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### **Submission – Qld Parliament Hendra Vaccine Inquiry**

I have been an equine veterinarian for 17 years. I started a veterinary practice in Beaudesert (1hr south of Brisbane) 13 years ago and now employ 20 staff.

I would like to address some of the terms of reference.

Vaccine safety:

The vaccine has been administered to all horses owned by the clinic partners (20-40 pregnant mares per year and all foals). We have not witnessed any vaccine reactions in our own horses. We have also not seen any severe vaccine reactions in any of the client owned horses that we have vaccinated since its release.

We have seen two moderate cases of urticaria (hives), one in a stallion and one in a gelding. This resolved quickly following administration of an antihistamine. These reactions were reported to the manufacturer by us, and it was confirmed that this was passed by them to the regulator. The same horses have been vaccinated several times since then without negative effects.

Our practice has administered 6,279 doses of HeV vaccine. We regard the vaccine as very safe following this experience. This was obviously also the conclusion reached by the APVMA, being a very thorough and stringent regulator well versed in the scientific principles involved.

Risk, Cost and Benefit:

**All of the risks associated with HeV are very well controlled by vaccination. All trial evidence and field data available has established this fact.**

The risks associated with HeV infection is borne by the

- The horse's owner
- Anyone who comes in contact with that horse.

In the first instance: cost, risk and benefit are all borne and enjoyed by the owner.

The second category is a real problem. Why? Because the cost is still being borne by the owner, but the benefits of the horse being vaccinated extend beyond the owner to everybody else who contacts that horse. This requires a level of concern from the horse owner towards their fellow man, and a sense of responsibility for the damage that a decision 'not to vaccinate' may cause to others.

It is an increasing trend in our society to try to dissociate rights and responsibilities. This springs from a self centered and repugnant desire to have all of the rights that can be claimed, but none of the responsibilities. However, this association of rights and responsibilities underpins our culture's well developed concept of justice. For example, an individual has the right to drink alcohol to excess if they wish, but our laws prevent him from combining that decision with driving, as the responsibility to not harm his fellow man is self evident. An individual has the right to smoke cigarettes, but they have an associated responsibility not to share the smoking associated risks with the diners at the next table.

In the same way, a horse owner who chooses not to vaccinate their horse would be well within their rights providing they were happy to take responsibility for the increased level of risk to which they are subjecting everybody else.

If vaccination is not mandatory (i.e. the current state), and an owner must either choose to vaccinate, or choose not to vaccinate and be absolutely prepared to meet their responsibilities for all of the negative outcomes associated with that decision. There is no doubt in the mind of any scientifically minded person who is in possession of the relevant data that **all** of the HeV positive cases are now completely preventable by vaccination.

What are these potential negative outcomes that a decision 'not to vaccinate' can produce, and who suffers as a result (i.e. what is the responsibility that resides with this 'right'?)

The Horse –

Unfortunately the animal has no input in the decision to be vaccinated, often leading to a series of poor animal welfare outcomes. Infection itself is obviously a poor outcome and will lead to death by the disease process or by euthanasia. Unnecessary suffering and death by some unrelated disease process is more common, as delays waiting for a HeV PCR test can be lengthy (a test taken at 1pm on Monday in Beaudesert will not be returned until approx 6pm Tues) and when weekends and public holidays are taken into account the delay can be many days. Our clinic has overseen the progression of disease in many horses while awaiting test results. Several horses have died unnecessarily as a result of this delay and many of these have returned a negative HeV result (not all of our tested horses have been negative, unfortunately). The risk mitigation strategies proposed by QLD OWHS do nothing to limit this animal suffering.

The QLD State Gov and taxpayer –

The government foots the bill for the cleanup operation after a positive case event. The state government also pays for a full OWHS investigation in every case event and also uses resources perusing prosecutions, all of which requires finance. These two facets of expenditure have cost the government many millions of dollars. I believe that it is in fact a very important question that the inquiry needs to have answered by the relevant departments: What is the total government cost of HeV. It should be noted again, that practically all of these costs are now completely preventable. It seems

ludicrous that the average tax payer should be copping the massive financial fallout for every horse owner who elects to run the gauntlet of retaining unvaccinated horses and gets caught with a case. Non vaccinating horse owners want the personal right to not vaccinate, but are they happy to personally face these consequences and cleanup costs? No, they are not.

## Business –

Any business that is exposed to a horse that is HeV positive will be negatively affected. The individual workers that have seen the affected horse will face massive mental and emotional stress. Many are incapable of working in the short term (having a few weeks with their family while they wait to die, which is exactly what has happened more than once) and a significant number that have survived these incidents have historically left equine related employment following these events.

