011 is 66)<sup>3</sup>.

Further evidence of the likely safety of this vaccine is that it is G protein based, similar to the vaccines for rabies, Respiratory Syncytial Virus, Nipah virus, and strangles, all of which have been widely used, are safe and accepted without public outcry.

### **1.3 Minor Use Permit**

The release of the HeV vaccine under a Minor Use Permit (MUP) may have inadvertently resulted in a number of incorrect perceptions about it by the general public including that the vaccine was “rushed to market” without adequate safety and efficacy data, despite years of research and clinical trials and that the vaccine was “experimental”. It is suggested that this has been one of the reasons why some sectors of the community have been reluctant to vaccinate their horses. The MUP arguments by HeV vaccine critics are however no longer relevant as the product is now fully registered by the APVMA, which should instil confidence in the entire equine community.

### **1.4 Horses for the export market**

Another factor that has made some horse owners reluctant to vaccinate their horses is that a number of countries are yet to approve the import of HeV vaccinated horses.<sup>4</sup> Whilst this may be a valid argument against vaccination for a minority of horse owners on the eastern sea board, any TVS clients that breed and train horses do so purely for the domestic market meaning that this argument does not hold any weight locally. Similarly the majority of horse owners would not export their horses.

<sup>2</sup> <http://www.abc.net.au/news/2015-01-29/concern-mounts-that-hendra-vaccine-has-health-risk-for-horses/6052344> accessed 20 April 2014.

<sup>3</sup> Queensland Health, *Communicable Disease Control Guide- Hendra Virus Infection*, <https://www.health.qld.gov.au/cdgc/index/hendra.asp>, date accessed 20/4/2016

<sup>4</sup> These countries include Hong Kong, Singapore, Indonesia, China and the UAE.

## **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**

### **2.1 Expected vs adverse reactions**

TVS has administered over 7, 800 doses of the HeV vaccine since 2012. A relatively small number of “expected reactions” have been observed in these horses including approximately twenty (20) cases of localised swelling at the injection site (not dissimilar from tenderness and swelling at the site of a flu vaccination in a person). This equates to an “expected reaction” rate of 0.26%.

In terms of “adverse reactions” TVS has been notified of six (6) adverse reactions in its horse clients. These reactions included colic, severe lethargy and behavioural changes. This equates with a reaction rate of 0.08%. Furthermore, none of these reactions have been experienced by the animals in question during subsequent doses of the vaccine suggesting these “adverse reactions” are more likely “possible”, rather than “probable” reactions to the vaccine and most likely coincidental cases of for example colic.

### **2.2 Silent majority vs vocal minority**

Despite low numbers of reported vaccine reactions there has been significant publicity surrounding them in the mainstream and online media.<sup>5</sup> It is submitted that while consumers of products and services have historically been influenced by word of mouth, the advent of online reviews, forums and social media has altered the landscape for the sharing of experiences in terms of the duration, depth, distribution and dominance of consumer behaviours.<sup>6</sup>

The dynamics of online consumer product forums and the behaviours of individual contributors have been investigated by a number of studies which have questioned the accuracy of the views reflected in these platforms and whether they accurately reflect wider community sentiment.<sup>7</sup>

Studies into online communications have identified that:

- a. less involved customers tend to be more favourable, while more involved customers tend to be more critical;<sup>8</sup>
- b. in the face of conflicting opinions, posted ratings tend to become more negative with selection and adjustment effects, which systematically alter the tone of online conversations. As online forums become more populated, customers who are more positive and less involved tend to stick to the sidelines, letting the more critical customers steer the ratings environment;<sup>9</sup> and
- c. many forums are dominated by a small hard-core group of individuals with extremely negative views who discourage the participation of customers with more favourable views. As a result views expressed in online forums and the media may not be representative of the views held by the broader community.<sup>10</sup>

<sup>5</sup> The Gympie Times, “Autopsy rules out Hendra as cause of death” 27 August 2015, <http://www.gympietimes.com.au/news/autopsy-rules-out-hendra-vaccine-link/2754014/>, accessed 20 April 2016.

