

Protecting competition horses from the flu

November 5 2013



A deep hacking cough, a runny nose and fever—just like humans, horses can suffer badly when struck down by the flu. Although equine influenza is rarely fatal, it is highly contagious and can seriously disrupt training and competition schedules and result in huge revenue losses for the equine industry.

Dr Janet Daly, a virologist from The University of Nottingham's School of Veterinary Medicine and Science is lead author on a state-of-the-art review looking at how [mathematical modelling](#) can help us bring horse flu under control and protect our horses effectively.

The review, entitled "What can mathematical models bring to the control of equine influenza?", has been published in the Equine Veterinary Journal. It confirms that vaccination reduces the occurrence and limits the extent of outbreaks, but also that vaccines could be administered more strategically and should contain currently circulating strains of

virus.

Protection afforded by equine flu vaccines is not as straightforward as we might think and the [flu virus](#) has an ability to mutate making older vaccines less effective. None of the vaccines currently on sale in the UK have the most recently recommended strains, and only one [vaccine](#) in the US achieves this.

Dr Daly said: "This study will help further our understanding of how to better protect horses against the effects of equine influenza.

Mathematical modellers have to make some assumptions in developing models, but models are informed by and tested against real data. As a virologist, I find the questions about the data they need to generate their models challenge me to think differently about the disease. "

The review collates the findings from numerous studies over the past 10 years in which mathematical models were used to project how [influenza outbreaks](#) are likely to progress in different circumstances and illustrates how this technique can be used to help inform decision-making on prevention and outbreak management.

More information:

onlinelibrary.wiley.com/doi/10.1111/evj.12104/full

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