If the business has a facility where the HeV positive horse is seen, this will be quarantined for 32 days in most cases (double the longest demonstrated incubation period) by state authorities. The financial result can be crippling for a business faced with this halt to trading, and the negative stigma often lasts much longer than the official quarantine period. There is no business interruption insurance available that will nullify this risk. I am yet to meet an owner of unvaccinated horses that is happy to be responsible for the costs incurred if a positive HeV case decimates someone else's business.

## Individuals –

Any person that is exposed to a HeV positive horse has every right to feel aggrieved that their safety has been severely compromised by a horse owner who decided not to vaccinate their horse. There are several reasons why the concept of PPE performing a comparable function to vaccination is absolute fiction.

It is established fact that infected horses excrete virus for 2-3 days before they show any clinical signs. During this time, these unprotected humans and other horses are exposed to virus particles, and there has already been one person absolutely confirmed by government investigation as being infected during this preclinical phase (Vet nurse at Redlands, May 2008).

The risk mitigation strategies proposed by OWHS obviously do not prevent contact between people and the fluids of preclinical horses (for example, the body fluid contact created every single time a human puts a bit in a horse's mouth before riding). These strategies are a valiant attempt to reduce risk and absolutely should not be weakened in any way. However, they are a very poor substitute for vaccination as many people can become exposed well before the horse exhibits any clinical signs that would dictate protective intervention.

The PPE that is recommended for field veterinarians is not regarded by expert virologists as fully protective and they wear completely different equipment when dealing with HeV in their labs. The impervious suits with respirators issued to virologists at AAHL when dealing with a positive HeV horse are vastly superior to what is available in the field.



The limitations of our 'PPE' is further elucidated by the experiences of the medical profession with the 2014 West Africa Ebola outbreak, where over **four hundred** health care workers from the local and international community contracted Ebola themselves, despite extensive training in the use of PPE identical to what is made available to a field veterinarian and an untrained horse owner. In this human medical field, where the Ebola 'on the ground' reality did not match OWS guideline predictions, there is also a glaring inconsistency between laboratory staff guidelines (respirators) and ward staff guidelines (masks), and there was the proven frequent inadvertent breaches of protocol that form an unfortunate part of human nature, with the result that many medical staff paid the ultimate price (<https://theconversation.com/how-are-nurses-becoming-infected-with-ebola-32873>).

Further evidence of the imperfection of the 'PPE' that is being relied on was evident during the cleanup procedure following a positive HeV case at Cainbale Creek in 2011. As part of the blood testing conducted on the positive property by a government veterinarian, she was unlucky enough to sustain a needle stab injury through her 'PPE' into her hand and was subsequently rushed off site. This unfortunate incident highlights limitations even in trained professional staff. What field vets are often faced with is trying to train a horse owner to correctly don and doff protective clothing and equipment with limited available time, often in the dark or in front of a car's headlights, and sometimes the person even has a beard rendering the P2 mask useless. In an afterhours situation on a property visit, it would be very rare that a second trained vet or nurse would be available.

I have attempted to perform a foaling in a mare that had a fever and was unvaccinated. The ability to deliver a foal without coming into contact with copious fluids turned out to be impossible despite my best efforts, and we have since reviewed our practice guidelines to reflect this unfortunate fact.

The true limitations are actually staggering, and the process is often viewed with cynicism quite rightly by the owner/their worker/neighbour holding the horse, who has almost invariably been in extensive contact with the horse without protection for an extended period prior to even contacting the vet.

Thus, having exercised the 'right' not to vaccinate, a decision that may lead to someone else's horrible death...are these owners willing to bear the responsibility of that preventable death? No, they aren't. All people electing not to vaccinate their horses fit completely within the "rights without responsibilities" camp.

If OWS took their job of protecting workers (and everyone else) seriously they would declare openly the obvious truth... that vaccination would resolve the issues faced, and that any owner electing not to vaccinate is the only logical person that could reasonably face prosecution for the risks that everyone is then subjected to. As there are active prosecutions of veterinary employees before the courts, I will not comment on any actual cases. However, it is vitally important to highlight that the whole process of blaming any individual for increasing the risk HeV risk **after** an event has occurred is an absolute obfuscation of true responsibility. It is effectively a form of victim blaming, and has tipped even more veterinary practices over the edge to become completely "vaccinated horses only" clinics.