<sup>6</sup> Brown, Jo; Broderick, Amanda J & Lee, Nick (2007), Word of Mouth Communication within online communities: Conceptualizing the online social network, *Journal of Interactive Marketing*, 21 (3), at 2.

Lee, Mira & Youn, Seanmi (2009), Electronic Word of Mouth (eWOM): How eWOM platforms influence consumer product judgment *International Journal of Advertising*, 28(3), 473-499.

Gunn, Rebecca, (2015) Factors that Motivate and Barriers that Hinder Electronic Word of Mouth (eWOM) on User-Generated Content (UGC) Sites Relating Travel Experiences, Doctorial Dissertation, Anderson University, at 1.

Cheung, Man Yee; Luo, Chuan; Sia, Choan Liin; Chen, Huaping (2009), Credibility of Electronic Word of Mouth: Informational and Normative Determinants of On-line Consumer Recommendations *International Journal of Electronic Commerce*, 13(4), at 9.

<sup>7</sup> Ibid.

<sup>8</sup> Moe, Wendy W; Schweidel, David A & Trusa, (2011) Michael What Influences Customers’ Online Comments, *MIT Sloan Management Review* 53(1), 14-16, at 16.

<sup>9</sup> Ibid, at 15, 16.

<sup>10</sup> Ibid, at 15, 16.

It appears in this instance that the “vocal minority” has received a disproportionate degree of attention on social media and other online platforms which has been remarkable pervasive.

### 2.3 Impact of allowing horses to remain unvaccinated

The practical consequences of not vaccinating horses are many and serious. There is a known and serious risk of injury or death to both horses and people. Although infection is not common, the mortality rate for the HeV in humans is 57%. If a vaccine were developed for any other (albeit more common) disease with such a high mortality rate, vaccination is likely to be mandatory. So where one is available and safe for use in horses, has demonstrated efficacy and can help prevent transmission to humans (where no current human vaccination exists) it begs the question why the HeV vaccination is not taken more seriously in horses?

Furthermore, HeV is categorised as a “BSL-4” virus (Bio-safety Level 4 - the same as Ebola Virus) and is considered by the US Centers for Disease Control and Prevention to be a Category 3 bioterrorism agent or pathogen. Surely as a matter of public policy any measure to reduce infection risk to such a serious zoonotic pathogen should be adopted.

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

#### 3.1 Risk of HeV infection

Although HeV infection in horses is relatively rare and the risk of exposure to HeV for the general public is relatively low, this is not the case for veterinarians and their staff. The infective dose required to contract the disease is presently unknown. Vets are at the frontline of diagnosis and treatment of sick horses and regularly perform invasive veterinary procedures that potentially involve a high level of contact with blood, tissue, mucous membranes and body fluids. A number of high risk procedures are regularly performed by TVS vets (assisted by nursing staff), for example:

- horse dentistry<sup>11</sup> which involves sedation of a (often fractious/nervous) horse, tooth extraction, use of power tools to file/shape teeth which generates aerosolised material (saliva and blood) and fine tooth particles;
- endoscopy<sup>12</sup> which involves passing a tube down the airway or alimentary canal of a sedated horse with associated exposure to saliva, nasal and nasopharyngeal secretions and respiratory fluids;
- horse surgery<sup>13</sup> with significant exposures to blood, tissues, mucous membranes and other body fluids; and
- reproductive procedures<sup>14</sup> such as ultrasounds to scan for pregnancy through the rectum, inseminations with chilled or frozen semen and flushing of embryos from donor mares with significant exposure to body excretions.

The HeV thus creates a serious health risks for veterinary professionals<sup>15</sup> and requires veterinarians to implement stringent risk management practices.

