UQ VETS Equine Specialist Hospital (UQ VETS ESH) Hendra Virus Policy

The following document is to inform referring veterinarians and their clients of the protocol for admission and treatment of all horses at UQ VETS Equine Specialist Hospital on The University of Queensland Gatton Campus The purpose of this policy is to minimise the risk of Hendra virus infection.

Policy Summary: A horse must either be vaccinated or have had an exclusion test performed In order to be admitted to the Equine Specialist Hosptital. These two avenues are outlined below.

Hendra vaccination

A horse will be deemed to be vaccinated against Hendra virus if it is compliant with current label recommendations for use of the vaccine product registered in Australia (Equivac^{R}HeV). 2017 vaccination recommendations are as per below:-

- Hendra vaccination is defined as **yearly vaccination after a set of three initial doses.**
- The two initial doses are to be administered 21 to 42 days apart and followed by a third dose to be administered 6 months later.
- Based on current evidence, vaccination can be commenced at **four months of age** and protective serum neutralising antibody levels are achieved 21 days after the second initial dose of vaccine and 7 days after the third initial dose;
- a horse will be considered **adequately vaccinated from 3 weeks to 6 months after its second initial dose of vaccine and from 1 week to 1 year after the third initial dose of vaccine**.

Note

- *The University of Queensland supports Hendra vaccination;*
- *Vaccination appears to be the single most effective way of preventing Hendra virus infection in horses.*
- *Vaccination is an important measure to prevent equine infection and, as a consequence, provides a public health and workplace health and safety benefit* [1-5];
- *In vaccine trials, viral shedding was not detected in immunised horses after Hendra virus challenge.*
- *No evidence of Hendra virus replication has been detected in any tissue of vaccinated horses.*

Hendra exclusion testing

Hendra exclusion test is defined as a **negative PCR** performed in the Biosecurity Queensland Coopers Plains Laboratory.

- Based on current evidence, samples that can be submitted for Hendra virus exclusion include blood in an EDTA tube **and** a never frozen nasal swab.
- Because of the incubation period, in order for a non-vaccinated horse to be admitted to the ESH, the above-mentioned samples must have been collected and submitted **less than 48 hours before a scheduled appointment or an emergency referral**.
- After sample collection, non-vaccinated horses must be kept indoors from dusk to dawn until the appointment at the ESH.

Admission of cases to UQ VETS ESH

1. Regular appointments and elective procedures **(including farrier appointments)**
    - All horses scheduled for an appointment at the Equine Specialist Hospital must be vaccinated against Hendra virus or have had a Hendra virus exclusion test performed less than 48 hours before admission (*see definitions above*);
    - Vaccination status of the horse will be verified by UQ VETS ESH staff when any appointment is made.
    - If the horse is not vaccinated against Hendra virus, the policy will be explained in order to obtain the Hendra virus exclusion before the day of the appointment;
    - Upon presentation, compliance with the policy will be ascertained before the horse can be unloaded from the float or truck by verification of the vaccination status of the horse in the Hendra virus vaccination registry or by presentation of the results of the Hendra virus exclusion test.
    - If the horse is not registered in the Hendra virus vaccination registry, the referring veterinarian will be contacted by UQ VETS to ascertain vaccination or exclusion;
    - **If vaccination or Hendra virus exclusion cannot be demonstrated, the horse will not be admitted directly to UQ VETS Equine Specialist Hospital and the following options will apply:**
        - **Option 1:** The horse enters the quarantine facility:
            - **Horses can only be accepted in the quarantine facility Monday to Friday (working days only)**;
            - A physical examination will be performed by personal wearing appropriate personal protective equipment (PPE):
                - If the horse has a normal physical examination, a Hendra virus exclusion test will be performed;
                - If the horse does not have a normal physical examination, the horse will not be accepted in the quarantine facility;
            - In the quarantine facility, **no veterinary care will be provided until the result of the test is known**;
                - If the test is **negative**, the horse will be **accepted** in UQ VETS Equine Specialist Hospital and fully examined the following **working** day;
                - If the test is **positive**, specific recommendations will be made by **Biosecurity Queensland** (*see below*).
            - The horse owner will be responsible for the costs associated with testing (220.55 AUD for EDTA and nasal swab transported directly to Biosecurity Sciences Laboratory) and boarding;
        - **Option 2:** The horse leaves The University of Queensland Gatton Campus:
            - This option will be taken if:
                - The horse arrives **during a weekend or a holiday;**
                - The horse **needs immediate medical attention.**

Please note: Admission of a horse with a Hendra titre level of at least 1/32 or more sampled within the previous month **could be** accepted after discussion with the Equine Internal Medicine Section.