At this moment in time, our veterinary practice still does attend some sick unvaccinated horses. It should be noted that this is an absolutely horrible visit to attend, and a time might come in the future

where we can no longer offer this service. Attending a sick unvaccinated horse is effectively a lose/lose situation.

- If the horse returns a negative result to HeV: the client is very unhappy that you did not provide a full range of diagnostic and treatment options while waiting tests results. They are also unhappy that the test was ever taken, because they are routinely certain in their own mind that their horse does not have HeV, despite having no clinical experience with HeV, no knowledge or training pertaining to virology or infectious diseases in any way. The hostility of the client gradually grows as the delay in test results lengthens and the horse's clinical condition worsens and the veterinarian is frequently bullied, threatened and abused. The veterinarian hates having to watch an animal suffer without proper intervention, as this is not why they became vets in the first place. I have personally seen horses die that could have been saved with more effective treatment, and I find this deeply distressing. However, I am bound to ensure the safety of the lives of my staff first and foremost.
- If the horse returns a positive HeV result: In this case the vet is an even bigger loser. They now face an aggressive investigation by OWS and will be the subject of damaging media scrutiny, often at their homes. They have to tell their family that it is conceivable that they may themselves die from this encounter, and tragically some have done just that, leaving behind a family full of grief for a lost partner or parent.

The job of visiting unvaccinated sick animals has become akin to being asked to clean a toilet. As I have elucidated, it was never a thing that anyone really wanted to do, but now veterinarians have the additional burden of someone with no cleaning experience of their own giving dictatorial directives about how it should be done, and beating those who didn't clean the toilet the way they wanted. Predictably, this has led to even less people wanting to clean toilets.

Many of the issues created by a sick unvaccinated horse are a "public health" issue. DAFF are compelled to respond to these events. However, they do not have enough staff to test all of the suspect cases state wide. This is an image of the DAFF website:



In the weeks following the onset of the OWS prosecutions, some veterinarians that were unable or unwilling to attend unvaccinated horses suggested to callers that they should follow the DAFF site advice and enlist the help of DAFF directly by calling on the numbers listed. Obviously none of the DAFF staff were keen to attend these horses either (as it is a decidedly unpleasant task and I suspect they may have wanted to discourage setting a precedent that they viewed as less than ideal).

The immediate response to this situation was that DAFF simply changed their website appearance in the hope that no one would call them.

### Who to contact if you suspect Hendra virus

If you are a horse owner or carer and suspect Hendra virus infection, contact your local veterinarian immediately.

If Hendra virus infection is confirmed by laboratory testing, we will:

- decide whether the property in question should be quarantined to stop horses moving off the premises and possibly carrying infection with them
- notify Queensland Health, who will coordinate risk assessments and appropriate follow-up for the people involved who may have been exposed to the virus.
- advise Workplace Health and Safety Queensland if the site is considered a worksite.

We will also notify the appropriate professional bodies, including the Australian Veterinary Association and Equine Veterinarians Australia. We will not release private details in these notifications.

If you have human health concerns at any time, you should seek medical advice. Contact your general practitioner, local hospital emergency department or local public health unit if you are concerned about possible exposure of people to

The problem that has developed is that many owners with horses cannot get them tested or treated by *anyone*. This situation was effectively created by government, by the unwillingness to mandate vaccine usage, followed by a misguided desire by OWS to prosecute veterinarians.

It is an untenable and poorly considered suggestion by a couple of owners on social media that vets should be compelled by legislation to attend unvaccinated horses. Most vets never see any horses at all in their career and focus solely on companion animals. Many horse vets focus only on horse dental work, or reproductive work, or surgery, or podiatry, and never see any form of horse outside of that field. Some vets elect to only treat race horses, or only treat stock horses, or only treat horses owned by clients that have not defaulted on invoices. The veterinary surgeons act compels vets only to provide pain relief or euthanasia to any animal that presents at a veterinary facility while a veterinarian is on site at that time. Broadening that compulsion to other things would be completely incapable of being implemented.

DAFF and OWHS have done an extremely good job of producing educational material designed to decrease horse-bat contact and to decrease transmission risk by altering management practices. There can be no doubt that these efforts have had an impact in decreasing the number of horse HeV positive cases.

However, there are two aspects to the current OWHS situation that must be addressed.