#### 3.2 Delay in diagnosis of HeV

Unlike other diseases where a diagnosis can be made quickly and efficiently based on presentation of a typical set of symptoms, diagnosis of HeV is problematic as an infected horse is asymptomatic in the preclinical phase when they can still shed the virus<sup>16</sup> and can subsequently present with any number or a

<sup>11</sup> 500-600 dentals are performed by TVS each year.

<sup>12</sup> Approximately 40 procedures are performed by TVS each year.

<sup>13</sup> Approximately 200 surgeries are performed each year at TVS.

<sup>14</sup> This generates approximately 300-400 horse nights in the TVS equine hospital annually.

<sup>15</sup> To a lesser extent their family members are also exposed eg through washing of work uniforms that have come into contact with contaminated body fluids, or through close physical or sexual contact with an affected individual. Queensland Health, *Communicable Disease Control Guidance – Hendra Virus Infection* <https://www.health.qld.gov.au/cdcg/index/hendra.asp> date accessed 20 April 2016.

<sup>16</sup> The incubation period in horses appears to be 5 – 16 days (but could be up to 31 days). For public health purposes, horses are considered potentially infectious from 72 hours prior to onset of symptoms until death (by disease or euthanasia) and safe disposal of the carcass has

combination of different clinical symptoms.<sup>17</sup> Thus the disease cannot be diagnosed based on symptoms alone, but relies on a blood or swab exclusion test conducted by Queensland Biosecurity. Consequently any horse that presents for treatment regardless of whether it is well or unwell must be considered as a potential HeV exposure risk. Testing is often a protracted process as it requires sending samples to Brisbane (some 2500km from our Weipa clinic and approximately 1500 km from the other clinics). The laboratory requires that samples are received by 2pm on weekdays. The laboratory is closed on weekends and public holidays. Consequently, if a suspected case occurs on a Thursday afternoon, through to Sunday evening, samples are collected, but cannot be sent to the laboratory until Monday morning with a turnaround for results the following Tuesday evening. The practical consequences of this are that the horse cannot be admitted to hospital and treatment is limited to that which is minimally invasive in the field. The delay in rendering intensive treatment at a horse hospital facility often results in the deteriorating condition in the animal, which is distressing for both the animal and the owner.

Ultimately, a horse owner can avoid such limitations or delay in the treatment of their animal through vaccination against HeV. If they decline to vaccinate, they must accept that there will be a limit to the treatment options that a vet can undertake safely without risk to themselves, their nursing staff and the owner whilst waiting for the exclusion test results.

To date TVS has performed approximately 80 HeV exclusion tests. A further argument in favour of vaccination is that exclusion testing is not feasible practically or financially for every horse as there is only one laboratory in Queensland with testing capability. The laboratory would be overwhelmed if vets in order to protect themselves, their staff and horse owners had to treat every horse as a suspected HeV case and accordingly request an exclusion test. Use of the vaccine which has proven not only safe, but efficacious avoids such an absurd and costly situation.

### 3.3 Who incurs the costs and receives the benefits from each risk mitigation option?

The risk of contracting HeV can be reduced through a number of mitigation measures:

- a. HeV Vaccination;
- b. stringent personal hygiene; and
- c. donning of Personal Protective Equipment (PPE).

Ultimately the cost of vaccination is borne by the client. The cost of vaccination with HeV Equivac® (the initial dose, microchipping, booster and subsequent doses) at TVS is \$100 plus travel. In the scheme of things this comparatively low relative to the initial and ongoing costs of horse ownership<sup>18</sup>, yet the benefits of vaccination to the horse, the owner and people who come into contact with the animal are significant. It is suggested that the majority of horses on the eastern sea board (where all outbreaks of HeV have occurred) are a luxury item, rather than a necessity. That is to say, it is suggested that most horse owners on the eastern seaboard are not dependent on their horses as their primary source of income, but choose to own horses for

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been completed. It is unknown whether horses recovered from illness remain infectious, can later become infectious again, or are capable of permanently clearing the virus. Queensland Health, *Communicable Disease Control Guidance – Hendra Virus Infection*

<https://www.health.qld.gov.au/cdcg/index/hendra.asp>, date accessed 20 April 2016.

