

CVO Bulletin

West Nile Virus- Kunjin Strain Cases in NSW

WEST NILE VIRUS

Recent testing at Elizabeth Macarthur Agricultural Institute (EMAI) has diagnosed West Nile virus – Kunjin strain (WNV_{KUN}) in four foals in two distant parts of the state. Two foals showing severe neurological signs have recovered with appropriate supportive care. The other two are still undergoing treatment.

WNV is a mosquito borne virus belonging to the genus Flavivirus. A strain of WNV, WNV_{KUN} is endemic in parts of Australia and has been present for many years. Only occasional cases are usually seen, however in 2011 there was a widespread outbreak across NSW involving approximately 300 horses.

Horses, people and a variety of other animals, especially birds, may become infected through a bite from an infected mosquito. Like most other arboviral infections the disease is expected to occur during late summer and autumn. A La Nina weather event such as NSW is experiencing during 2021-2022 increases the risk of infection due to a widespread increase in mosquito numbers.

The initial signs of disease in horses can be non-specific and may be mistaken for colic as horses appear depressed and reluctant to move, however these signs are soon followed by neurological signs. The most common signs include ataxia (including stumbling, staggering, wobbly gait, or incoordination) and hyperaesthesia but a range of other central nervous system (CNS) signs may also be observed.

Most animals infected with WNV do not develop any clinical signs. Affected horses usually recover uneventfully within a few days to weeks, however, in the 2011 outbreak about 10% of clinically affected animals died.

Because of the clinical similarity to Hendra virus infection, a sporadic but serious zoonotic disease, it is important to take appropriate precautions when assessing, sampling and treating affected horses. If performing a Hendra exclusion test, it is important to notify EMAI regarding the case.

Clinical West Nile virus is a Schedule 1 notifiable disease under the NSW Biosecurity Act 2015 and testing is covered under the NSW notifiable disease surveillance funding. The WNV IgM ELISA is diagnostic for blood samples collected from horses within 2 weeks of the onset of clinical signs. The first sample should be collected as soon as possible after clinical signs have been observed.

Collection of paired clotted blood samples in the acute and convalescent phases of the illness (approximately 3-4 weeks apart) can also be used for diagnosis of WNV as well as other diseases such as Murray Valley Encephalitis (MVE) which may also be spread by mosquitoes and show similar clinical signs.

Advice to horse owners includes reducing exposure to mosquitoes through rugging, insecticides and restricting grazing times when mosquitoes are most active.

For further information refer to the [NSW DPI West Nile Virus in Australia](#) fact sheet.

If you suspect a horse is showing signs of WNV, call the Emergency Animal Disease Hotline on 1800 675 888