2. After-hours and emergencies
   - Unless a horse is returning to UQ VETS Equine Specialist Hospital for re-examination of a specific condition, prior evaluation by a general practitioner is compulsory and referral must be organised by the referring veterinarian;
   - **All horses referred to UQ VETS Equine Specialist Hospital must be vaccinated against Hendra virus or have had a Hendra virus exclusion test performed less than 48 hours before being admitted** (*see definitions above*);
   - Vaccination status of the horse must be verified when the referral is made. If the horse is not vaccinated against Hendra virus, this policy will be explained in order to obtain the Hendra virus exclusion before admission;
   - Upon presentation, compliance with the policy will be ascertained before the horse can be unloaded from the float or truck by verification of the vaccination status of the horse in the Hendra virus vaccination registry or by presentation of the results of the Hendra virus exclusion test. If the horse is not registered in the Hendra virus vaccination registry, the referring veterinarian will be contacted to ascertain vaccination;
   - **If vaccination or Hendra virus exclusion cannot be demonstrated, the horse will not be admitted to the Equine Specialist Hospital or to the quarantine facility.**

3. Unexpected arrival of a horse at UQ VETS ESH
   - Upon arrival, history will be collected and compliance with the policy will be ascertained before the horse can be unloaded from the float or truck by verification of the vaccination status of the horse in the Hendra virus vaccination registry or by presentation of the results of the Hendra virus exclusion test;
   - **If vaccination or Hendra virus exclusion performed less than 48 hours prior cannot be demonstrated, the horse will not be admitted to UQ VETS Equine Specialist Hospital or to the quarantine facility**.

4. Foals to be examined at UQ VETS ESH
   - Foals from **vaccinated mares** (*see definition*) will be accepted up to the age of **6 months** (after 6 months of age, a foal will have to follow the same rules as an adult horse, *see above*);
   - **If vaccination of the mare or Hendra virus exclusion of both the mare and the foal performed less than 48 hours prior cannot be demonstrated, the foal and the mare will not be admitted to the Equine Specialist Hospital.**
   - **The foal and the mare could be admitted to the quarantine facility**, **unless the foal requires immediate medical attention (which would require transportation to another veterinary hospital)**.

5. Client-owned horses on The University of Queensland Gatton Campus pastures
   - **All horses that will be kept on a pasture at The University of Queensland Gatton campus must be vaccinated** (*see definition above*);
   - If a horse is present on a pasture of The University of Queensland Gatton Campus when the horse is due for its booster, the horse **will** be vaccinated and registered by a veterinarian from the Equine Specialist Hospital.

6. Arrival of equine samples for VLS through UQ VETS Equine Specialist Hospital
   - Upon delivery, history on the case will be collected and compliance with the policy must be ascertained before the sample can be processed by verification of the vaccination status of the horse in the Hendra virus vaccination registry or by presentation of the results of the Hendra virus exclusion test.
   - **If vaccination or Hendra virus exclusion cannot be demonstrated, the sample will not be accepted by the Equine Specialist Hospital.**

General Information regarding Hendra virus

Transmission:-

- The most likely source of Hendra virus exposure and infection in horses is via direct or indirect contact with infected bats.
- Bats tend to sleep in camps during the day and are active at night. Bats are capable of flying considerable distances to feed during the night hours. **The absence of obvious bat activity in a particular area does not exclude the possibility of an equine Hendra virus infection** [3; 6; 7];
- Transmission of Hendra virus from bats to horses is thought to occur via contact with contaminated body fluids (e.g., saliva on discarded fruit) or droplet transmission [3];
- Horse to horse Hendra virus transmission is thought to occur through direct contact with infectious body fluids or indirect contact via contaminated fomites (including human assisted transfer) [3];
- Viral transmission between horses appears to be much more efficient in stabled horses (compared to horses kept at pasture) [6];
- **Human infections have resulted from close contact with infected horses**. Exposure to respiratory tract secretions or during post-mortem examination of infected horses are important in horse-to-human Hendra virus transmission. Bats do not appear to directly infect humans [1];
- **Hendra virus is a fragile enveloped virus and, outside of the host, is very susceptible to increases in temperature and desiccation. Survival of Hendra virus in the environment is short (hours) and the virus is rendered non-infectious by most soaps and detergents** [8; 9]. However, under some circumstances, Hendra virus may be able to survive for longer periods (up to several days). Fomites could therefore pose a Hendra virus transmission risk.

Clinical signs of equine Hendra virus infection:-

- **Horses infected with Hendra virus can show variable and sometimes vague clinical signs and there are no pathognomonic signs of Hendra virus infection in horses**. However, disease is typically acute in onset and rapidly progressive with death of most infected animals occurring with 2 – 3 days of the appearance of clinical signs [3; 6].
- Early clinical signs seen in experimental infections included **depression**, **pyrexia** (note that a fever is not always present at evaluation), **tachycardia** and **discomfort** or **restlessness** (displayed by weight shifting between fore and hind limbs). Unexplained, **sudden death** should be considered a clinical sign of equine Hendra virus infection [3].

If any person has concerns about possible exposure of people to a horse infected with Hendra virus, they should seek medical advice and contact their general practitioner, local hospital emergency department or local public health unit. For general enquiries about Hendra virus infection in humans, call the Queensland Health Hotline on 13 HEALTH (13 43 24 84).

Addresses and contacts

Biosecurity Queensland

Phone: 13 25 23 (business hours) Emergency Animal Disease Watch Hotline 1800 675 888 (anytime)
Website: www.biosecurity.qld.gov.au

Queensland Health

Phone: 13 HEALTH (13 43 25 84) Website: www.health.qld.gov.au Queensland Health public health unit contact details are available at: http://www.health.qld.gov.au/cdcg/contacts.asp

Department of Environment and Heritage Protection

Phone: 13 QGOV (13 74 68) Website: www.ehp.qld.gov.au

References

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