<sup>17</sup> "There are no pathognomonic signs that define HeV infection in horses. Horses infected with HeV have shown variable and sometimes vague clinical signs" including acute illness, high temperature, increased heart rate, depression, discomfort evidenced by shifting weight between legs or rapid deterioration, as well as respiratory signs such as pulmonary oedema and congestion, respiratory distress, terminal nasal discharge and neurological signs such as a wobbly gait progressing to ataxia, altered consciousness, head tilting, muscle twitching, urinary incontinence, facial paralysis, opisthotonus, seizures to name but a few, Department of Agriculture, Fisheries and Forestry, Biosecurity Queensland, *Guidelines for veterinarians handling potential Hendra virus infection in horses*, at 13,

[https://www.daf.qld.gov.au/\\_data/assets/pdf\\_file/0005/126770/2913\\_Guidelines-for-veterinarians-handling-potential-Hendra-virus-infection-in-horses-V5.1.pdf](https://www.daf.qld.gov.au/_data/assets/pdf_file/0005/126770/2913_Guidelines-for-veterinarians-handling-potential-Hendra-virus-infection-in-horses-V5.1.pdf), accessed 20/4/2016.

<sup>18</sup> The costs of horse ownership include purchase price, feed, agistment, other standard vaccinations, worming, veterinarian fees, medication, farriers costs, tack, riding lessons and competitions.

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other reasons. As such the costs of vaccination should be understood and budgeted for as part of the cost of owning and maintaining a healthy horse.

Contrary to widespread public opinion, the vaccination process is not a means of generating exorbitant or even significant income for veterinary practices. The price for the initial dose, boosters and microchipping have been set to ensure they are affordable for the majority of horse clients (many of whom it is recognised have multiple horses).

When managing a workplace health and safety risk, the costs associated with control measures including time, effort and money are just one group of factors to consider when determining the best mitigation option. Although the cost of controlling a risk may be taken into account in determining what is reasonably practicable, it cannot and should not be used as a reason for not doing anything. The greater the likelihood of a hazard occurring and/or the greater the harm that could result if the hazard or risk did eventuate, the less weight should be given to the cost of controlling the hazard or risk as an excuse for not undertaking such mitigation. How much is a human life worth? The HeV vaccine for horses is available and is the single most effective way of reducing the risk of HeV infection in horses and provides a workplace safety and public health benefit. As such it should be the principal defence against HeV transmission through mandatory vaccination.

Regarding PPE, TVS believes that while safety precautions should be taken during any interaction with a horse, the donning of full PPE every time staff visit a horse is just not practical or economically viable.

The cost of PPE used when vets treat an unvaccinated horse are borne by the client. In suspected HeV cases the vet will request all people having contact with the horse wear full PPE, not just the vet. Thus it is not just the vet who obtains the protective benefit of this measure.

It is to be noted that some of these costs can be defrayed through the Queensland Government PPE Rebate Scheme<sup>19</sup> and the subsequent Replenishment Rebate<sup>20</sup>. Availing oneself of this Scheme has been beneficial to the clinic to reduce the costs incurred by clients, but it is not without its administrative difficulties as PPE including gloves, particulate respirator (minimum P2), face shield and eye protection, long sleeve hooded overalls and impervious boots is often purchased from multiple suppliers necessitating submission of multiple invoices for multiple vets with each application- which in itself is costly in terms of time for administrative staff.

The major challenge with PPE however is not the economic cost, but the practicalities of its use and subsequent disposal. These include heat stress due to the heat and high humidity experienced in tropical Far North Queensland,<sup>21</sup> restricted movement as suits and respirators are cumbersome, an increased risk of needle stick injury, restricted vision, the horse becoming spooked by the PPE, or simply being unable to move quickly enough away from a nervous horse or one thrashing on the ground. PPE failure in terms of tears, fluid strike-through and accidental personal contamination when removing the PPE also reduces its effectiveness. Additionally, use of PPE also contributes to extra time required on farm prolonging potential exposure to HeV. These challenges are exacerbated out in a paddock with rough terrain, or in pouring rain in the middle of the night in a poorly lit environment.

