The development, trials and approval processes: 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

Trial approval process and adverse reactions

It appears that the safety of the HeV vaccine has been grossly ovelooked as it is clearly stated in the first minor use permit under Safety, there is a ten fold increase in adverse reactions between the first and second vaccine injection. The safety data listed on the permit states the adverse reaction rate after the first injection was 3.4% at the site of injection which then rose to 34.5% at the time of the second injection. On this data stated by the manufacturer one has to ask why the APVMA did not question the safety of this vaccine to horses, as a ten fold increase in adverse reactions should have raised red flags regarding the safety to horses in using this vaccine. The trial horses were euthanized and therefore we don't know how the reaction rate changed for the prescribed six monthly boosters.

However, privately owned horses are showing an increase in adverse reactions either at the first injection, or with each additional injection. Given the tenfold increase from injection one to injection two, this ever increasing level of adverse reaction for private horses is predictable.

We in the horse community see and hear of this regularly, where horse owners who were once the champion of this vaccination, swear they will never use it again because of the pain, suffering and for some the death or uselessness of their horses for riding. Other owners bite their finger nails in the stress of an upcoming booster, waying up damaging their horse versus access to treatment by a veterinarian.

# **Economic Impacts**

- a. Measurable economic costs of buying the vaccine service from the vet
  - i. If the domestic horse population is estimated to be 800,000, and for every hundred dollars spent with the vet for vaccinations there would be a transfer of funds from horse owners to vets in the magnitude of \$80,000,000. That is to say, in the first year where there are three jabs, a transfer of \$240M from horse owners to vets, if only the charge by the vet was \$100. Subsequent years would see \$160M if all horse remained and there were no new or dead horses.
  - ii. Such amount of money will be extracted from communities where it is currently spent on local business, be that for human needs or other sporting horse activities.
    Given each dollar lost to a community has a multiplier effect, the economic cost to a community will be no small impact on the economic health of communities.
  - iii. For those who can't afford to vaccinate or choose not to vaccinate and leave the sport horse industry, their absence will be felt as fewer participate in horse events, buy less tack and feed, fewer volunteers for the events that attract competitors from out of town. This will permeate through all the interconnected economic links creating a depression.
  - iv. For horses made sick at the time of vaccination, there are more dollars transferred from the horse owner to the vet further leaching unproductive dollars. Unproductive to the horse owner, because it was following the vaccination that the horse became unnecssairly sick. Productive for the vet who now has a new income stream.

v. Proving or disproving the connection to the vacine is difficult and expensive, however, the number of conincidences of horses becoming sick at the time of vaccination, or subsequent to vaccination is strkingling similar. Denial of the damage by vets, still leaves the horse owner with veterinarian debt they may no be able to service.

### b. Subjective costs

- The emotional stress in owning a sick or dying animal has considerable consequences
  - The owner is no longer receiving the pleasure and health benefits derived from riding. In requiring more public or private medical resources, they also reduce the number of able members in a community, which the have to be carried by the remaining members.
  - 2. For parents of children riding, the children have lost the many benefits of riding, looking after a horse or pony.
  - 3. Many parents use horse activities as a way of keeping their kids from hanging out at the mall etc.
    - The social benefit of active kids will have an economic value, however it is difficult to comprehend let alone measure the long term value to the community.
      - i. Kids being active and lower obesity levels
      - ii. Kids learning to be responsible for the care of their animal
      - iii. Kids getting up earlier to ride, muck out, work out at a stud for riding lessons etc.
- 2. Who bears the risks of HeV infection and who incurs the costs and receives the benefits from each risk mitigation option?

## Horse owners

Firstly horse owners bear the risk of acquiring zoonotic diseases from their horses as they typically feed, groom, touch intimately and smooth and ride their horses daily. Hendra virus is but one zoonotic diseases of horses.

### Equine professionals

Vets, farriers, trainers, stock feed delivers and complimentary horse health providers should be following industry standards to:

- Minimize contact, i.e. Don't smooch clients horses
- Have a standardised method to interact, assess and treat horses
- Take measures to not bring any diseases onto a property, or take diseases to another property or spread it in the wider community.