1) The requirement to test a horse for HeV and take on all of the associated responsibility for the entire situation if HeV cannot be ruled out. This is patently ridiculous, as due to the variable and often subtle clinical presentation (and even preclinical virus excretion), it is not possible to rule out HeV in ANY CASE, EVER. This would mean testing every horse for HeV, every single time you see one. This is not possible for the vet or the lab. Altering the level at which action is taken to “a reasonable suspicion of HeV” should be considered. This obviously makes it harder for OWHS to attribute blame for in the event of human exposure in a situation where a veterinarian did not suspect HeV, but as we have already established that the Veterinarian is not the person that is responsible for the exposure to HeV (that’s right...the non vaccinating owner is), then this is perfectly reasonable. This is obviously a problem for OWHS investigative people, as they feel the need to hold *someone* accountable in an effort to ‘tighten up’ the exposure to risk, and unfortunately for them they have no jurisdiction over the owner in most circumstances (unless the owner is acting as an employer or an employee at that time).

OWHS are the wrong agency to deal with this. The risk in these situations often doesn’t even qualify as a workplace. Many times the exposure occurs well before there is even a vet in attendance. There is no “workplace” by any definition... there is just a horse and a child. It brings to mind a case (not within our geographical area of practice), where an owner could not find any vet to attend a horse that was showing some of the clinical signs consistent with HeV infection, and after also being refused attendance by DAFF, the owner enlisted the help of a neighbor to attempt to introduce a nasogastric tube into the animal. There were several people who were exposed to large amounts of bodily fluids in this sick, unvaccinated horse. I’m sure this situation and variants of it are repeated frequently all over the state. I’m sure that the only possible preventative for these situations developing is now becoming obvious...vaccination.

2) The prosecution of veterinarians for failing to meet what OWHS has decided is the veterinarian’s responsibilities. I reject their definition what is the vet’s responsibilities are in these circumstances. They have effectively attempted to warp the spirit of the legislation into something that requires the vet that attends to the sick animal into taking all responsibility for the entire situation surrounding a HeV case. Things like ensuring that owners inform their neighbours of risks, trying to train someone in PPE on the spot, trying to make a decision on which cases require a HeV exclusion test prior to treatment in the face of intolerable ambiguity, etc.

It is irrefutable that QLD OWHS has done a great job educating and informing vets in an effort to reduce the risk of HeV infection to people. In the absence of vaccination, I don’t believe that any of their guidelines can be or should be softened. But I have a big problem with their



direction of blame. I have no doubt that ultimately all the responsibility for every HeV positive case and every negative outcome of it lies with:

1. **The Owner**, who willfully placed everyone who contacted that horse in harm's way by not vaccinating their horse. In the event of HeV positive cases, criminal and civil proceedings should be brought against owners for the outcomes that their decision created. It is self evident that this is the only prosecution that could be made where natural justice is served.
2. **The State Government**, who *allowed* owners to make the decision that put the community at risk. In the same way that a parent has responsibility for preventing a child from beating their sibling, the government should not stand idle and allow some members of the public to put everyone else's lives and livelihoods in danger. The representatives of OWHS and DAFF should be eternally ashamed for their reluctance to state the truth of the need for compulsory vaccination. Doing the right thing should not be sacrificed for political expediency. There was a question during initial briefing by Mr. Madden asking "...what do you have to say about making the vaccine mandatory..." The answer provided by Dr Crook was oblique: "That is something we have talked about quite regularly. It is not a practice that we have done..."

Although these statements are true, they don't answer the question that was posed. I can only assume that she has never bothered to form a position on the question as she is never directly faced with the situation in the field, or that this answer is the only way a public servant can answer if they value their career. For them to openly say "Of course it should be mandatory, but the government is afraid of the minor negative voter reaction that a mandatory decision may produce, and they fear it might also require some form of government funding, which they are loath to provide."

The economy and human health – HeV on a grander scale:

Could HeV create an even greater threat in the future? How will our decisions today influence that threat? These are questions that require extrapolation from the science that we do have, based on "what if?" and "Is it possible that in the future...?"

This line of consideration has been targeted by the panel's questions already to some degree. Mr Bennett quite rightly asked about mutations. Another example was the question posed by the **Chair**: "**If the husband goes out and catches Hendra Virus, is it possible to spread to other humans as well?**" This is obviously an important consideration in terms of the possible effect on the rest of the non horse owning community and other industries like tourism.

The answer that was given by **Dr Crook**: "**There is no evidence of that at all**" was disingenuous at best, and thoroughly incorrect.



If the question had been “have we seen a case of human-to-human transmission yet in Australia?”, then this would have been an accurate response. But this was not the question posed.