<sup>19</sup> This Scheme assists veterinary practices to offset the cost of eligible PPE for use by vets in the testing of suspect HeV cases. In the first instance a Start-up Rebate of up to \$250 is available to assist eligible veterinary practices with the initial purchase of prescribed PPE, for each vet employed by a practice.

<sup>20</sup> A rebate of \$250 is available for the purchase of prescribed PPE after an approved test of a suspected HeV infection sample has been completed.

<sup>21</sup> This is a significant difficulty as the Queensland Workplace Health and Safety legislation requires that *inter alia* PPE be reasonably comfortable for the user to wear- this is not the case with impervious overalls/suits when used in direct sunlight. Regular hydration, scheduling work times to avoid the hottest part of the day and frequent rest breaks in cool areas are not practical measures in the case of a potential HeV outbreak where such measures would necessitate repeated donning and removal of PPE, dramatically increasing the risk of inadvertent contamination when unsuited, and where time is of the essence work cannot be scheduled to suit the physical comfort of the vet.

It is an unrealistic argument that good hygiene and PPE could be expected to prevent all contact with body fluid/tissues and be the sole protection measure that vets take to protect themselves and others from the risk of HeV infection.

Furthermore, imagine if veterinarians, nurses and other staff were required to don PPE for every interaction with a sick horse. In a specialist horse hospital the intensity of treatment provided at a high level for example in the cases of a severe colic with surgery, or round the clock treatment and nursing care of a sick foal requiring ventilation to breath, stomach tubing to feed, urinary catheterisation and enemas all of which are invasive procedures, carries a high risk of exposure to body fluids. Also consider other staff who subsequently enter the theatre or stables to clean them and the equipment used during treatments. Should they also be expected to don full PPE as a means of protecting themselves? Are clients likely to be willing and could they reasonably be expected to accept the cost of multiple PPE suits for every treatment, when vaccination is a much cheaper, practical and effective option? Think also of the environmental cost of the use of this additional PPE.

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

##### **4.1 Risk mitigation policy at TVS**

In response to advice from Equine Veterinarians Australia (EVA) regarding risk mitigation procedures, the real risk of prosecution under workplace health and safety legislation and in consultation with the local community<sup>22</sup>, TVS has developed and implemented (as of 1 December 2014) the following policy regarding the treatment of unvaccinated horses:

- a. Routine examinations on well, unvaccinated horses (dental treatments, rectal examinations, rectal ultrasounds, radiology etc) will not be performed unless HeV vaccination is performed at, or prior to the routine examination or treatment.
- b. Sick, unvaccinated horses will be charged a higher examination fee that is in line with the costs of personal protective equipment and the additional time required in "suiting up" and decontaminating. Owners may also be charged for the costs of an exclusion test (including packaging and shipping of the sample to Brisbane).
- c. Sick, unvaccinated horses presented for emergencies may require exclusion testing prior to any invasive or risk associated treatment being provided.
- d. Sick, unvaccinated horses will not be admitted to hospital until there is a negative exclusion test. Treatment will be limited to that deemed necessary for the animal's welfare and will not include invasive or diagnostic procedures or therapies.
- e. Admission of routine cases to hospital (horses for bandage changes, reproductive cases, AI, ET) will only be possible if HeV vaccination is implemented at or before admission to hospital.

Bringing an unvaccinated horse into the horse hospital could have potentially catastrophic consequences, not only for the horse, owner and vet staff. If a case is confirmed, this would necessitate quarantining the hospital for up to thirty (30) days along with the attached clinic, and cattle facility, which would decimate the business. There is no way to insure the business against such an adverse event.