For professionals providing service and receiving payment, the onus is on them to conduct their business in such a way that they, their patient and their human client have the best of care. Also to ensure that the wider community is at minamil risk from the hygine practices of all equine professionals.

In the advent of misfortune, following industry standards there is indemnity insurance for these professionals. Normally, only when professionals have preached industry standards is their indemnity insurance forfeited.

3. Veterinary service - Whether the guidelines/procedures required for veterinarians attending horses that are not vaccinated against HeV are proportionate to the consequences;

There are laws and industry guidelines for vets to protect themselves, their clients and their patients, against all diseases. Hendra virus is but the current disease in focus, vets require industry guidelines and procedures that work effectively and are practical to manage the risk for all potential disease transfers from human to animal, animal to human, and animal to animal...not just Hendra virus, which is rare to encounter. If it was not rare to encounter, horse owners in daily intimate contact with their horses would be dying from Hendra and clearly they are not. Also the feral horse population would also be diminishing, if Hendra represented a substantial equine health threat. Cearly the problem of feral horses has not been resolved through the transmission of Hendra virus.

This push by the AVA and EVA to make the HeV vaccine mandatory is a major impact to the horse industry. Especially when the Hendra virus has such a minor impact on the horse industry. The published information clearly states that Hendra is very hard to spread from bat to the horse then to a human. It also shows that when veterinarians wear PPE the risk of being infected with Hendra virus is extremely low. Thus the stance the veterinary profession has taken appears ludicrous when a veternarian will not do an inspection on a healthy unvaccinated horse for the fear of catching Hendra virus.

Such choices demonstrate the impact of the HeV vaccine on the horse industry. The reality is that most vets are willing totaled the risk and be finded for talk on a mobile phone while driving a vehicle between clients which is one of the most dangerous activities that can be undertaken in a workplace. This is confusing to the non-vet population when vets are prepared to do an activity that kills thousands of people each year and yet are so concerned about catching a virus that has only infected 7 people and killed 4 in 21 years.

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

### Equine industry

The equine industry has been described as the third largest industry in the economy of Australia. It would require a major study to understand the impacts arising from vets applying a policy not to treat unvaccinated horses. Some people would simply move interstate if the vaccine is not vet compulsory Australia wide. If not Australia wide, some would not come to Queensland for competitions, to bred or buy horses. Some would just quit the horse industry rather than vaccinate, and that way avoid the vet strike against unvaccinated horses. Some will put to sleep their own horses and or revert to non vet animal health services, eg herbs, homeopathy, acupuncture etc.

In addition when horse owners leave the horse industry, there will be a drop in demand for equine vets, and this is likely to drop the demand for university veterinary schools. It may increase the demand for non veterinary health practitioners.

- Racing sector
  - Breeders, trainers, farriers, saddleries, complimentary health care providers and associated business local and interstate and international
  - o Race tracks, betting, associated business local, interstate and international
  - Stock feed growers and mills, farmers, builders of equine facilities steel, timber, rubber etc
  - Racing fixtures
  - Equine property sales
- Sport horse sector
  - Breeders, trainers and associated business, farriers, saddleries complimentary health care providers
  - Stock feed growers and mills, farmers, builders of equine facilities steel timber, rubber etc
  - Equine property sales
  - Community organisations caters to small events eg commercial caters through to fund raisers for CWA, rotary etc
  - o Hotels for accommodation for competitors
  - Local council facilities and show grounds
  - Large facilities such as those at State Equestrian Centres as well as say the equine facilities at Tamworth
- 5. 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.

There may be a case to find workplace health and safety practices that are workable. There maybe for a need for vets to up-skill such that there are competent to handle their sharp tools when wearing PPE. There may be a a need for a change in tools, eg retractable needles.

There maybe a need for a change in veterinarian culture towards management of infectious diseases, much as the human medical community went through with the advent of AIDS and other infectious diseases. Hospital staff that did not heed the verbal and written warnings by management were shamed publicly on lists in elevators in the hospitals as people failing hygine and putting other people's lives at risks. Finally procedures for managing the risk of infectious diseases became normal everyday practices.

Don and Sharon Bridgeman Silkbridge Equine Services

Plainland 4341 Queensland