It reminds me of the lessons that can be learned from the British Bovine Spongiform Encephalopathy outbreak and the growing body of evidence in 1990 that eating beef from these cattle was the cause of modified CJD in humans. The advice that was given at that time by the Chief Medical Officer (Sir Donald Acheson) was that “Beef can be eaten safely by everyone...” These types of comments were designed primarily to “dissuade panic” and prevent damage to Britain’s agricultural trade position. The minister of agriculture (John Gummer) then entered British political folklore by posing for photographs while trying to feed a beef burger to his 4 year old daughter. It turns out that there was plenty of argument behind closed doors about the risk to human health, and there was evidence mounting that eating beef was in fact a problem. Of course, it was later completely proven that BSE was the direct cause of CJD. This was finally accepted after a long, detailed and expensive enquiry in 2000 that also found that “*failures of successive administrations had contributed to the catastrophe*”. The episode cost the British tax payer billions, resulted in the slow and terrible death of well over 200 people and changed forever the way the British government assesses risk. One media commentator summarizing the findings wrote “*Civil servants were urged by the BSE inquiry to be less ready to sit on bad news. Ministers, bruised by the experience of BSE and other health disasters such as Salmonella in eggs in the 1990’s, are more open on public health risks. The public now expects the government to be straight with them about the risks*”.

This advice, relating to the absolute need to provide all the available information (even if it is scary), takes us back to the question posed by the chair: **“If the husband goes out and catches Hendra Virus, is it possible to spread to other humans as well?”**

The facts are these:

- Humans infected with Hendra Virus go through a viraemic phase during the disease process when they excrete large amounts of infective virus in their saliva, respiratory secretions, urine and semen. These excreted virus particles are identical in every way to the ones that infected that human in the first place. Although Australia has not yet had a case of this type of transmission, there is absolutely no doubt that human to human transmission is possible.
- As QLD hospital medical staff are well aware of this, human HeV patients are **isolated** and the treating physicians take extreme precautions not to become infected by them.
- Nipah Virus (NiV) in Asia is *almost* identical to HeV and is also maintained in Flying Foxes. As the HeV vaccine is cross protective for NiV, the initial funding for HeV vaccine research at AAHL came from the US military, as presumably they wanted to have an answer available in a situation where NiV may be used as a biological weapon.
- Several HiV outbreaks in Bangladesh have demonstrated direct human to human transmission, with one man spreading the disease to 22 of his caretakers, including his GP.
- It has also been accepted that NiV can infect humans via two other routes (other than human-to-human and animal-to-human)
  1. By direct ingestion when consuming palm date sap (the majority of Bangladesh infections)
  2. By direct skin contact when climbing trees inhabited by flying foxes (Goalandu outbreak).

With minor and reasonable extrapolation, the potential for even worse scenarios than previously seen is obvious. While statements involving the 'that hasn't happened yet' line of answering may be historically accurate, it ignores the fundamental truth. Someone could have pointedly claimed in 2010 that "there is no evidence that HeV has been naturally transmitted to dogs"... which would have been an equally true (but meaningless) statement at that time... as became evident when HeV subsequently did in fact get transmitted to a dog, as science showed it could.

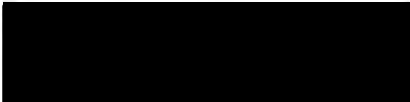
Human HeV cases that survive, do not excrete infective virus after recovery. The person may still encounter health problems (and some even die) several years later as a result of the disease, but this has been shown to be more like a 'reaction', rather than from returning to a viraemic state. Thus the evidence points to recovered humans not being infective to other humans.

The other term of reference I'd like to address is "who benefits from vaccination"

- 1) Horses, which are protected from infection and under-treatment.
- 2) Owners and their families, who are protected from their horses as potential HeV sources.
- 3) Service providers, who can operate without constant fear and without actual HeV infection.
- 4) Event organizers, who can limit the unserviceable liability that a positive case at an event would present.
- 5) The Vaccine manufacturer.

There is a sense in the community that Veterinarians may be promoting this vaccine to increase profits. Although I cannot speak for everyone, I am certain that this is not the main motivating force for veterinarians. Although I respect any business owner's right to make a profit, I have personally chosen to provide the HeV vaccine at a financial loss to my practice. Once payment of my staff wages is taken into account (to administer the vaccine and to do the data entry on the online database) my business makes a small net loss on every vaccine that we administer.

The reality is this: if all horse owners took their responsibility as citizens seriously then no one would be having this discussion, because there would be no HeV cases. It is my sad experience that many individuals cannot be entrusted to make decisions for the benefit of others. As we have seen, even an outwardly healthy horse can excrete this horrific virus, and I believe that it is a travesty that the government has not intervened to mandate that horse owners vaccinate and stop risking the lives of others.



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