##### **4.2 Impact of implementation of TVS policy - response proportionate to consequences**

Prior to implementation of the policy only a minority of horse clients elected to vaccinate their horses. Subsequent to its introduction the vast majority of clients have accepted it and whilst they don't appreciate having to bear the cost of an additional series of vaccinations, they have acted responsibly to vaccinate their

<sup>22</sup> Consultation with the community has taken the form of evening workshops outlining our policy and rationale behind it, email distributions, verbal communications with clients, advertorials in local newspapers, radio interviews, publication of flyers and visits by vets to events and special interest groups including poly clubs, agricultural show society, breed society meetings and race meeting organising committees.

horses. With only limited criticism, the majority of horse owners recognise vaccination as a proportionate response and understand that this has been implemented to mitigate the risk of infection not only for vets attending their property, but also in the interest of the horse and horse owners.

A very small number of horse clients have had strong objections and the TVS vets have made themselves available to these individual clients for (at times lengthy) discussions, at no cost to the clients. As a result only two (2) clients based on the Atherton Tablelands have challenged the vaccination policy and chosen to leave the practice. In Charters Towers a larger number of clients have elected to no longer use the services of TVS, but most of these used the practice only for sporadic, rather than regular equine work.

The cost of vaccination is vastly smaller than the cost of a HeV outbreak and the potential consequences such as:

- a. loss of human life;
- b. permanent disablement;
- c. loss of a valuable animal/s;
- d. physical discomfort to an affected animal;
- e. distress to the animal and owner; and
- f. cost of fines and sanctions imposed as a result of prosecution by WHS for any potential breach of the duty of care to mitigate risk- applicable to both vets and owners of affected properties.

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

### **6. Impact of WHS actions on the decision by veterinarians not to attend unvaccinated horses and results of previous WHS HeV investigations where there have been human infections**

#### **5.1/6.1 The decision of vets not to attend or treat unvaccinated horses**

The *Animal Care and Protection Act 2001* (Qld) imposes an obligation on vets to provide basic first aid and pain relief to any sick animal.

It is necessary to make clear that the TVS and NQEC practices still attend and treat unvaccinated horses. Staff however, will not perform invasive procedures on a sick horse before receiving results of an exclusion test, therefore limiting the treatment options available for an animal. At no stage has our policy been to refuse to attend or provide basic first aid treatment for an unvaccinated horse.

As a result of concern about the prevalence of HeV outbreaks in Far North Queensland and perhaps also a consequence of the prosecution of veterinarians by WHS and the failure of all horse owners to vaccinate their animals, are that there are fewer veterinary practices in the region that will treat horses (irrespective of their HeV vaccination status). It is therefore not a decision by vets not to treat unvaccinated horses, but a decision of many practices not to offer equine services at all. While we cannot claim to have intimate knowledge of why other practices have made these decisions, it is our observation that in general, most practices perform less large animal work over time and many practices that were previously mixed practices ultimately become small animal practices and this trend existed prior to Hendra virus vaccine.

#### **6.2 Impact of previous WHS HeV investigations where there have been human infections**

The current prosecution of three (3) Queensland vets under section 28 of the *Workplace Health and Safety Act 2011* (Qld) for alleged failures to take reasonable care of the health and safety of themselves, and others, while carrying out their duties has caused significant concern amongst the veterinarians and practice owners of TVS. These proceedings have highlighted the risk equine vets face in the performance of their work and made all staff more vigilant in applying stringent hygiene and risk mitigation procedures and following TVS policy in every instance of a sick horse.

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## 7. Additional comments

### 7.1 Relevant legislative and regulatory framework

A number of acts, regulations and codes of conduct apply to the veterinary profession when dealing with mitigation of the risks associated with HeV.

The Queensland *Workplace Health and Safety Act 2011*, associated regulations<sup>23</sup> and codes of practice<sup>24</sup> require a person with a health and safety duty arising from the conduct of their work to eliminate the risks to health and safety so far as is reasonably practicable and, if not reasonably practicable, to minimise those risks so far as is reasonably practicable. In the context of potential HeV infection there are no mandatory practice standards so the hierarchy of controls in deciding what is reasonably practicable to protect people from harm requires consideration and weighing of all relevant matters is left almost entirely to vet practices/individual vets. These factors include the likelihood of a horse being affected by HeV, the degree of harm that might result from exposure to a horse with HeV and the availability of effective and reasonably practicable controls to eliminate or minimise this risk for example vaccination status of the animal, donning of PPE and limiting treatment to non-invasive procedures in an unvaccinated horse prior to exclusion tests confirming HeV negative status.

The vet's duty reflects the degree of influence or control they have in relation to eliminating or minimising the exposure to the HeV risk. Despite having a health and safety duty to *inter alia* owners/handlers assisting vets where a suspected HeV case exists, the vet is not always able to compel these people to wear PPE in what is often a highly charged and emotional situation. This places vets in an uncomfortable position and potentially exposes them to prosecution/liability under WHS legislation.

### 7.2 Legal confusion and contradictions

The multitude of regulatory agencies,<sup>25</sup> regulations, codes of conduct and legislation that govern workplace safety practices, infection control mechanisms and professionals conduct have created a situation where there is confusion amongst the veterinary profession, particularly with respect to apparent contradictions in procedure and obligations required of vets.

For example a vet's duty of confidentiality to their client under the *Veterinary Surgeons Act 1936* (Qld) and professional standards guidelines conflicts with the *Biosecurity Act 2014* (Qld) and *Workplace Health and Safety Act 2011* (Qld) obligations to minimize infection risk to others which might reasonably require the notification of owners of other horses at the property, and owners/occupiers of neighbouring properties even before confirmation of a HeV diagnosis. Which duty is the overriding one? Arguably the duty that is in the interest of protecting public health prevails over the professional niceties of client confidentiality- but the conflict remains and opens the vet to potential liability under professional standards legislation or in tort if the HeV exclusion test is negative and the owner sustains damage (for example to their business or reputation).

### 7.3 Concluding remarks

By making the decision to not vaccinate, horse owners must understand that they are taking a gamble and must be prepared for the possible consequences. It is not reasonable for owners to expect others to put themselves at risk because of their decision to not vaccinate, irrespective of their rationale.

TVS has an obligation to its clients and staff to protect and advise them on the best way of preventing, treating and limiting the spread of disease in horses and people. Vaccination is the single most effective way

<sup>23</sup> *Workplace Health and Safety Regulations 2011* (Qld).

<sup>24</sup> *Workplace Health and Safety Code of Practice- How to manage work health and safety risks* (2007).

<sup>25</sup> Biosecurity Queensland, Queensland Health, Queensland Department of Primary Industries, Queensland Workplace Health and Safety, Veterinary Surgeons Board of Queensland, Equine Veterinarians Australia and the Australian Veterinary Association.

of reducing the risk of HeV infection in horses and subsequent transmission to humans (and other animals) and provides a public health and workplace health and safety benefit. Widespread uptake of the horse vaccine has the potential to significantly reduce the number and risk of human exposures as well as the economic costs of this disease.

If the financial cost of this vaccination is truly a barrier for all horses to be vaccinated then the introduction of a government subsidy/rebate for the HeV vaccination may be worth consideration.



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## References

### Journal Articles

1. Brown, Jo; Broderick, Amanda J & Lee, Nick (2007) Word of Mouth Communication within online communities: Conceptualizing the online social network, *Journal of Interactive Marketing* 21 (3), 2
2. Cheung, Man Yee; Luo, Chuan; Sia, Choan Liin; Chen, Huaping (2009) Credibility of Electronic Word of Mouth: Informational and Normative Determinants of On-line Consumer Recommendations *International Journal of Electronic Commerce* 13(4), 9
3. Gunn, Rebecca, (2015) Factors that Motivate and Barriers that Hinder Electronic Word of Mouth (eWOM) on User-Generated Content (UGC) Sites Relating Travel Experiences, Doctorial Dissertation, Anderson University, page 1
4. Lee, Mira & Youn, Seanmi (2009) Electronic Word of Mouth (eWOM): How eWOM platforms influence consumer product judgment *International Journal of Advertising* 28(3), 473-499
5. Moe, Wendy W; Schweidel, David A & Trusa, (2011) Michael What Influences Customers' Online Comments, *MIT Sloan Management Review* 53(1), 14-16,

### Other Publications

1. Australian Veterinary Association, *Equivac HeV vaccine for horses*, [http://www.ava.com.au/sites/default/files/AVA\\_website/pdfs/Equivac%20HeV%20fact%20sheet\\_about%20Equivac%20HeV%20vaccine%20for%20horses%5B1%5D.pdf](http://www.ava.com.au/sites/default/files/AVA_website/pdfs/Equivac%20HeV%20fact%20sheet_about%20Equivac%20HeV%20vaccine%20for%20horses%5B1%5D.pdf), accessed 20 April 2016
2. Department of Agriculture Fisheries and Forestry, Biosecurity Queensland, *Guidelines for veterinarians handling potential Hendra virus infection in horses V.4.1* (2011), [http://www.dpi.qld.gov.au/4790\\_13371.htm](http://www.dpi.qld.gov.au/4790_13371.htm), accessed 20 April 2016
3. Department of Agriculture Fisheries and Forestry, *Hendra Virus Incident Summary*, <http://www.daff.qld.gov.au/animal-industries/animal-health-and-diseases/a-z-list/hendra-virus/general-information/what-is-hendra-virus>, accessed 20 April 2016
4. Department of Justice and Attorney-General, Workplace Health and Safety Queensland, *Hendra virus information for horse properties*, [http://www.justice.qld.gov.au/\\_data/assets/pdf\\_file/0015/160071/hendra-virus-information-for-horse-properties-ekka.pdf](http://www.justice.qld.gov.au/_data/assets/pdf_file/0015/160071/hendra-virus-information-for-horse-properties-ekka.pdf), accessed 20 April 2016
5. El Saadi D, Field H, Thompson F, Reid P, Wilson J, Coward P, Donohue S, Ailworth A, Appuhamy R, Nelson K, (2011), *Hendra Virus Infection Prevention Advice*, Hendra Virus Interagency Technical Working Group
6. Queensland Health, Hendra Virus Interagency Technical Working Group Biosecurity Queensland, Australian Veterinary Association, Queensland Health, Workplace Health & Safety Queensland, *Hendra Virus Infection Prevention Advice*, October 2014, <https://www.health.qld.gov.au/ph/documents/cdb/hev-inf-prev-adv.pdf>, accessed 13 April 2016
7. Queensland Health, *Communicable Disease Control Guidance – Hendra Virus Infection*, <https://www.health.qld.gov.au/cdcg/index/hendra.asp>, accessed 20 April 2016
8. Queensland Health, *Queensland Health Communicable Disease Control Guide- Hendra Virus Infection*, <https://www.health.qld.gov.au/cdcg/index/hendra.asp>, accessed 20 April 2016
9. Tableland Veterinary Service, *Hendra Virus Vaccination Policy*, implemented 1 December 2014.
10. Workplace Health and Safety Queensland, *Code of Practice- How to manage work health and safety risks* (2007)
11. Workplace Health and Safety Queensland, *Topic: Hendra virus infection* (2010), [http://access.health.qld.gov.au/hid/InfectionsandParasites/ViralInfections/hendraVirusInfection\\_fs.asp](http://access.health.qld.gov.au/hid/InfectionsandParasites/ViralInfections/hendraVirusInfection_fs.asp), accessed 20 April 2016

### Legislation and Regulations

1. *Animal Care and Protection Act 2001 (Qld)*
2. *Biosecurity Act 2014 (Qld)*
3. *Workplace Health and Safety Act 2011 (Qld)*
4. *Workplace Health and Safety Regulations 2011 (Qld)*
5. *Veterinary Surgeons Act 1936*

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